

The Economist

What markets fear

How bosses snoop on workers

Sri Lanka in flames

Rock music's world capital

MAY 14TH-20TH 2022

India's moment

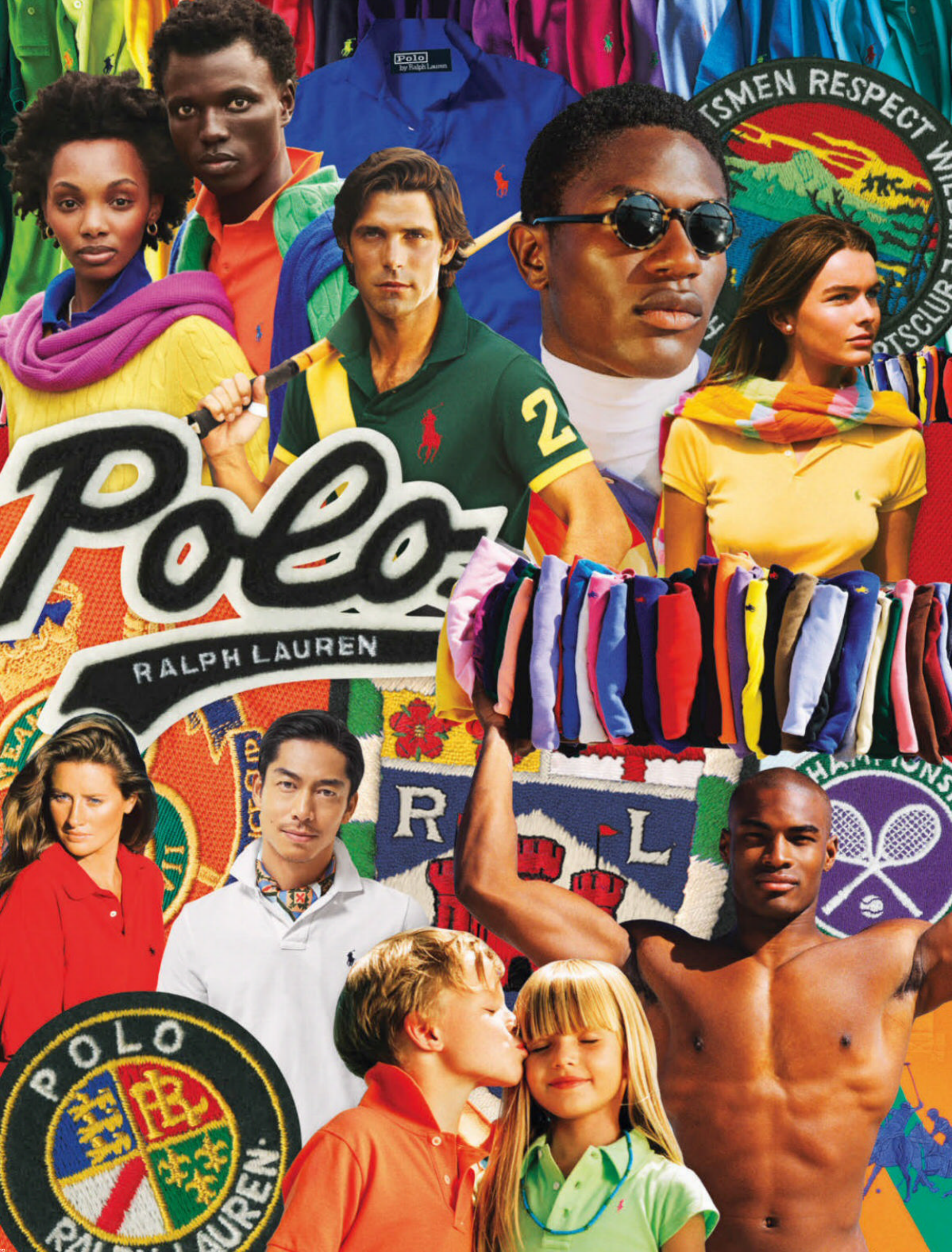
Will Modi blow it?





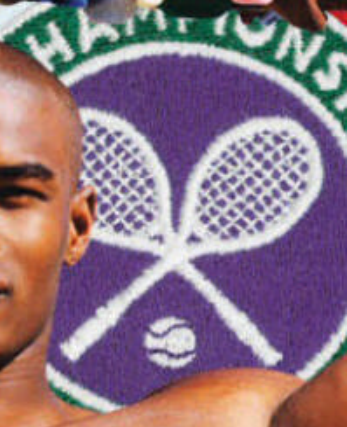


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On the cover

The Indian economy is being rewired. The opportunity is immense—and so are the stakes: leader, *page 13*. Will India's formula for growth be sustained? Briefing, *page 18*. Narendra Modi and his party are making a Hindu state, *page 33*. Can India power the global economy? Free exchange, *page 72*

What markets fear Behind the plunge in America's stockmarkets: leader, *page 14*. Tech bubbles are bursting, *page 59*. Inflation is starting to look entrenched, *page 68*. Which property markets are most exposed to the interest-rate storm? *Page 65*

How bosses snoop on workers Some rules for watching desk-jockeys: leader, *page 14*. Welcome to the era of the hyper-surveilled office, *page 62*

Sri Lanka in flames The country is on the brink of collapse. The president must resign: leader, *page 15*, and analysis, *page 35*

Rock music's world capital A town in the Amish country of Pennsylvania is rock'n'roll's unlikely nerve-centre, *page 77*

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The world this week

10 A summary of political and business news

Leaders

- 13 **India**
The next decade
- 14 **Financial markets**
Grisly reality
- 14 **Surveillance at work**
Professional panopticon
- 15 **Sri Lanka's crisis**
Gota go
- 16 **Genetic screening**
Rules, please

Letters

17 On central banks and inflation, China, Ronald Fisher, ketamine, granny flats, email sign-offs

Briefing

18 **India's economy**
A new formula



Schumpeter Activist investors are becoming tamer. They must not become extinct, *page 64*



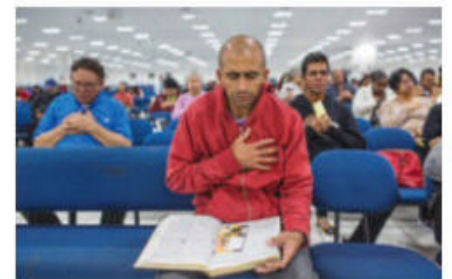
United States

- 21 Primary battles in Georgia
- 22 Forced assimilation
- 23 Saving mountain lions
- 23 Educating the undocumented
- 26 Wrongful convictions
- 27 California's cannabis
- 28 **Lexington** Mark Esper's memoir



The Americas

- 29 The evangelical vote
- 30 Brazilian gangs
- 32 **Bello** Political violence



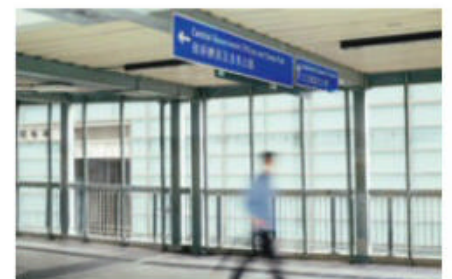
Asia

- 33 India's Hindu state
- 35 Sri Lanka's crisis
- 35 Australian elections
- 36 Covid-19 in North Korea
- 37 **Banyan** Dealing with Afghanistan
- 38 Okinawa and Japan



China

- 39 Hong Kong's bureaucracy
- 40 Shanghai tightens up
- 41 Water problems
- 41 Covid-19 and the homeless
- 42 **Chaguan** A self-repressing society



Middle East & Africa

- 43 Zimbabwe's slumping dollar
- 44 Inflation-proof heifers
- 44 Jump-starting Zambia
- 45 A Palestinian journalist's death
- 46 Algeria beards Morocco



Europe

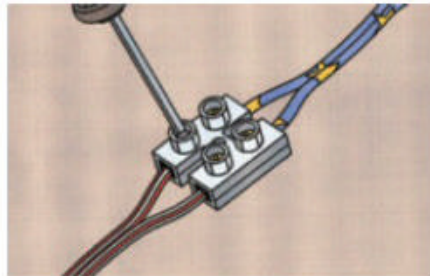
- 47 Ukraine's wartime economy
- 48 Putin's parade
- 49 Germany's Social Democrats take a beating
- 50 France's radical left
- 50 "Borgen" returns
- 52 **Charlemagne** How the EU handles crises

**Britain**

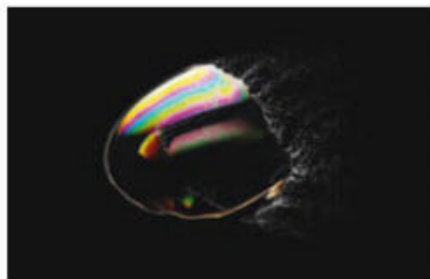
- 53 An interview with Boris Johnson
- 54 Sir Beer Starmer
- 55 **Bagehot** Labour and the Lib Dems

**International**

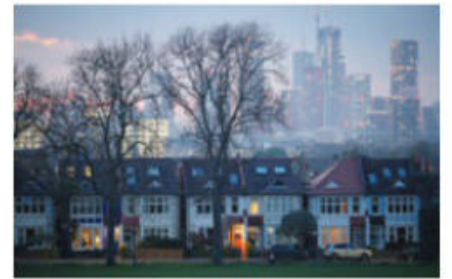
- 57 Transatlantic tech talks

**Business**

- 59 The tech crunch
- 61 Razing baby Amazons
- 61 The zero-covid industrial complex
- 62 The surveilled office
- 63 **Bartleby** Woolly words
- 64 **Schumpeter** Taming the activists

**Finance & economics**

- 65 Global property
- 67 China's trade slows...
- 67 ...Russian exports bear up
- 68 Inflation everywhere
- 69 **Buttonwood** Italian debt anxieties
- 70 Digital payments in Brazil
- 72 **Free exchange** India, the world's growth motor?

**Science & technology**

- 73 Babies' genomes
- 74 Bugs fed by immunity
- 75 Bats mimic hornets' buzz
- 76 Russia and the Arctic

**Culture**

- 77 The capital of rock'n'roll
- 78 Regional foods
- 79 Emperors past and present
- 80 The quest for eternal life
- 80 A tricky new novel
- 82 **Back Story** Tyranny and storytelling

**Economic & financial indicators**

- 84 Statistics on 42 economies

Graphic detail

- 85 Russia is swaying Twitter users outside the West to its side

Obituary

- 86 Ron Galella, the original paparazzo

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S&P Global



Mahinda Rajapaksa resigned as prime minister of **Sri Lanka** amid a wave of violence, as the country endures its worst ever economic crisis. Gotabaya Rajapaksa, the president and Mahinda's younger brother, also came under pressure to step down. Protesters burned down politicians' houses and a museum dedicated to the Rajapaksas, whom they blame for crippling shortages of food and fuel and for runaway inflation. Gotabaya called for the opposition to join a government of national unity and ordered the army to shoot rioters on sight.

Ferdinand Marcos junior, better known as "Bongbong", won the **Philippines'** presidential election. The son of a former dictator, who was overthrown by the "People Power" revolution in 1986, Mr Marcos asked not to be judged by his ancestors but by his actions. One of his first actions was to visit his father's grave in Manila. Sara Duterte, the daughter of the outgoing president, Rodrigo Duterte, won the vice-presidency.

The Taliban issued a decree that in effect requires women in **Afghanistan** to wear a veil in public whenever they leave their homes.

The authorities in **Shanghai** tightened covid restrictions. A weeks-long lockdown has pushed daily new cases well below their recent peak, but China's biggest city is still struggling to extinguish an outbreak. Food deliveries have been banned in some areas and hospital visits must be approved. Neighbours of anyone infected are often being forced into quarantine.

North Korea ordered cities to lock down after admitting to its first covid infections since the pandemic began more than two years ago.

John Lee was chosen to lead **Hong Kong** by a 1,500-member committee packed with Communist Party loyalists. He was the only candidate. Mr Lee oversaw the crackdown on pro-democracy protesters in 2019. He has embraced a draconian national-security law that the central government imposed on the territory in 2020. Meanwhile, Cardinal Joseph Zen, an outspoken advocate of democracy, who is 90, was arrested in Hong Kong for allegedly colluding with foreign forces.

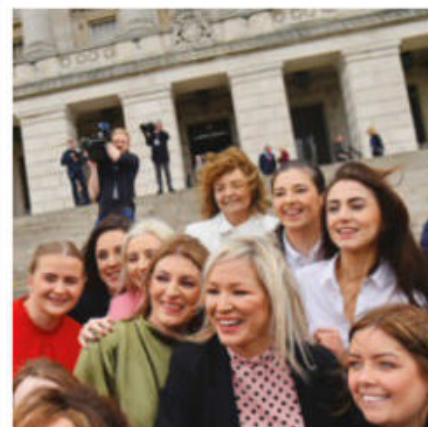
A new Helsinki accord

Finland's president and prime minister recommended that the country formally join **NATO**, a potential reversal of 80 years of neutrality. Before Russia's invasion of Ukraine only about 20% of Finns supported membership; that figure is now around 70%. Sweden is also expected to say it will join. One of the supposed goals of Russia's invasion was to stop NATO's expansion; if the two countries' parliaments approve the change, it will have achieved the opposite.

Vladimir Putin, Russia's president, announced no new initiatives in the war in **Ukraine** in a speech on May 9th to commemorate victory in the second world war. He declared neither victory, as some had expected, nor an escalation of the war. The conflict is becoming more static, with intelligence analysts in America and elsewhere now predicting a stalemate. Ukrainian troops have succeeded in driving Russia back from Kharkiv. The last defenders of the city of Mariupol continue to resist a Russian siege. But Russia has made small territorial gains in the Donbas region and still seems to be aiming to cut off Ukrainian forces there.

America's House of Representatives approved an extra \$40bn in **military and humanitarian aid** for Ukraine. There was some resistance from Republicans, which could slow the bill's passage in the Senate. America imposed more **sanctions** on Russia, and the G7 made a commitment to ban Russian oil imports "in a timely and orderly fashion".

Jill Biden, Joe Biden's wife, visited a border town in Ukraine, where she met **Olena Zelenska**, the wife of Ukraine's president. It was Mrs Zelenska's first public appearance since the Russian invasion began in February.



In **Northern Ireland** the nationalist Sinn Féin party took the most seats in assembly elections. It is the first time since Ireland's partition in 1921 that unionists have not been the biggest party in the province. Disagreement over the Northern Ireland protocol, a post-Brexit deal which creates a customs barrier with the rest of the United Kingdom, is proving to be an obstacle to restoring the government in Belfast.

Shireen Abu Aqleh, a prominent **Palestinian** journalist for Al Jazeera, was shot dead while reporting on a clash between Israeli forces and Palestinians in the restive West Bank town of Jenin. Colleagues at the scene blamed the **Israeli** army, which said she may have been shot by Palestinian gunmen. Israel's foreign minister offered a joint Israeli-Palestinian inquiry. A few days earlier, three Israelis were killed by two Palestinians wielding axes, the latest in a wave of terrorist attacks in Israel.

The IMF resumed lending to **Mozambique**, having suspended it six years ago after it emerged that the country had \$2bn in undisclosed debts. Credit Suisse, which arranged the loans, was fined last October for failing to carry out due diligence; its bankers pocketed some of the cash.

Islamic State West Africa Province, a **Nigerian** terrorist group, released a video purporting to show the murder of 20 Christians in the north-eastern state of Borno.

Colombia sent 2,000 members of the security forces to deal with a spate of violence by the Gulf Clan, a criminal gang, in reprisal for the extradition to America of its leader, Dairo Antonio Úsuga, known as Otoniel. President Iván Duque claims that Otoniel is the world's most dangerous drug-trafficker.

The outsiders

Andrés Manuel López Obrador, the president of **Mexico**, visited Cuba and praised his communist counterpart there. Mr López Obrador threatened to skip a gathering in Los Angeles in June of governments from across the Americas unless the United States also invites Cuba, Nicaragua and Venezuela.

A 28-year-old woman in **El Salvador** was sentenced to 30 years in prison for the death of her unborn child following an obstetric emergency. Abortion is illegal in the country.

Republicans in America's Senate blocked a bill that would override state laws and give women a right to **abortion**. The legislation was never expected to pass but marks the first attempt by Democrats to enact such a right following the leak of a draft decision of the Supreme Court that would, if adopted, return abortion policy to the states. Some Republicans would like to go further still and try to impose an outright national ban.

Stockmarkets endured another punishing stretch, as investors fretted about the Federal Reserve's aggressive moves to tighten policy, high inflation and slowing growth. After its longest weekly losing streak since 2011 the S&P 500 closed below the 4,000 mark for the first time in 14 months. The Nasdaq Composite plummeted to its lowest finish since November 2020. Apple's share price dropped by 12% over five days. The sell-off extended to stocks in Europe and Asia.

What goes up...

Cryptocurrencies took a pummeling amid the commotion, as investors pulled back from speculative assets. Bitcoin shed 30% of its value over a week. Coinbase, the biggest crypto-exchange in America, lost more than 2m users in the second quarter, a fifth of its customer base.

More data pointing to a worse slowdown in **China** than expected also spooked investors. With supply chains disrupted and factories closed because of covid lockdowns, the country's exports grew by 3.9% in April, year on year, the slowest pace since June 2020.

America's annual rate of **inflation** as measured by the consumer-price index fell to 8.3% in April, from 8.5% in March, the first drop in eight months. But most economists had been expecting April's figure to fall to 8.1%.

Christine Lagarde, the president of the **European Central Bank**, gave the clearest signal yet that it will raise interest rates in July or September when she suggested that she expects such a move in the third quarter. The bank has maintained a negative rate on its deposit facility since 2014.

Hong Kong's central bank stepped in to protect the Hong Kong dollar's peg to the greenback for the first time since 2019. Investors have been shedding assets denominated in Hong Kong dollars as the

local economy suffers from covid lockdowns and crack-downs on Chinese tech firms.

BlackRock, which two years ago warned about the risks of climate change to investments and pushed for green-friendly shareholder proposals at company meetings, said it would support proportionately fewer of them this year because they are not consistent with its clients' interests. The world's biggest asset manager gave several reasons, including a regulatory change in America that has increased the number of proposals of "varying quality" and the impact of the war in Ukraine on energy markets. And it won't support shareholder votes that are intended to micromanage companies.

FIFA, football's global governing body, and **Electronic Arts**, a video-game publisher, announced an end to a three-decade deal by which FIFA lent its name to an annual series of games. The deal had brought in \$150m a year for FIFA, making it the organisation's biggest commercial venture besides the World Cup.

SoftBank said its tech-focused investment funds posted a loss of ¥3.7trn (\$33bn) for the year ending March 31st, pushing the

Japanese conglomerate to an overall annual loss of ¥1.7trn. The value of SoftBank's stakes in companies such as Coupang, Didi Chuxing, DoorDash and Grab have plummeted over the year, as their share prices have tumbled.

The magic kingdom

Disney allayed fears that it would follow Netflix by losing subscribers from its streaming service, when it reported that an additional 7.9m customers had signed up to **Disney+** in the first quarter, taking its subscription base to 137.7m. That is still some way behind Netflix's 222m, but Disney+ is sticking to its goal of reaching up to 260m users by 2024.

With sales from its covid vaccine set to dip in coming years, **Pfizer** shored up its future revenue stream by agreeing to acquire **Biohaven Pharmaceuticals**, which develops drugs for neurological disorders, for \$11.6bn. Separately, **BioNTech**, the German drug company that collaborated with Pfizer to produce their vaccine, said revenue and profit more than tripled in the first quarter, year on year, though it expects sales will slow. There is now a huge glut of covid vaccines in the market.

Building on its pledge of "delivering a smoke-free future", **Philip Morris International**, which makes Marlboro cigarettes, struck a deal to buy **Swedish Match** for \$16bn. Swedish Match's smoke-alternative products include a type of snuff called "snus", tobacco pouches that are placed behind the upper lip.



Andy Warhol's silk-screen portrait of Marilyn Monroe, "**Shot Sage Blue Marilyn**", was sold for \$195m at Christie's in New York. That was a record price at auction for a work by an American artist and also for a piece of 20th-century art; the previous record was the \$179.4m paid for Pablo Picasso's "Les Femmes d'Alger (Version O)" in 2015. The super-rich are itching to splash out after covid suppressed demand. "The expensive stuff got more expensive," said Christie's head of 20th-century art.





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India's next decade

The Indian economy is being rewired. The opportunity is immense—and so are the stakes

OVER THE past three years India has endured more than its share of bad news and suffering. The pandemic has killed between 2.2m and 9.7m people. Lockdowns caused the economy to shrink temporarily by a quarter and triggered the largest internal migrations since partition in 1947, as city workers fled to their villages. Religious tensions have been simmering, stoked by the anti-Muslim chauvinism of the Bharatiya Janata Party (BJP), in power since 2014 under the strongman prime minister, Narendra Modi. Now a heatwave is baking the north of the country and the global oil- and food-price shock is battering the poor.

Yet as our Briefing explains, if you take a step back, a novel confluence of forces stands to transform India's economy over the next decade, improving the lives of 1.4bn people and changing the balance of power in Asia. Technological leaps, the energy transition and geopolitical shifts are creating new opportunities—and new tools to fix intractable problems. The biggest threat to all this is India's incendiary politics (see Asia section).

Since India opened up in 1991, its economy has prompted both euphoria and despair. One minute it is the next China: a rising superpower bursting with enterprising geniuses. The next it is a demographic time-bomb unable to generate hope for its young people; or a Wild West where Vodafone and other naive multinationals are fleeced. Over the past decade India has outgrown most other big countries, yet this has been overshadowed by a sense of disappointment. It has not engineered the manufacturing surge that enriched East Asia nor built enough big companies to marshal capital for development. Its fragmented markets and informal firms create few good jobs.

As the country emerges from the pandemic, however, a new pattern of growth is visible. It is unlike anything you have seen before. An indigenous tech effort is key. As the cost of technology has dropped, India has rolled out a national "tech stack": a set of state-sponsored digital services that link ordinary Indians with an electronic identity, payments and tax systems, and bank accounts. The rapid adoption of these platforms is forcing a vast, inefficient, informal cash economy into the 21st century. It has turbocharged the world's third-largest startup scene after America's and China's.

Alongside that, global trends are creating bigger business clusters. The IT-services industry has doubled in size in a decade, helped by the cloud and a worldwide shortage of software workers. Where else can Western firms find half a million new engineers a year? There is a renewable-energy investment spree: India ranks third for solar installations and is pioneering green hydrogen. As firms everywhere reconfigure supply chains to lessen their reliance on China, India's attractions as a manufacturing location have risen, helped by a \$26bn subsidy scheme. Western governments are keen to forge defence and technology links. India has also found a workaround to redistribute more to ordinary folk who vote but rarely see immediate gains from economic reforms: a direct, real-time, digital welfare system that in 36 months has paid \$200bn to about 950m people.

These changes will not lead to a manufacturing boom as big

as those in South Korea or China, which created enough jobs to empty the fields of farmers. They do not solve deep problems such as extreme weather or clogged courts. But they do help explain why India is forecast to be the world's fastest-growing big economy in 2022 and why it has a chance of holding on to that title for years. Growth generates more wealth to invest in the country's human capital, particularly hospitals and schools.

Who deserves the credit? Chance has played a big role: India did not create the Sino-American split or the cloud, but benefits from both. So has the steady accumulation of piecemeal reform over many governments. The digital-identity scheme and new national tax system were dreamed up a decade or more ago.

Mr Modi's government has also got a lot right. It has backed the tech stack and direct welfare, and persevered with the painful task of shrinking the informal economy. It has found pragmatic fixes. Central-government purchases of solar power have kick-started renewables. Financial reforms have made it easier to float young firms and bankrupt bad ones. Mr Modi's electoral prowess provides economic continuity. Even the opposition expects him to be in power well after the election in 2024.

The danger is that over the next decade this dominance hardens into autocracy. One risk is the BJP's abhorrent hostility towards Muslims, which it uses to rally its political base. Companies tend to shrug this off, judging that Mr Modi can keep tensions under control and that capital flight will be limited. Yet violence and deteriorating human rights could lead to stigma that impairs India's access to Western markets. The BJP's desire for religious and linguistic conformity in a huge, diverse country could be destabilising. Were the party to impose Hindi as the national language, secessionist pressures

would grow in some wealthy states that pay much of the taxes.

The quality of decision-making could also deteriorate. Prickly and vindictive, the government has co-opted the bureaucracy to bully the press and the courts. A botched decision to abolish bank notes in 2016 showed Mr Modi's impulsive side. A strongman lacking checks and balances can eventually endanger not just democracy, but also the economy: think of President Recep Tayyip Erdogan in Turkey, whose bizarre views on inflation have caused a currency crisis. And, given the BJP's ambivalence towards foreign capital, the campaign for national renewal risks regressing into protectionism. The party loves blank cheques from Silicon Valley but is wary of foreign firms competing in India. Today's targeted subsidies could degenerate into autarky and cronyism—the tendencies that have long held India back.

Seizing the moment

For India to grow at 7% or 8% for years to come would be momentous. It would lift huge numbers of people out of poverty. It would generate a vast new market and manufacturing base for global business, and it would change the global balance of power by creating a bigger counterweight to China in Asia. Fate, inheritance and pragmatic decisions have created a new opportunity in the next decade. It is India's and Mr Modi's to squander. ■



Financial markets

Grisly reality

Getting to the bottom of the plunge in America's stockmarket

AMERICA'S BEAR season, when hikers are advised to stay on their trails and carry pepper spray, runs for two months from September. It has come early for investors. The S&P 500 index of leading American stocks has fallen by 18% from its all-time high in January, ten percentage points of which was in the past month alone. The index is flirting with bear-market territory, a 20% decline. The NASDAQ, a tech-heavy benchmark, has plunged well past that level. Since November it has shed 29%.

For 18 months or so, since inflation began to climb, investors have fretted over how much the Federal Reserve would tighten policy, and how painful that would be for asset prices. The latest rout, which followed a meeting of the Fed on May 4th at which America's central bank raised rates by 0.5 percentage points, offers an answer: very painful.

The market expects the Fed to raise interest rates by another 1.9 percentage points this year, even as it shrinks its balance-sheet fast. And the more entrenched inflation becomes, the more aggressive the Fed will have to be. Worryingly, American households expect inflation to be above 6% a year from now and almost 4% in three years, according to a survey from the Federal Reserve Bank of New York on May 9th (see Finance & economics section).

Higher real interest rates erode the present value of future cashflows. The sell-off has been vicious for technology stocks whose valuations rest on expectations of much larger earnings far in the future (see Business section). For the same reason, prices of bonds with long maturities have fallen heavily. Many speculative assets without cashflows have done even worse. Bitcoin is trading at about \$27,000, half its value in November.

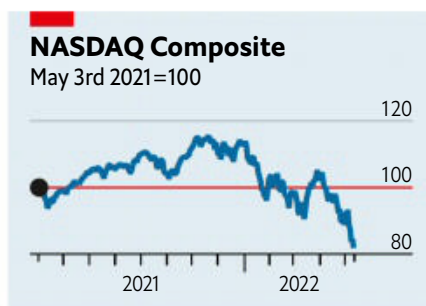
One question is whether the market slump signals deeper trouble in the economy. America's unemployment rate is just 3.6% and more than 11m jobs remain unfilled. But the more zeal-

ous the Fed has to be, the more likely it is to cause a recession. Meanwhile, war in Ukraine has stoked energy prices. And China's zero-covid policy is damaging its economy and adding to supply-chain snarl-ups around the world.

The other question is whether financial-market turmoil may eventually amplify economic problems, rather than merely reflect them. Over the past decade debt and equity markets have played a bigger role in finance, in part owing to tighter regulation that has inhibited risky lending and trading by banks. Most household mortgages now originate outside the banking system, and are issued as securities and held by investors. American companies get 57% of their debt funding from investors in bond markets, up from 45% in 2007. Banks play a smaller role as the middlemen in financial markets, their place taken by computers and specialist trading firms.

These structural changes in the way finance works may mean that markets are more prone to bouts of erratic trading and nervous breakdowns. Regulators, as well as plenty of investors, have worried that the new-look Treasury market could seize up in times of stress, causing strains in the real economy. Violent moves in asset markets may have more of an effect not only on people's retirement accounts and firms' share prices, but also on their ability to borrow.

As ten-year Treasury yields have climbed from 1.6% in January to 3% now, mortgage rates in America have shot up from 3.0% to 5.3%. Risky firms are beginning to find it hard to issue debt. The first quarter of 2022 was the slowest for high-yield issuance since 2016. When it tried to sell \$3bn-worth of bonds in late April, Carvana, a second-hand-car retailer, struggled to attract investors even at double-digit yields. Unfortunately, the hikers are far from being out of the woods just yet. ■



Surveillance at work

The professional panopticon

Look out, office workers. You are being watched—by your boss

WORKPLACE SURVEILLANCE is nothing new. The dark Satanic mills of 18th-century Britain had supervisors to crack the whip. Shops have long used CCTV to monitor customers and staff, and some factory and warehouse workers have had to face the humiliation of timed toilet breaks. Still, if you enjoy the comfort of a white-collar job, you may be stunned to learn just how much you are being watched.

Calls and emails are monitored using ever more advanced software. Artificial intelligence (AI) is taking the snooping to new levels, tracking everything from Zoom-call rictus and twitchy keyboard strokes to the consistent note of irritation in your voice, in an attempt to assess your productivity and judge your state of mind (see Business section).

Surveillance is rising because work-from-home policies mean that employers are keen to keep tabs on their remote workforce. Before the pandemic, around one in ten of the large businesses asked by Gartner, a research firm, had spying software. Within three years it expects the share to reach 70%.

Bosses also have ever-expanding amounts of data at their disposal, enlarging the digital footprint that can be monitored. Widely used software such as Google Workspace, Microsoft Teams or Slack can tell managers what time you clock in or how many calls you join on their platforms. Employee badges fitted with motion sensors and microphones can alert bosses if someone is loafing about. The blurring boundaries between work and home mean that video surveillance and other intrusive tools are ▶▶

▶ barging into workers' personal lives, social-media accounts and private devices at all times of the day.

The law is scrambling to adjust. In the state of New York employees subject to electronic monitoring must be told in advance, under a new law introduced on May 7th. Connecticut and Delaware require similar disclosures. California is considering new laws to strengthen privacy protections for workers, including a ban on digital monitoring without prior notice. The European Union's General Data Protection Regulation establishes some basic rights for staff. Yet it is still early days and the technology is advancing fast. As a result, most firms are only just getting their heads around how much remote work is likely to remain permanent. A clear boundary between embracing new technologies on the one hand, and protecting workers on the other, has still to be drawn.

There are perfectly legitimate reasons for surveillance at work. Many jobs require monitoring for safety, security and compliance. Investment banks' traders are tracked to prevent insider dealing, and the decisions of social-media moderators are traced and recorded to ensure consistency and accountability. In the same way that companies collect data on customers' behaviour in order to improve their products, so professional employers are using monitoring tools to measure the productivity and engagement of their most important resource: their people. In the future such tools could help spot bad posture, root out bullying, and identify and share best practice among staff.

Yet it is easy to see the pitfalls. There is a long history of those



with power abusing those without in the name of compliance and efficiency. In the most extreme cases, 20th-century despots ran vast informant networks, and some slave plantations in America and the West Indies kept tyrannical work records.

Today's workers are not indentured, obviously. But many studies link excessive individual surveillance to higher levels of stress. And if algorithms trained on biased data are used to make more decisions, the odds of discrimination will rise. One analysis found that AI systems consistently interpret black faces as being angrier than white ones.

What to do? As law and practice evolve, some principles should govern workplace surveillance. Individuals must be fully informed, as the New York law provides. Some firms now disclose monitoring methods in the fine print of their employee handbooks, and specify what data managers have access to. But that is no substitute for consistent, easily understood information for staff—so they can decide how to

behave at work, and whom they choose to work for.

Employers should have a legitimate reason for surveillance. Although the boundary will take time to establish through case law and precedent, this is vital to ensure that monitoring is proportionate. Firms should not have access to employees' private devices, provided they are not used for work. And significant decisions made by algorithms should be subject to appeal and review by human beings. Establishing clear guidelines is not easy, but qualms over the potential abuse of surveillance will grow. It's time to start drawing some lines. ■

Sri Lanka's crisis

Gota go

Sri Lanka is on the brink of collapse. The president must resign

ON PAPER, AT least, Sri Lanka is one of the wealthiest countries in South Asia, ranked by the UN on a par with much of eastern Europe in terms of development. Yet the country of 22m people is suffering severe food shortages, locked petrol pumps and power cuts lasting as long as 13 hours a day. The currency has lost nearly half its value against the dollar over the past two months. Foreign reserves stand at \$50m, too little to cover even a day's worth of imports and down from about \$9bn in 2019. Last month Sri Lanka admitted it could no longer service its foreign debts. The country is broke.

Sri Lankans are furious. On May 9th protesters torched dozens of homes, most belonging to politicians, precipitating the resignation of Mahinda Rajapaksa, the once-beloved prime minister (see Asia section). Security forces evacuated him and his family to a naval base as a mob tried to storm his official residence. Vigilantes have set up checkpoints outside the country's airports to prevent him and other officials from fleeing. A state of emergency is in force. The army has been ordered to shoot rioters and looters on sight.

How did it come to this? For an answer, look back to late 2019, when Sri Lanka was still picking itself up after a devastating set of terrorist attacks on Easter Sunday. Home-grown Islamists had targeted three churches and three luxury hotels, killing more than 250 people. Tourism, a big source of foreign exchange, took

a hit, with arrivals falling from 244,000 the month before the attacks to 38,000 the month after.

It was against this backdrop that Sri Lankans chose as president a man known for an iron-fisted approach to security: Gotabaya Rajapaksa, who had brought to an end a 26-year civil war as head of the ministry of defence a decade earlier. Mr Rajapaksa, in turn, appointed as prime minister his older brother, Mahinda, who had been president from 2005 to 2015. The pair were seen as vigorous, can-do types, unlike the vacillators of the opposition. Their party won parliamentary elections by a landslide.

Untrammelled authority seems to have gone to the Rajapaksas' heads. A two-thirds majority in parliament meant that they could have their way with the constitution—and they did, creating an executive presidency that granted Gota control over the appointment of ministers, judges and the heads of various nominally independent commissions. Many top jobs went to assorted brothers and nephews; others to retired or serving soldiers.

But even as the Rajapaksas appeared to be entrenching themselves in power, they were actually undermining their own authority through ill-conceived policies. They slashed taxes as the pandemic brought tourism to a screeching halt, which together clobbered the economy and severely reduced government revenue and precious inflows of foreign exchange. Downgrades from ratings agencies underlined the deteriorating economic ▶▶

▶ picture and in effect closed the door to fresh borrowing abroad.

Instead of admitting their errors, the Rajapaksas pretended things were under control. They continued to defend the rupee and service Sri Lanka's external debts of 44% of GDP, even as foreign reserves dwindled. A ban on imported fertiliser, to save dollars, was dressed up as a boost to organic farming—but had to be scrapped when crop yields plunged, threatening a further decline in exports. The war in Ukraine was the final straw, pushing up the prices of imported oil and food and prompting the government to resort to rationing for lack of foreign exchange.

The Rajapaksas and the country are now out of options. The government will have to slash spending and raise taxes, further eroding Sri Lankans' standard of living even as inflation bites. The plunge in the rupee's value will eventually boost tourism and other exports, bringing some desperately needed dollars. But Gota no longer has the credibility to negotiate with the IMF

for fresh loans to tide over the country until that point, nor the authority to impose painful austerity. Opposition politicians, meanwhile, have no desire to take responsibility for a mess of the Rajapaksas' making or to associate themselves with the unpopular remedies to come. And no economic repairs are possible while bands of arsonists roam the capital.

Put the country first

To calm the mobs and pave the way for a government of national unity, Gota must go. But the opposition should put the people before politics, too, and take some responsibility for extricating Sri Lanka from its predicament. The outlook may be bleak, but voters will reward the politicians who find a way out of the present impasse. It was by ending a seemingly endless war, after all, that the Rajapaksas first won the popular devotion that they have now betrayed. ■

Genetic screening

Private letters, public promise

Britain's plan for whole-genome sequencing of newborns poses ethical quandaries

IMAGINE FOR a moment that your unborn child has a rare genetic disorder. Not something at least vaguely familiar, such as sickle-cell anaemia or cystic fibrosis, but rather a condition buried deep within the medical dictionary. Adrenoleukodystrophy, maybe. Or Ehlers-Danlos syndrome.

Would you, when your child is born, want to know about it? If effective treatments were available, you probably would. But if not? If the outcome were fatal, would your interest in knowing about it depend on whether your newborn had five years of life to look forward to, or ten? Or 30?

Today these questions are mostly hypothetical. Precisely because they are rare, such disorders are seldom noticed at birth. They manifest themselves only gradually, and often with unpredictable severity. But that may soon change. Twenty years after the first human genome was mapped, the price of whole-genome sequencing has fallen to a point where it could, in rich countries at least, be offered routinely to newborns (see Science & technology section). Parents will then have to decide exactly how much they want to know.

Early diagnosis brings with it the possibility of early treatment. Moreover, sequencing the genomes of newborns could offer a lifetime of returns. A patient's genome may reveal which drugs will work best in his or her particular case for conditions such as ADHD, depression and cancer. Combined with information about someone's way of life, it could highlight easily discounted health risks such as cancers and cardiovascular disease, leading to better preventive measures. A database of genomes, matched to living people, would be a boon for medical research. The fruits of that research, in turn, would make those genomes more useful to their owners as time goes on.

Sequencing children's genomes at birth would also create opportunities to develop treatments for rare conditions that are typically discovered too late and in small numbers. There are reckoned to be about 7,000 rare diseases in the world, affecting 400m people, and most are genetic. At the moment they are so

unusual as to be unattractive targets for big pharmaceutical firms. With more and earlier diagnoses, that might change.

Such a powerful new technology creates new dangers. Widespread screening for thousands of potentially harmful genes may be counterproductive: some results may worry parents unnecessarily, because some genetic variations, though occasionally indicative of disease, are not strongly so. Parents may not want to unlock all the secrets that their newborn's genome might reveal. Some may indeed prefer not to know about conditions that cannot be treated. Adult-onset illnesses pose a different dilemma—a reasonable position is that it should be up to the children themselves, once grown, to decide whether they want to look at their genomic information. A further concern is that data will not be kept secure, and may be leaked or otherwise misused at some point in the future.



In Britain, where a large project to sequence the genomes of newborn babies is planned to start next year, a consultation process is already grappling with these questions. Some of the broad principles emerging may be applied to similar projects in a number of other European countries, and in America, Australia, China and Qatar. One lesson is to start conservatively. The

British project is likely to begin with a small number of extremely reliable tests that will improve the way children are treated. This ensures the testing is for the benefit of the child. Tests that are not firmly diagnostic, or which involve much follow-up work, are not a priority. Control of the data should be passed on to children at adulthood. Finding the time to educate parents, so they can make good decisions, is essential.

It remains to be seen whether the economics of this sort of testing make it feasible on a national scale. These days the cost has less to do with the technical expense of sequencing than with the salaries of those providing the services. But countries that can make this work will be able to start to harness the full potential of the genomic revolution. It began 20 years ago. Soon, it will become part of everyday health care. ■

Zero tolerance on inflation

You correctly noted that there is “nothing special” about the Federal Reserve’s 2% average target for inflation, except that it “has promised it in the past” (“The Fed that failed”, April 23rd). Indeed, when Anthony Diercks, an economist on the central bank’s board, reviewed every optimal monetary-policy paper made available to the public since the mid-1990s, he was unable to identify a single one citing 2% as the ideal. Most papers—and the most highly cited ones—recommend an inflation rate of around 0%.

WILLIAM LUTHER
Associate professor of economics
Florida Atlantic University
Boca Raton, Florida

The stern warning in your special report on central banking (April 23rd) against overburdening central banks is appropriate. Taking on too many tasks, such as focusing on inequality and other social ills, risks undermining their independence by drawing them into politics. After his retirement from the Bank of England, Mervyn King wrote that, “the biggest threat to the future and independence of central banks comes from... promising too much.” The Fed and others have already gone a fair way in informally taking into account income distribution and other matters of an essentially political nature into consideration.

An early example of inserting politics into the Fed’s remit, and a root cause of many of its later problems, is the Humphrey-Hawkins Act of 1978, which introduced a dual mandate of price stability and maximum employment. The Fed has the unenviable task of trying to balance these two macroeconomic outcomes. Like others it seems that the Fed has over time favoured low unemployment (running the economy red hot) rather than having been sufficiently alert to early signs of inflation.

ONNO WIJNHOLDS
Washington, DC

Tell it how it is

A letter from the Chinese embassy’s spokesperson referred to the war in Ukraine as “an international dispute between two sovereign nations” (April 30th), as if it were some sort of mundane trade spat, rather than unprovoked and brutal military aggression by Russia. She wouldn’t have had to hunt far to find a precedent. Xi Jinping has described China’s response to invasion in the 1930s as a “war of resistance...where China resisted the invasion of a foreign enemy”. This is cited in “China’s Good War” by Rana Mitter, who notes that the Chinese government “has promoted the new collective memory” of the second world war “as a way to create a morally weighted narrative about China’s role in the global order”.

That moral narrative would be more consistent, and that role in the global order greatly more effective, if Mr Xi, his embassy spokesperson and their colleagues were to call out the situation in Ukraine for what it truly is.

ANDREW KORNER
Port William, Galloway

Cambridge’s cancel culture

As an alumnus of Gonville & Caius college in Cambridge I have watched its contortions about Ronald Fisher with dismay (“Window pains”, April 23rd). If the fellowship truly wanted to take a principled stand about its predecessors, it could do no better than start with John Caius himself, a man who wanted to bar scholars who were “deformed, dumb, blind, lame, maimed, mutilated (or) a Welshman” from entry to the college. For more contemporary relevance it could turn to Jimmy Carr, a graduate of Caius, who thinks that the Nazi genocide of the Roma is amusing.

To pick on Fisher, who held views fairly unremarkable for his time, is simply giving in to those wishing to indulge in some virtue-signalling. Raking through the historical record for dead people who held

views we now find unacceptable is a fool’s game. Both Churchill and Gandhi would fall foul of such a process. It consumes energy that would be best directed towards ongoing injustices.

PAUL WATSON
Cambridge

Drug lows

The use of ketamine to treat depression is being promoted in certain quarters (“Special κ”, April 23rd). In Canada, several medical specialists have touted its effectiveness. Some are almost delirious in their enthusiasm. I received ketamine as an anaesthetic for surgery, after being assured of its safety. They said I would experience a nice little “trip”. I have never used recreational psychedelics. What a trip it was. I awoke in a severe and prolonged tearful state, with profoundly suicidal thoughts. Two years later the images and sounds remain vivid and can trigger those same thoughts.

This cavalier use of ketamine is a modern iteration of the psychiatric experiments carried out in the 1950s at the Allan Memorial Institute in Montreal.

ASTRID AHLGREN
Ottawa

Housing attachments

“Cottage industry” (April 23rd) pointed out that granny flats, or Accessory Dwelling Units as they are known, “have taken off in California...as house prices have soared”. We have a long tradition of these dwellings here. Allen Ginsberg’s poem, “A Strange New Cottage in Berkeley”, described the one on Milvia Street where he and Jack Kerouac lived in the mid-1950s. Unfortunately, it is long gone.

Cottages used to be available for short-term rentals to students and artists, but landlords are now unwilling to take the risk of expropriation by tenants who won’t pay, won’t leave, and who are supported by an autocratic rent board.

TOM BURNS
Berkeley, California

Kind regards

I would have enjoyed Bartleby’s advice on “How to sign off an email” more had I not been conscious of having committed pretty much every epistolary sin listed (April 16th). One sin omitted was the sad line that often precedes a sign-off. “No worries if not” negates everything that has gone before, and always make me cringe for the writer’s lack of self-worth. Anyway, thank you in advance for planning to print my letter. Although no worries if not.

LUCY BERESFORD
London

Automated corporate sign-offs can be a bore, especially when they include legal shields, equivalent to “by reading this message you implicitly agree not to use it as a reason to sue us”. More interesting is the signature that all employees at the International Institute for Management Development (IMD) are encouraged to use: “I am sending this email at a time that suits me. Please feel free to respond at a time that suits you.” It is a clear expression of respect for the notion of work-life balance that our hyper-connected lives tend to disregard much too often.

BRUNO LANVIN
President
Smart City Observatory
IMD
Lausanne, Switzerland

Bartleby’s sign-off is oh-so 2010s. Today it is also necessary to state your preferred pronoun (she/her) and that the message was sent from the traditional, ancestral and unceded territory of the (fill in the blank) people.

BRENT SUTTON (HE/HIM)
West Vancouver, Canada
The traditional, ancestral and unceded territory of the Squamish people

Letters are welcome and should be addressed to the Editor at The Economist, The Adelphi Building, 1-11 John Adam Street, London WC2N 6HT
Email: letters@economist.com
More letters are available at: [Economist.com/letters](https://www.economist.com/letters)



A new formula

BANGALORE, DELHI AND MUMBAI

India is likely to be the world's fastest-growing big economy this year. Can the expansion continue?

THE TRIALS and transformation of India's economy have an epic quality, reminiscent of 19th-century America. A vast national market is being created, allowing firms to grow from economies of scale. Internal migration is shifting tens of millions of desperately poor people; a brash new consumer class is proliferating and empires are being built on new technologies. Tycoons unleashing vast investments are happy to debate if they are India's Rockefeller or its Carnegie.

In 2014, when Narendra Modi began his first term as prime minister, India was the world's tenth-largest economy. In the following seven years it grew by 40% (see chart 1 on next page); of big economies only China did better, with 53% over the same period. Growth this year of 8% will be the highest among big countries, according to the IMF. It predicts that by 2027 India will be the world's fifth-largest economy, with a GDP of roughly \$5trn at market prices. In terms of the size of its stockmarket it has already reached the number-four spot, behind only America, China and Japan (see chart 2 on next page). And with a herd of

about 100 unicorns (unlisted startups worth over \$1bn), India is third only to America and China.

Behind those figures lie ups and downs and bitter controversy. Mr Modi's decision to void high-denomination banknotes in 2016 saw growth drop from 10% to 5% over the following nine months. A crisis at shadow banks led to a financial scare in 2018, slowing growth again. The lockdowns in the first half of 2020 saw GDP temporarily drop by a quarter.

Yet, as the pandemic recedes, four pillars are clearly visible that will support growth in the next decade: the forging of a single national market; an expansion of industry owing to the renewable-energy shift and a move in supply chains away from China; continued pre-eminence in IT; and a high-tech welfare safety-net for the hundreds of millions left behind by all this.

Mr Modi was elected on a platform of "minimum government, maximum governance". That is not really what he has served up. There is still a lot of government in India, and the threat that Mr Modi poses to its democratic nature worries observers

inside and outside the country (see Asia section). Indeed, one of the reasons India's performance is less admired than it might be is that people are reluctant to highlight it lest they be seen as endorsing Mr Modi.

But a realistic approach to things which government can and cannot do has paid dividends—despite being based on truths which Mr Modi would never publicly affirm. His government sees that second-best policies forcefully implemented are better than immaculate plans that never happen. It acts on the basis that the country can industrialise, but not as fast as East Asia did. Though it sees the potential in the rise of tech platforms, the shift to clean energy and the redesign of the world's supply chains, it appreciates that the age of open globalisation that China exploited in the 1990s and 2000s is over. And it knows that if it is to win a continual cycle of elections (the next national poll is in 2024), economic disruption must be combined with instant gratification for the mass of voters.

The first and most important pillar of India's new growth pattern is the emergence of a single national market in which more firms and consumers use the modern financial system. This is fast superseding regional markets and informal businesses using mainly cash, which accounted for two-fifths of output and 87% of jobs five years ago. Much of the reform and investment underpinning this change predate Mr Modi, but he has expedited them.

Infrastructure is crucial. The national highway network is over 50% longer than ▶▶

▶ it was in 2014 (it also uses a digital tolling system to avoid queues). The number of domestic air passengers has doubled; air-freight volumes are up by 44%. There are more than three times as many mobile-phone base stations, supporting 783m broadband subscribers. Wall Street private-equity firms are competing to create networks of warehouses across India.

In addition to all this tarmac and concrete is the “India stack”, a unitary national digital infrastructure created by the state and championed by Mr Modi. This includes Aadhaar, a biometric identity system for all Indians; a push to make sure everyone has a bank account; and a national payments system known as UPI. A huge obstacle to trade between states has been removed by the adoption of a nationwide goods-and-services tax (GST) in place of umpteen local levies. As a result, more businesses are being dragged into the daylight, using modern banking and perhaps paying taxes. Payments via UPI have risen from the equivalent of 13% of monthly GDP in January 2020 to 50% in April 2022. Receipts from GST reached the equivalent of 8% of monthly GDP in April (see chart 3 on next page). Tax evasion is getting harder.

Competition in a national marketplace has been bad news for smaller firms that were reliant on tax-dodging and captive markets. The covid-19 slump hit them badly, too: by some estimates, 10-20% have failed during the past few years. Investment by households, which operate lots of tiny informal businesses, has dropped from 16% of GDP a decade ago to 10%. Bigger firms that have brands, scale and technological perspicacity have grown. For example, Titan, the leading firm in the jewellery trade, boosted sales by a third and floor space by a fifth during the pandemic. A new bankruptcy code that makes it harder for zombie firms to stagger on is also spurring consolidation. Formalisation and consolidation, in turn, presage a leap in productivity. McKinsey, a consultancy, reckons India's top 600 firms are 11 times more productive than the average.

Quite a ride

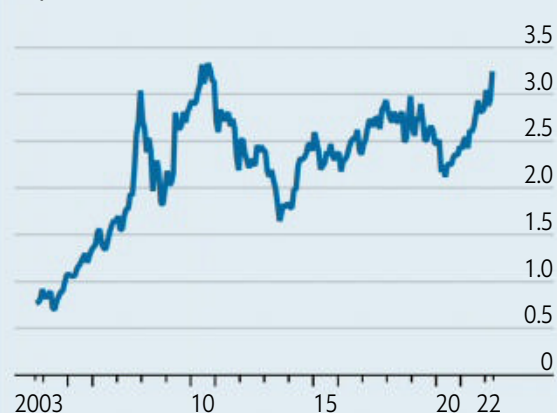
India, GDP, % change on a year earlier



Source: National statistics

In the big leagues yet?

India, share of world stockmarket capitalisation, %



Source: Bloomberg

The second pillar of India's new growth concerns industry. India has long dreamed of becoming a factory for the world. But manufacturing's share of output has remained stuck at 17-18% over the past decade as corporate investment by all firms has idled at the equivalent of 9-12% of GDP. The country accounts for a paltry 1.9% of global exports of goods.

Bigger and bigger business

Big companies with large cashflows are looking to change this. Saurabh Mukherjea of Marcellus, an asset manager, calculates that India's top 20 firms earn 50% of corporate India's cashflows. They are making money fast enough to take risks with their earnings instead of having to borrow to excess. The ambitious giants include conglomerates—Adani (energy, transport), Reliance Industries (telecoms, chemicals, energy, retail), Tata (IT, retail, energy, cars)—and more focused giants such as JSW (mainly steel).

Those four firms alone plan to invest more than \$250bn over the next five to eight years in infrastructure and emerging industries; in doing so they intend to develop local supply chains, which fits with government goals. Mukesh Ambani of Reliance says he will cut the price of green hydrogen to \$1 per kilogram by 2030, for instance, from about \$5 today. Tata is rolling out battery plants, electric vehicles and semiconductors. These are huge, risky bets that few other firms would dare take.

There are worries about excessive corporate power, monopolies and, in some cases, cronyism. If the firms accrue yet more economic power through their investments, such concerns will surely grow. At the moment, though, the ratio of those four firms' profits to national GDP is 0.7%, half the equivalent ratio for the four tech giants which are currently America's biggest companies. The government seems happy with big business, given its high re-investment rates.

Hoping to benefit from multinationals' efforts to diversify away from China, Mr

Modi's lieutenants are also handing out \$26bn in subsidies over the next five years for investment in 14 industries. These “production-linked incentives” (PLIs) pay out as firms' revenues expand in such fields as solar panels, batteries and pharmaceuticals. Samsung from South Korea and Foxconn from Taiwan are using PLIs to make more mobile phones in India. Local companies, such as Ola Electric, an affiliate of a big ride-hailing firm, are also taking advantage of them. Ola has built a large e-scooter factory 90km from Bangalore with the goal of becoming a global force.

The government wants to catalyse manufacturing. The danger is that benign intentions degenerate into cronyism and protectionism. Still, although \$26bn amounts to only roughly 1% of all expected corporate investment over the next five years, in the short run the policy is having the intended effect.

The new edifice's third pillar is founded on a long-standing strength: technology. India's IT-services and outsourcing industry has doubled in size over the past decade. Its annual revenues are now \$230bn. That has made India the world's fifth-biggest exporter of services, despite being only 16th in goods. A global shortage of software engineers, and the fact that software is increasingly supplied as a service from the cloud, mean that the trend is likely to continue. India's biggest difficulty is now finding talent. Some 5m people already work in tech and there is a red-hot market for new workers.

The combination of engineering skills, mobile data and a national tech stack has created lots of startups. They have gone from providing e-commerce, delivery and ride-sharing services for the 10m-20m richest Indians to seeking opportunities further down the economic pyramid. And Bangalore's low-key tech culture is fostering a new generation of firms that are closer to the global frontier of innovation, for example in space, drones and batteries. Four such “deep-tech” firms that spoke to *The Economist* all use domestic research and development and are targeting exports for over half of their sales. A rich venture-capital system can finance firms throughout their life-cycle, from angel funding to public offerings (which financial reforms have made easier). A local venture capitalist reckons there is a pipeline of 10,000 plausible startups created each year.

The single market, industrial policy and technology seem likely to bring about a pick-up in growth from the 5.4% year-on-year rate reported in the final quarter of 2021. A mortgage banker says, “I have never seen this kind of demand for loan applications in 40 years.” Demand for electric vehicles is booming, a manufacturer exults. Capital spending is starting to revive, according to an index compiled by CMIE, an ▶

► analysis firm. Exports are rising.

What, though, of jobs? Formal employment is rising: enrolment in the national social-security scheme for formal blue-collar workers has risen by 19m, to 56m, since early 2020. But that reflects the formalisation of the economy. The share of Indians aged over 15 in work of any sort was 55% in 2012 but only 51% in 2020. Sluggish jobs growth, with a paucity of women in work, are long-standing problems. The jobs that exist are often miserable.

Hence the fourth pillar, digital welfare, with payments for some 300 schemes for needy Indians, from job support to fertiliser subsidies, sent straight to people's bank accounts. This cuts out bureaucrats and allows spending on a staggering scale. In the year to March, payments reached \$81bn, or 3% of GDP, up from 1% four years earlier. Payments have totalled \$270bn since 2017. Roughly 950m people have benefited, at an average of \$86 per person per year. That makes a difference to struggling households: India's extreme poverty line is about \$250 per person per year at market exchange rates. Mr Modi has not managed to initiate a national jobs boom, but he has created a national safety-net of sorts.

Money for the masses

These four pillars could sustain a transformation of India's economy over the next decade. It would have a core of highly productive firms. Digital services would mean most people's consumption took place efficiently in the formal economy (even if their jobs remained informal), raising productivity and channelling funds into the banking system. All this would be taxed, allowing the government to pay for redistribution, using the direct welfare system to placate a great mass of underskilled and underemployed people.

One risk to this vision is economic instability. India is dependent on inflows of capital to finance its current-account defi-

Stacking up

India, formalisation
% of estimated monthly GDP

Monthly UPI*
transactions



Monthly GST†
receipts



*Unified Payments Interface †Goods and Services Tax
Sources: NPCI; GSTC; Bloomberg; *The Economist*

cit. Though it uses almost a fifth less oil per unit of GDP than it did a decade ago, almost all of that oil is imported. When interest rates and commodity prices rise, it tends to suffer. Welfare spending has helped push the budget deficit to 10% of GDP and public debt to 87% of GDP. On May 4th India's central bank raised interest rates from 4% to 4.4% in response to inflation and the global tightening of monetary policy.

That said, the financial system is more resilient than it was. Banks' bad debts have at last been cleaned up. A growing pool of domestic investors offer resilience should foreigners feel forced to flee. And formalisation of the economy gives the government more tax-raising clout.

Another danger is Mr Modi's style of rule. Businesspeople know he is not the progenitor of all that is working well; he did not invent the tech stack, road-building or unicorns. But they see a government that is more consistent and less corrupt than its predecessor. What is more, his political dominance provides continuity. "They are not ideas guys, but they are open," says one company founder. "Modi puts the full weight of the system behind it. They are able to kick butt, to get it done."

A penchant for quick, second-best decisions has costs, though. Intractable problems fester. Despite surging private investment in renewable energy, the state-owned firms that distribute electricity are bankrupt and supply is unreliable. Education remains terrible. Although school enrolment has risen to over 90% for children under 16, many leave barely literate. More efficient welfare is not a substitute for a system in which people are more fully able to realise their potential, rather than be left on tiny farms as automated factories pass them by. Too little is being done to prepare such farms, or the country as a whole, for the ravages of climate change.

There are other disturbing aspects to the mindset of Mr Modi's BJP. The ideology of self-reliance and habit of tinkering with tariffs could yet morph into full-blown protectionism. The culture of intimidation it fosters in the political world could become a bigger feature of the business world, too. It has already bullied the press and eroded judicial independence.

So far the economy seems to be insulated from the religious tensions that the BJP continuously heightens to sustain itself in power. This is not new. In 2002, in the last big bout of religious violence, over 1,000 people, most of them Muslims, were killed in riots in the state of Gujarat. But the economy shrugged off the horror: the national stockmarket dipped by 4% for a day and then recovered. Gujarat's GDP grew by 8% the following year, twice as fast as the national economy—growth which helped Mr Modi, then the state's chief minister, rise to his current office.

Unlike, say, ethnic Chinese in Indonesia, India's persecuted Muslim minority does not have a disproportionate role in business. Their exclusion reflects discrimination. It also limits the potential scale of any capital flight should things deteriorate further. But there is a chance that sectarian violence could return on a large scale. And Mr Modi's chauvinism could also damage the economy by destabilising the federal system. Promoting Hindi as a national language goes down badly in the south and Maharashtra, which have disproportionate economic weight. A potential redrawing of India's parliamentary seats could heighten regional tensions. The government's sinister tendency to undermine rival sources of power could obfuscate problems and promote cronyism.

Mr Modi wants to restore Indian greatness. For him, that seems to involve not only bolstering Hindu pride at the expense of minorities, but also building a large, integrated, high-tech economy. So far the two ambitions have gone together, but that may not always be so. India's Rockefellers and tech stars are hoping that the country's economic modernisation and unification will survive his divisive politics. ■





The mid-terms

Voting wars

ATLANTA

Georgia will again be the scene of explosive battles over electoral fairness

THE CENTRAL schism of the Republican Party is not particularly well-concealed. In the first primary debate to be the party's nominee for governor of Georgia, held on April 24th in Atlanta, it came into stark relief from the opening sentence. "First off, let me be very clear tonight. The election in 2020 was rigged and stolen," said David Perdue.

The ex-senator, who lost a pivotal run-off election in January 2021, is now trying to resurrect his fortunes by playing Donald Trump's anointed avenger against Brian Kemp, the incumbent governor. Mr Kemp is hardly a weak-wristed moderate. In 2018 he was the politically incorrect (and Trump-endorsed) candidate who won his primary by running ads pledging to gather up "criminal illegals" in his pickup truck and exhibiting an impressive gun collection to a nervous suitor of his daughter. Yet in 2022 he is being denounced by Mr Trump as a "RINO [Republican in name only] sell-out". His sin: not overturning the 2020 election after the former president's spurious claims of voter fraud.

Mr Trump's pre-eminence in the party

is clear, even in the aftermath of the attack by his supporters on Congress on January 6th 2021. But the extent of his kingmaking powers is being closely scrutinised in the mid-term party primaries. Among Republicans, the main prerequisite for securing Mr Trump's approval is not any policy commitment but perceived fealty to him and his lost cause. He has solicited primary challengers against many of the ten Republican members of the House of Representatives who voted to impeach him after the January 6th attack—most will probably be out of office by year's end. In Michigan, acolytes of his "stop the steal" faction have al-

ready won the party's nomination to be attorney-general and secretary of state (the chief elections officer).

Georgia is perhaps the most important case of the nationwide intraparty struggle. In 2020 the presidential-election results were the tightest in the country. Just 0.24% of the vote separated President Joe Biden from Mr Trump, a remarkable upset in a state which no Democrat had won since 1992. Mr Trump and his proxies waged an intense pressure campaign on fellow Republicans like Mr Kemp and Brad Raffensperger, the secretary of state, to manufacture evidence to overturn his loss. When multiple audits failed to turn up any such evidence, Mr Trump, in a now infamous phone call, asked for Mr Raffensperger to help "find 11,780 votes".

For refusing his overtures, the president placed both men on his enemies list. As early as December 2020, Mr Trump was encouraging primary challenges to Mr Kemp. Defying the president was thought to have doomed both as dead men walking, politically speaking. In the immediate aftermath, state and local Republican committees booed both and passed resolutions of censure. And yet, remarkably, both are standing again—and have a reasonable chance of survival. The polls show Mr Kemp leading by enough to win an outright majority on May 24th and avoid a run-off.

"My job is to make sure that Brad can look in the mirror every day, knowing that I fought for integrity. And I have walked the line to make sure that I followed the con-▶▶

→ Also in this section

22 **America's Indian boarding schools**

23 **Saving mountain lions**

23 **Educating the undocumented**

26 **Wrongful convictions**

27 **California's cannabis industry**

28 **Lexington: Mark Esper's memoir**

stitution,” says Mr Raffensperger, sitting in the headquarters of the engineering-design firm he founded in a town called Suwanee. (Before the hoopla of 2020, he was a little-noticed and soft-spoken structural engineer.) He is hoping to stave off a Trump-endorsed, stop-the-steal enthusiast, Jody Hice, a congressman who aims to “to stop Democrats before they rig and ruin our democracy for ever”. The two are in a tight race that is likely to require a run-off on June 21st.

Neither Mr Raffensperger nor Mr Kemp is adopting the position of Never Trumper or party dissident, however. Asked why he is standing for re-election, Mr Raffensperger replies that, “for Georgia voters, the number-one issue is to make sure that only Americans vote in our elections”. When asked why he does not make much of the stand that made him a (relatively hard to pronounce) household name, Mr Raffensperger says that is “because America always looks forward”. His references to it are unmistakable but oblique: “History has shown that good always triumphs over evil. And truth always triumphs over untruth...I don’t mean to be philosophical about it,” he says, almost apologetically.

Both Mr Kemp and Mr Raffensperger prefer to spend their time criticising Stacey Abrams, a progressive icon who will again be the Democratic nominee for governor. Mr Kemp argues that he is the best placed to spoil her chances of becoming governor—or even president after that. Mr Raffensperger claims she is agitating for changes to election administration that will leave it susceptible to fraudulent votes by non-citizens. Ms Abrams narrowly lost her election in 2018 to Mr Kemp, but refused to concede, blaming voter suppression for her loss and firing off a federal lawsuit, which is still ongoing. In his book, Mr Raffensperger writes about his “unshakable sense of déjà vu” in 2020 after his experience of the 2018 election.

Controversial new rules are in place, too. In 2021 the Republican-controlled Georgia legislature passed SB202, a law making changes to rules on drop boxes for absentee ballots, early voting and mail-in voting. It also, seemingly punitively, removed Mr Raffensperger as chair of the state elections board, and made it easier for the state to take over county election boards it deemed to be failing.

Progressive legal groups are arguing in court that the tactics amount to voter suppression. “SB202 has made it worse in my mind because one tactic of voter suppression that has been effective is confusion,” says Nsé Ufot, chief executive officer of the New Georgia Project, a voter-registration outfit founded by Ms Abrams. The organisation has set ambitious aims for itself: to register 55,000 new young and minority voters and turn out an additional 150,000

citizens who have not voted before. For Ms Ufot, the stakes feel downright existential. “There’s a clarity among people who run elections about what is at stake,” she says. “Trying to avoid a constitutional crisis focuses the mind in a real way.”

The bad blood between old rivals and the bipartisan tradition of crying foul augur a particularly contentious general election in Georgia. The primary may be more important still: Republicans who believe, against all available evidence, that the past election was stolen because their champion did not win are vying to be in place to certify the next presidential vote. Not long ago, a rematch between Mr Kemp and Ms Abrams might have been seen as a fiendishly fraught outcome. Somehow, it now appears to be the tamer option. ■

Forced assimilation

Stolen children

CARLISLE, PENNSYLVANIA

A report on Native American boarding schools unveils some of their horrors

SOPHIA TETOFF was 12 years old in 1901 when she was sent 4,000 miles from her island home in the Bering Sea to Carlisle, an Indian boarding school in Pennsylvania. Sophia was a member of Alaska’s Unangax people. Five years later, she died from tuberculosis. She was buried in the school’s cemetery and largely forgotten. Her name on her headstone was misspelt. Her tribe’s name was incorrect. Sophia was one of thousands of children separated from their communities, often forcibly, and sent to Indian boarding schools.

Last summer Deb Haaland, the secre-



Carlisle, a long way from home

tary of the interior, whose department manages the Bureau of Indian Affairs, announced the Federal Indian Boarding School Initiative, a comprehensive review of the troubled legacy of such policies. On May 11th Ms Haaland, the first Native American cabinet secretary, released the first volume of the review. The investigation found that from 1819 to 1969, the federal Indian boarding-school system had 408 schools across 37 states or territories. Burial sites were identified at 53 schools (as the investigation continues that number is expected to rise). The Indian children who died at schools far from their families could number in the tens of thousands.

“The consequences of federal Indian boarding-school policies...inflicted upon generations of children as young as four years old are heartbreaking and undeniable,” said Ms Haaland. Forced-assimilation practices included cutting off the children’s long hair, and stripping them of their traditional clothing, language and culture. The government mixed children from different tribes to disrupt connections and force the use of English. There was rampant physical, sexual and emotional abuse as well as malnourishment, disease and overcrowding. Many children were sent out to farms and businesses for months of manual labour. The schools often pocketed their wages.

Ms Haaland was moved to shed light on these traumas by the discovery of hundreds of unmarked graves connected to Indian residential schools in Canada. The review found much evidence of intergenerational trauma caused by family separation and cultural eradication. Ms Haaland’s own grandparents were stolen from their families and sent away to school. Her great-grandfather was taken to Carlisle.

Carlisle was used as a model for other schools. Its founder, Richard Henry Pratt, infamously said in 1892, “Kill the Indian in him, and save the man.” His outlook was not novel. As far back as George Washington it was part of federal policy. Indian territorial dispossession and assimilation through education was considered a cheap and safe way of subduing Native Americans. By 1926, 83% of Indian school-age children were attending boarding schools.

The initiative will continue its search for burial sites. It also intends to identify surviving boarding-school pupils to document their experiences. And it will explore the potential repatriation or disinterment of children’s remains. Sophia’s remains, along with those of nine Rosebud Sioux children, returned to Alaska and South Dakota last summer, where they were welcomed home by their communities. At the review’s unveiling Deborah Parker, head of the National Native American Boarding School Healing Coalition, said: “Our children deserve to be brought home.” ■



Conservation

The concrete jungle

SANTA MONICA MOUNTAINS, CALIFORNIA

The roar of mountain lions mixes with the roar of traffic

LOS ANGELES, as everyone knows, is a noodle bowl of highways. As everyone may not know, it is also one of only two cities in the world where big cats roam wild inside the city boundaries (the other is Mumbai). One even took up residence near the Hollywood sign. But big cats and highways do not mix, which is why Los Angeles will soon be home to one of the world's biggest wildlife corridors.

The cats in question are mountain lions. They live in the Santa Monica Mountains. Their numbers are stable. Their habitat is mostly pristine wilderness, full of deer, the lions' prey. The ecology of their range, the largest urban national park in the world, is healthy, thanks in part to their presence as an apex predator. Yet animals can come under threat without habitat loss. Genetic degradation can be just as deadly.

Slicing through the mountains is Route 101, carrying up to 10,000 vehicles an hour. It cuts the Santa Monica range off from a larger wilderness to the north. The southern tract is not big enough for all the lions, which each require hunting grounds of 60-150 square miles (160-390 square kilometres). The result is a population trapped on an environmental island, with inbreeding and genetic degradation. A study in 2016 found that, given their environment, the Santa Monica mountain lions' chances of extinction in 50 years would be 15-22%; because of their genetic deterioration, the chance of extinction was more like 99.7%.

Four years after that study came the first evidence that the big cats were suffering physical damage: a young male

was found with a 90-degree kink in his tail and with only one testicle descended. Researchers had seen that before. In the early 1990s biologists studying the Florida panther, a closely related animal, found that many of the males had the same genetic flaws. The Florida panther escaped extinction only thanks to the introduction of females brought from Texas to refresh the gene pool.

California does not need to go that far. There are healthy mountain-lion populations north of the Santa Monica range, separated by the ribbon of road. Hidden cameras show the animals crouched at the side of the highway, not daring to cross. The solution is a 165-foot-wide (50-metre) dirt bridge which would allow them to pad high over the traffic.

Such corridors have worked elsewhere, from large spans for elk over the Trans-Canada Highway to a dinky claw-bridge for migrating red crabs on Christmas Island. Angelenos raised money for theirs in a campaign that dubbed the animal in the Hollywood Hills the "Brad Pitt of mountain lions" (handsome, ageing, single). Last month the governor, Gavin Newsom, launched construction.

The animals become sexually mature at 2½ to 3 years and have cubs every other year. So within ten years of the corridor's completion the great-grandchildren of the first mating beyond the mountains could have cubs. Genetically, even a few matings would make a difference. "We'll definitely save the mountain lion," thinks Paul Edelman of the Mountains Recreation and Conservation Authority. "It's just a matter of how long it takes."

Educating the undocumented

Meanness to migrants

WASHINGTON, DC

Texas's governor wants to deny public education to some children living there

AMERICA GUARANTEES every child living within its borders a free public education. This could change if Greg Abbott, Texas's Republican governor, has his way. He has said he intends to challenge a Supreme Court ruling that obliges states to provide free schooling to undocumented immigrants. Perhaps as many as 183,000 pupils are currently in Texas's schools.

For nearly a century every state has required children to attend school. Compulsory-education laws began in colonial days. The rationale was that an educated citizenry was needed for a democracy.

In 1975 Texas revised a law to prevent undocumented children from enrolling in public schools and to allow the state to withhold state funds from districts that educated them. A class-action lawsuit was filed on behalf of Mexican children in Texas who were unable to prove they had come to America legally. Texas lost in the district court, appealed, and the case (called *Plyler v Doe*) was argued before the Supreme Court in 1981. The state lost again: in 1982 the court ruled 5-4 that undocumented children had a right to attend free public school under the Equal Protection Clause of the Fourteenth Amendment. But in a radio interview on May 4th, Mr Abbott said that he plans to challenge this ruling.

About 1.7m undocumented immigrants live in Texas, estimates the Migration Policy Institute, a think-tank in Washington, DC. Texas experienced the second-largest absolute growth of immigrants (after Florida) between 2010 and 2019. Mr Abbott may see an opportunity for his upcoming gubernatorial race. According to polling by *The Economist/YouGov*, 95% of Republicans say that the issue of immigration is important. Appearing tough on immigrants could be politically advantageous.

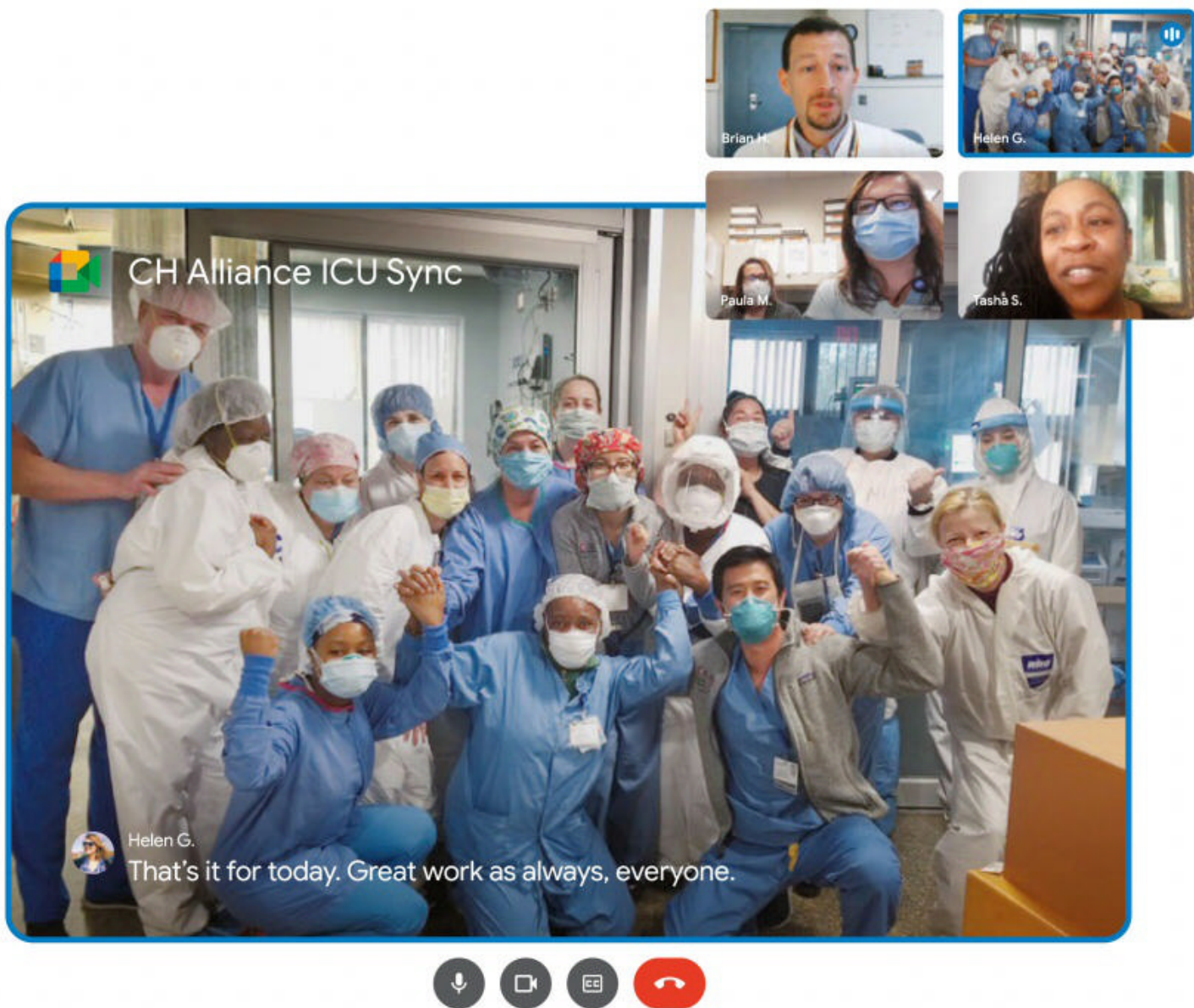
The controversy over a leaked Supreme Court draft opinion to overturn the constitutional right to abortion established in *Roe v Wade* may also provide an opening. "Conservatives have long wished to get out of providing state services of all kinds to illegal immigrants," says Geoff Kabaservice, a historian at the Niskanen Centre, a centre-right think-tank. Given the likely reversal of 50 years of settled law, Mr Kabaservice reckons, Mr Abbott thinks now is a good time to "overturn as many of these kinds of precedents that apply to public services as he can".

Undocumented immigrants have con-▶▶



How Cambridge Health Alliance

 **cares** for their **community** 



Avail. Items	Quantity	Date
Brown rice	1400 5 lb bags	8/3-5
Almonds	260 48 oz packs	8/7 Dane
Chicken thighs	1190 lbs Tina	8/23



is how World Central Kitchen feeds neighborhoods in need.

Nate

Sami

Tessa



56

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A lesson in politics

► continued to face barriers in education. A study from Stanford University found that local police partnerships with Immigration and Customs Enforcement, America's immigration-enforcement agency, reduced school enrolment within two years among Hispanic pupils by nearly 10% compared with districts without such policies. The programme displaced over 300,000 Hispanic pupils in America between 2005 and 2011. In 2011 a new law in Alabama required public schools to determine the citizenship and immigration status of children enrolling in school. (It was eventually blocked.) The Trump administration sought ways to prevent undocumented children from enrolling in school, but gave up on the effort.

Mr Abbott thinks Texas spends too much educating such children. Rice University's Baker Institute for Public Policy estimates the cost at \$1.5bn in 2018 (less than 3% of the state's outlays on education). This may be an overestimate. "Marginal cost might be a better way to look at it," notes Alex Nowrasteh of the Cato Institute, a libertarian think-tank. "Adding one more student does not increase cost very much...It's not like they are going to shut down a school." A full calculation should also consider tax revenues. The Baker Institute estimates that revenue collected from undocumented immigrants exceeds state expenditures on them by \$421m.

How serious is Mr Abbott's intent? A successful challenge to *Plyler* would take years, from passing state legislation to the subsequent legal challenges and an eventual Supreme Court decision. "This is a 40-year-old precedent at this time on the federal level. I don't think there's a lot of appetite to pursue this," says Mr Nowrasteh. Maybe, but there is appetite for the politics of it—and conservatives have Supreme Court precedents in their sights. ■

Wrongful convictions

Delayed justice

NEW YORK

The number of exonerations has risen, and their pattern is revealing

IN THE AUTUMN of 2006, two teenage girls were sexually assaulted in Detroit. Within weeks, the police had their man. Terance Calhoun, a local 19-year-old, was spotted in a liquor store nearby and appeared to match the composite sketch the police had produced. He pleaded no-contest in February 2007 and was dispatched to prison.

There was just one problem: he didn't do it. A follow-up investigation in 2019 found a litany of red flags in how the case was handled, including an unrecorded police interrogation and the fact that Mr Calhoun, who was found to be cognitively deficient, had been questioned without a lawyer present. On April 27th, after 15 years behind bars, he was exonerated.

He was not alone. The government does not record figures, but in 2012 a pair of professors founded the National Registry of Exonerations (NRE) to keep track. It counted 161 exonerations last year, up more than sixfold compared with 1989, when there were just 24 (see chart). These shed light on weak spots in America's justice system.

An exoneration "doesn't just happen on its own", says Barbara O'Brien of Michigan State University, who runs the NRE. A crucial development has been the rise of "professional exonerators". These were spurred by improvements in DNA testing, which spread public awareness of mistakes, and can take two forms. First, advocacy groups such as the Innocence Project play a role in lobbying for individual cases. The WMU-Cooley Innocence Project, a part of Western Michigan University's law school, was a critical component in Mr Calhoun's case. Second, and perhaps more important, are Conviction Integrity Units (CIUs), branch-

es of prosecutors' offices tasked with investigating possible miscarriages of justice. Together, these professional exonerators were responsible for 60% of overturned convictions last year.

Some CIUs require cases to be DNA-based; a few consider only cases which have been tried (as opposed to ones with guilty pleas); others look at every application. Once it takes on a case, a CIU combs through police files, court transcripts and lab results, in search of flaws. The CIU in Wayne County, Michigan, pieced together the alarming story of Mr Calhoun's conviction. It found that the DNA analysis of a condom at the second crime scene, completed just three months after his conviction, had excluded him as its potential donor. This result was apparently never shown to Mr Calhoun's lawyers. Other discoveries included the fact that one of the victims had clearly described a perpetrator with "braids" and a distinctive "puzzle tattoo", neither of which Mr Calhoun had.

Since the first CIUs were established in the early 2000s, 93 other jurisdictions have followed. Last year 16 were formed, from Bessemer, Alabama, to Monterey, California. Minnesota set up a statewide CIU last August. Yet many are understaffed and underfunded, and they remain few in number relative to the more than 2,400 elected prosecutors across the country.

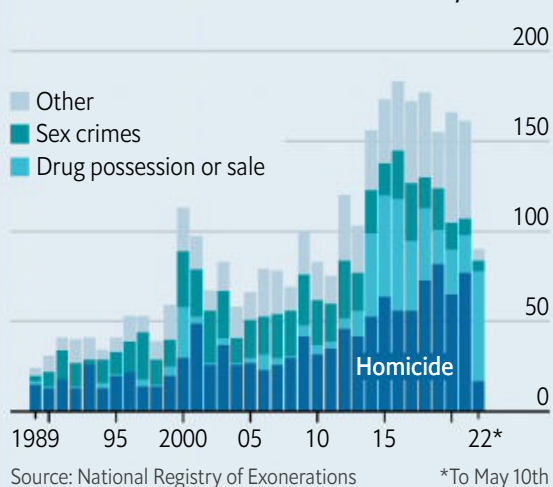
Official misconduct is the main reason behind most exonerations: it played a role in 102 of the 161 cases last year. In 2012, for example, Ronald Watts, a Chicago police sergeant, was arrested for stealing federal funds from an undercover FBI informant. It gradually emerged that he had been planting drugs and extorting victims over the course of a decade, stitching them up on bogus charges if they refused to pay. Starting in 2016, the CIU in Illinois's Cook County began identifying and tossing out all convictions linked to him. So far over 100 have been overturned.

Mistaken eyewitness identification accounts for about a third of exonerations. Misleading forensic evidence is relatively rare, responsible for roughly 20% of wrongful convictions. Other factors include perjury and, as in Mr Calhoun's case, false or coerced confessions. Nearly three-quarters of the exonerated who falsely confess have been found to be mentally ill or intellectually disabled.

Since 1989 the NRE has recorded more than 3,000 exonerations in America, amounting to 27,080 years of lost freedom. That is just the tip of the iceberg. Samuel Gross, one of the project's co-founders, estimates that the wrongful-conviction rate may be as high as 2%, or some 20,000 false felony convictions a year. Finding and overturning those injustices is essential work—for Mr Calhoun, now in his mid-30s, and the many others like him. ■

Guilty until proven innocent

United States, number of exonerations, by crime



California cannabis

High maintenance

EUREKA, CALIFORNIA

The world's largest legal weed market is going up in smoke

KAREN AND TOM HESSLER moved to their remote corner of Humboldt County, California, in 1971. Distrust of the government during the Vietnam war and a desire to live off the land drove them to settle in Ettersburg, some 225 miles (360km) north of San Francisco. “We thought we’d come out into the wilderness, and we could just do our thing,” Mrs Hessler says. The only way to get to the Hesslers’ farm is to navigate miles of serpentine dirt roads through northern California’s towering redwoods. The isolation that so intrigued “back to the land” hippies like the Hesslers also turned Humboldt County into the cannabis capital of California—and, therefore, America.

Humboldt, Mendocino and Trinity counties make up the “Emerald Triangle”, an area roughly the size of Massachusetts famous for growing weed. Locals say the dense forests act as a “redwood curtain”, affording farmers seclusion when cannabis was still illegal. For decades cannabis farmers were seeing green. Johnny Casali, a small farmer in Humboldt County, says he remembers selling some of his crop for \$5,800 a pound (\$2,600 a kg) in 1990.

California legalised medical marijuana in 1996 and recreational cannabis in 2016. The state is now the largest legal weed market in the world, raking in \$5.2bn in sales in 2021. Proposition 64, the ballot measure that allowed recreational weed, was heralded as a way to shrink the illicit market, and give those harmed by the war on drugs

a chance to join the legal economy. Some of that has happened. Mr Casali was released in 2004 after serving eight years in prison. He now runs a legal cannabis farm.

However, many cannabis businesses in California are floundering. Supply surged as more growers entered the legal market. In 2017 ERA Economics, a consultancy, estimated that California consumes 2.5m pounds of the 13.5m-15.6m pounds of weed produced there each year. Farmers and shop owners complain that onerous taxes and rules make running a profitable legal weed business nearly impossible. Last autumn was “a perfect storm of everything that could have gone wrong”, says Nicole Elliott, California’s top pot regulator. Prices fell to \$400 a pound; the cultivation tax, of \$161 a pound for buds, was raised because of inflation; and labour was scarce.

The price has recovered somewhat; in April it was about \$800 a pound. But the legal framework set up by Proposition 64 spells long-term trouble. It gave local municipalities the power to decide whether they would allow cannabis to be grown and sold. In their forthcoming book “Can Legal Weed Win?” two economists, Robin Goldstein and Daniel Sumner, argue that local control ensured that the illegal market would continue to flourish in places where legal weed was banned. Local control also helps explain why California lags behind nine states in weed shops per person. By comparing sales figures with drug-use sur-

veys, Messrs Goldstein and Sumner estimate that only about 25% of the weed sold and consumed within California is legal. Many pot farmers in Humboldt say that some of their fellow growers have gone back underground to make a profit.

One way to try to stamp out the illegal market, including the organised-crime groups which have set up shop in the Emerald Triangle, is to ramp up enforcement. But that is not popular among officials who want to make up for the trauma inflicted during the war on drugs. In the 1980s, “it was like the military coming in,” says William Honsal, Humboldt County’s sheriff. “A lot of the old farmers still have PTSD based upon the helicopters flying low.” He says his department doesn’t have the resources anymore to go after illegal farmers even if it wanted to. Of the 120 deputies that roam Humboldt, only four are devoted to smoking out illegal cannabis.

Programmes to help former offenders have fallen short. An investigation by the *Los Angeles Times*, published in January, found that at least 34,000 old drug charges for marijuana had yet to be cleared.

Wake up and smell the weed

Chipping away at local control by incentivising—or compelling—cities to join the legal market might help the industry. But the change farmers want most is tax reform. Some cities and counties have suspended local taxes on cannabis. Gavin Newsom, California’s Democratic governor, has promised to “look at tax policy to stabilise the market”. Meanwhile, Humboldt farmers are getting crafty to keep their businesses afloat. Some take part in cannabis tours, where Bay Area potheads are whisked to different farms to see what happens behind the redwood curtain.

Humboldt farmers hope federal legislation will save them by creating a national market. “When California cannabis becomes legal”, says Mr Casali, “the Emerald Triangle will be the Napa Valley of weed.” They might be disappointed. Because interstate commerce is banned, states that might have bought California pot have instead built their own industries. If and when weed is legalised, these states may strive to prop up their local businesses.

California may also have trouble competing with lower-cost states. Industrial, indoor farms have proliferated as the cannabis industry has begun to resemble Big Ag. But the state’s high energy costs make growing pot indoors expensive. In future farmers may choose to grow in somewhere like Oklahoma—a medical-only state that licenses new businesses quickly—rather than California, where they must also contend with high taxes and burdensome regulations. “People gotta wake up in California, man,” warns Mr Hessler, “before it’s way too late.” ■



Don't take a leaf out of California's book

Lexington | Donald Trump's brutal turn

Mark Esper's memoir of the dying months of the Trump administration is a frightening read



AHEAD OF THE mid-terms in 2018, the *New York Times* published a sensational piece from a “senior official” in Donald Trump’s administration who claimed to be “working diligently from within to frustrate parts of [the president’s] agenda and his worst inclinations”. After it emerged that the author was Miles Taylor, a little-known staffer in the Department of Homeland Security, the *Times* was accused of mis-selling. Yet it turns out Mr Taylor’s words were before long equally true of the secretary of defence.

In his much more lurid confessional, “A Sacred Oath”, Mark Esper describes his tenure at the Department of Defence as an 18-month white-knuckle effort to prevent Mr Trump starting “unnecessary wars”, launching “strategic retreats” and causing “politicisation of the DOD” and “misuse of the military”. And to do so while avoiding getting sacked, because that would probably lead to Mr Trump replacing him with one of the sycophants and crazies the president was increasingly surrounding himself with.

On the plus side, Mr Esper, a former defence-industry lobbyist, claims to have helped persuade Mr Trump not to shoot Black Lives Matter protesters (“Can’t you just shoot them. Just shoot them in the legs or something?” the president asked the chairman of the joint chiefs of staff); or to withdraw American troops from Afghanistan and Germany; or launch “missiles into Mexico to destroy the drug labs”. Yet Mr Esper, by his admission, could at best mitigate the damage Mr Trump did. He was fired in November 2020, after which the president carried out the feared purge of senior Pentagon staff and their replacement with some of the most malign or inept individuals in his coterie.

Hair-raising accounts of the Trump presidency are now so familiar it is easy to become complacent about them. Mr Trump’s authoritarian instincts and lack of principle are a matter of record. Even so, Mr Esper’s memoir stands out for a few reasons.

One is the credibility of his revelations. A stolidly partisan establishment conservative, plucked from relative obscurity by Mr Trump, he owed him everything, resented his left-wing critics, got along with many of his henchmen and took a fairly relaxed view of the president’s foul-mouthed eccentricities. He appears to have taken such little note of Mr Trump’s behaviour in the first three years of his presidency that Mr Esper was surprised the first time

he heard Mr Trump announce a sudden withdrawal from South Korea and call Vice-President Mike Pence and other members of his top team “fucking losers”. (The Pence incident “really caught my attention”, Mr Esper writes in wonder.) Having risen higher than he could have expected to, he is also eager to see the upside in whatever he did. He claims to have run an unusually harmonious Pentagon leadership team, to have overseen a golden age of co-operation between the Defence and State Departments, to have moulded Mr Trump’s wild orders into all manner of policy successes. “Judgments should be made...on the lemonade that was made, rather than the lemons that were handed to us.”

That, importantly, chimes with a common defence of Mr Trump which Republican politicians are already starting to dust off, as the prospects of his running again in 2024 increase. He was unconventional, but had great and successful policies, it is said. Yet, as Mr Esper makes clear, unwittingly at times, that was not true. The Trump administration did a lot of solid work, as all governments do (and, who knows, perhaps the changes Mr Esper made to defence recruitment and spending programmes were as groundbreaking as he claims). But such progress was generally made despite Mr Trump, often surreptitiously. And much of what the president touched directly was a disaster.

He was the biggest leaker in the leakiest of administrations. He was unable to make decisions, unable to maintain a consistent policy, was forever wasting his cabinet members’ time with meetings that would turn, no matter the subject under discussion, into extended presidential rants on “his greatest hits of the decade: NATO spending, Merkel...closing our embassies in Africa”. He badgered Mr Esper obsessively about the ugliness, in Mr Trump’s view, of American battleships (“He wanted to see ships that looked more like yachts”). He claimed to be tough on China but, according to Mr Esper, was inconsistent, weak and pandering until, seeking a distraction from his mismanagement of covid-19, he started talking tough ahead of the 2020 election.

Describing the changes that Mr Trump and his White House team underwent in the late stages of his term is Mr Esper’s other big contribution. The president’s demands—motivated entirely by personal political calculation, the former defence chief says—grew more outlandish and brutal. Mr Trump, for all his thuggishness, had had a long-standing distaste for violence. But over the final 18 months of his term, Mr Esper writes, “the president or some of his top White House aides proposed to take some type of military action in or against other nations on multiple occasions...Other recommendations were so careless that they easily could have provoked a conflict.” Including at home, given Mr Trump’s frenzied demand for violence against racial-justice protesters in the wake of George Floyd’s murder. His late-stage cast of sycophants, led by Mark Meadows and Robert O’Brien (both of whom Mr Esper despised), encouraged his worst instincts.

Esper-sensory perception

It is a chilling account, which has elicited not a breath of concern from Mr Trump’s party. The large majority of Republicans who did not break with him over the deadly Capitol riot will not leave him now. Whether Mr Trump will be the next Republican presidential nominee appears to be largely for him to decide. Yet it is already clear, from Mr Esper’s and other accounts, that if he does return to the White House Mr Trump and his cabinet will be very different from their earlier versions. Trump II would be more reckless and aggrieved, and probably much less restrained. ■



Brazil

The cross on the ballot

BELO HORIZONTE

Evangelicals will help decide Brazil's presidential election

POLITICAL HOPEFULS always cast doubt on the abilities of their competitors. But when Luiz Inácio Lula da Silva finally confirmed on May 7th that he would be running in Brazil's presidential election in October, his campaign speech included attacks which were more moralistic than most. Lula, as he likes to be known, was scathing about Jair Bolsonaro, the incumbent, arguing that a president who does not cry for those rummaging for food in rubbish or for the 660,000 Brazilians dead from covid-19 is not worthy of the title. "He may call himself a Christian, but he has no love for his neighbour," he said.

Lula, who was president from 2003 to 2010, has much to gain by doing down his rival's godliness. Evangelical or born again Christians make up around a third of Brazil's electorate. In 2018 seven out of ten of them chose Mr Bolsonaro over Fernando Haddad, the candidate from Lula's Work-

ers' Party, according to one poll. (Lula was not on the ballot.) In April another pollster found 52% of evangelicals would vote for Mr Bolsonaro in the first round, compared with 30% for Lula. "[Evangelicals] are going to decide the elections," says Victor Araújo, who writes about the politics of Brazilian Christians.

That the presidency of Brazil, which has more Roman Catholics than any other country, would be determined by evangelicals would have been hard to believe half a century ago. Then they made up just 5% of the population; Catholics, by contrast, accounted for 92%. Evangelicals look set to become the biggest religious group in Bra-

zil within a decade. In São Paulo, the biggest city, the number of evangelical churches increased by a third between 2011 and 2020, to over 2,000.

This shift is already transforming society. Brazilians listen to gospel music more than samba. Members of the *Seleção*, Brazil's revered football team, frequently praise God on the field. Bigger churches, which often operate as multinational companies, report profits touched by the divine. Church revenues almost doubled between 2005 and 2013, to over \$1bn.

Evangelicals are also changing Brazilian politics. Since the 1990s they have sought to elect local representatives who can protect their churches' interests. Today, these interest groups are national. In Congress, 195 of the lower house's 513 deputies belong to the evangelical caucus.

Mr Bolsonaro is Catholic but his wife, Michelle, is evangelical. The family enjoys the support of the country's most powerful pastors, such as André Valadão, who once shared a pulpit with one of Mr Bolsonaro's sons. On Instagram, a social-media app, Mr Valadão puts up posts explaining to his 5m followers why it was acceptable for Cain to marry his sister and why Christians should not vote for the left. Edir Macedo, a billionaire bishop who owns Brazil's second-largest TV station, backed Lula in 2002 but Mr ▶▶

→ Also in this section

30 Brazil's shadow state of crime

32 Bello: Political violence in Colombia

► Bolsonaro in 2018. Lula does have the support of Paulo Marcelo, a left-leader in the Assembly of God, Brazil's biggest church. But that is one person against "an army" of pastors, says Juliano Spyer, an academic.

The megachurches do not represent all believers. Brazil has thousands of smaller churches, and many different versions of evangelicalism. More middle-class types are less likely to vote for Mr Bolsonaro. Pentecostals, who make up around two-thirds of evangelicals, are more so. But while their highest-profile leaders often resemble the white, affluent men who form Mr Bolsonaro's core support, most rank-and-file members are poor and black. It is their votes that the candidates will be battling for in October.

Some will plump for Mr Bolsonaro because they believe he is upright and pious. In Belo Horizonte, a city in the bellwether state of Minas Gerais, Carlos, a Pentecostal pastor, sports straightened Afro hair and a grey pinstripe suit. Standing in front of a golden pulpit with "JESUS" written in large black letters down the front, he explains that church is "a hospital for the soul", which he claims saved him from a life of crime. Mr Bolsonaro, as "a man of God", is the person to defend it.

Others simply like the ideas that Mr Bolsonaro champions. "Evangelicals are not voting for him as a person, they are voting for principles," says Isnard Araújo, a councilman and pastor, of the thrice-married president. These include protecting "family values" such as marriage, "manly" behaviour and opposition to abortion. Evangelicals are not the only voters who find these ideas appealing, says Fábio Baldaia of the Federal Institute of Bahia, but they respond to them more than most.

Evangelicals may also be more exposed to fake news on social media, which in turn could influence how they vote. The WhatsApp messaging service is used by 145m people in Brazil, the second-largest number of users in the world. A recent poll found that 92% of evangelicals belong to religious WhatsApp groups, compared with 71% of Catholics. In the same survey, half of evangelicals said they had received fake news from such chats. Others are told more explicitly by their pastors how to cast their vote. "This is the person who marries you, buries your father, baptises your kids, and visits you when you are sick," says Filipe Gibran, a pastor in Belo Horizonte.

But not all churchgoers embrace the politics of their pastors, warns Vinicius do Valle of the University of São Paulo. Many are tired of the politicisation of their faith. Evangelicals "have a thousand other identities", he says. In Salvador in north-eastern Brazil, Mr Bolsonaro got less than a third of votes cast in 2018, despite the city's fast-growing Pentecostal population. This may be because Salvador is 80% brown and

black. Mr Bolsonaro has made derogatory remarks about black people; he once said that members of a *quilombo* (a community descended from runaway slaves) "don't do anything" and were fat. Many in Salvador consider the president racist, says Cláudio Almeida, a researcher from the city.

Poverty also plays its part. Almost a third of Pentecostals have a monthly income of half the minimum wage or less (ie, less than \$118 at current exchange rates). While some will be swayed by otherworldly promises of rewards in heaven, others will vote based on their rising bills.

Possibly the most decisive votes will come from women, who make up 58% of evangelicals. A recent survey showed that while men clearly prefer Mr Bolsonaro, among evangelical women, Lula leads by nine percentage points. This is in keeping with broader surveys which show Mr Bolsonaro trailing Lula with women of all religions. "In some ways, gender is more important than faith," says Cláudio Couto, a

political scientist. (In 2018 poor women helped elect Mr Bolsonaro.)

Many evangelicals will never vote for Lula. He was convicted of corruption after leaving office, although the conviction was later overturned. His recent comments that abortion should be treated as a public-health issue worry many religious types. But his critiques of Mr Bolsonaro's presidency may resonate with enough of them to swing the vote in his favour.

"What do you want me to do?" Mr Bolsonaro asked critics of his slow response to the virus and anti-vaxxer statements at one point during the pandemic. "I'm Messiah [his middle name] but I can't do miracles." For Alex, an evangelical bus driver who spent two weeks hospitalised with covid, such an attitude was inexcusable. "God saved me, but if the government had secured vaccines, thousands of people would not have died," he says. He voted for Mr Bolsonaro in 2018. This time, he says, he will not do so again. ■

Crime

Crack on

SÃO PAULO

South America's biggest criminal gang has immense sway in Brazil

BOMBS AND bullets could not remove *cracolândia*, the largest open-air drug market in South America, from the heart of São Paulo. When violence failed, the police took away the black tents in which women weighed packages of powder. They raided the surrounding hotels, where customers ordered food on delivery apps while waiting for their illicit orders. Still, the business flowed. The dealers merely put up umbrellas and sold drugs from backpacks.



Behind bars, but in control

But in March *cracolândia* emptied. Hundreds of dealers and addicts dispersed without any sign of violence. The police initially claimed credit, but whispers said that the move had instead been orchestrated by First Capital Command (PCC), South America's largest gang, on the orders of its imprisoned leadership. The drug-sellers, in cahoots with the PCC, are pitching up elsewhere in smaller groups.

That a gang could do what the Brazilian police could not is perhaps not terribly surprising. In some ways the PCC has set itself up as an alternative form of government, according to Gabriel Feltran, a sociologist who has studied the group for decades. Many poorer Brazilians "feel they can trust the PCC more than the state", he says.

Last year the US Treasury named the PCC as one of the most powerful criminal organisations in the world. The group is now involved in everything from petty crime to international drug-smuggling. It first formed in São Paulo's overcrowded prisons in the 1990s, and still counts many thousands of inmates as its members. In 2017 the PCC was behind the beheading and killing of dozens of inmates in various prisons. The group is thought to control the trade in stolen phones that plagues São Paulo, Brazil's biggest city, where a mobile phone is reported stolen every 3.5 min-►



**“They helped us change the game with
AI, 3D and Infosys Cobalt cloud-first solutions.”**

- Roland-Garros



utes—and, with it, access to the owner's banking app. On April 25th a young man was shot for his phone by a fake delivery driver. After the phones have been hacked to gain access to the banking app Pix (see Finance section), they are sold.

But the group has pretensions to be greater. It loftily claims to be motivated by a desire to help the “oppressed of the system”, rather than just to make a juicy profit. The gang's rules are designed to benefit a “fraternity of crime”: it provides loans, weapons and a network of contacts to help illicit enterprises flourish. It acts like a

“government of the crime world”, says Bruno Paes Manso, who co-wrote a book on it.

Indeed some think the group is behind the dramatic fall in crime in the state of São Paulo. Since 1999 its homicide rate has plunged by 80%. It has gone from being one of the most dangerous places in Brazil to one of the safest. Although police take credit for the decline, academics point out that the biggest falls occurred in the most violent suburbs, at around the time that the PCC began to make its presence felt in such places. To end the gang wars of the 1990s, the group created its own parallel

court system in which to settle disputes, says Mr Feltran. It mediated among gang members' families, churches and other members of civil society.

Today order is maintained by members known as *disciplinas* who hand out punishments, such as beatings, to those who break their rules. Many residents find them less threatening than the police, who killed 6,000 Brazilians in 2020. (Police in the United States, by contrast, killed 1,000 people that year.) One of the group's maxims is, “Crime strengthens crime.” It pays to be strong where the state is weak. ■

Bello Staying alive

Colombia's tragic history of political murder still haunts the country

FOR MONTHS opinion polls have made Gustavo Petro, a leftist populist, the front-runner in Colombia's presidential election, which is due to take place on May 29th. But Mr Petro's challenge is not just to defeat his rivals, chief among them Federico Gutiérrez, a centre-right former mayor of Medellín. It is also to stay alive. Earlier this month Mr Petro cancelled a two-day campaign trip, for reasons of security. His team said it had information that La Cordillera, a paramilitary group, was planning to kill him.

This threat conjures up ghosts from Colombia's past. In 1989 Bello spent a day in the southern city of Palmira watching César Gaviria campaign. He was followed by three ambulances, one equipped with an intensive-care bed. He spoke from behind a bullet-proof rostrum, surrounded by a huddle of six policemen clutching Uzi submachineguns. Mr Gaviria had replaced Luis Carlos Galán, a Liberal reformer who was gunned down at a rally three months before. By the time Mr Gaviria was elected president in 1990, two more candidates, both left-wingers, had been shot dead.

Those were the days when Pablo Escobar, the boss of the Medellín drug mob, had declared war on Colombia's political establishment. The country is much improved since then, thanks first to a security build-up, though one not free of abuses, by Álvaro Uribe, president from 2002 to 2010, and then a peace agreement with the FARC guerrillas in 2016 by his successor, Juan Manuel Santos. The murder rate fell by almost two-thirds between 2002 and 2017.

But security has deteriorated since then. Iván Duque, the current president, has failed to make the most of the peace agreement. In November he claimed to have dismantled the Gulf Clan, the larg-

est paramilitary drug-trafficking organisation, when troops arrested its boss, Dairo Antonio Úsaga. But this month, hours after Mr Úsaga was extradited to the United States, the Clan shut down a large swathe of north-western Colombia with a four-day “armed strike”.

Mr Duque has politicised the security forces, naming as commanders people close to Mr Uribe. According to prosecutors, several retired officers have links to the Gulf Clan. When Mr Petro alluded to that in a tweet after six soldiers were killed by drug-traffickers in April, General Eduardo Zapateiro, the army commander, attacked him for using their deaths for “campaign narratives” and offered other criticisms of the candidate. Many opposition figures saw this unusual political intervention as unconstitutional, and called for General Zapateiro to be sacked. But Mr Duque defended him.

If Mr Petro wins, he would be Colombia's first avowedly left-wing president. He was once a member of M-19, a nationalist guerrilla group. But that is not the reason he alarms many Colombians.



Rather it is because until recently he was an enthusiastic supporter of the late Hugo Chávez, Venezuela's elected autocrat. He now presents himself as a moderate and has pledged not to expropriate any businesses. But some of his proposals still seem quite extreme. He promises, for example, to guarantee public employment to all the jobless (unemployment stands at 12%) and to persuade the central bank to print money to finance the government. He wants to re-establish diplomatic relations with Venezuela. Other proposals are opposed by reactionary landowners and cattle-farmers, such as a plan to tax idle land.

Colombia is a country of checks and balances. The powerful constitutional court thwarted Mr Uribe's attempt to turn himself into president for life. The central bank is independent. Mr Petro would lack a majority in the Congress, although he might secure one eventually.

Mr Petro wears a bulletproof vest and does not announce his venues until the last minute. If he were to be killed it would be a moral indictment of Colombian democracy that would risk a downward spiral into violence. In 1948 Jorge Eliécer Gaitán, a demagogic populist who like Mr Petro was a crowd-puller, was shot dead in Bogotá, the capital. He had said, paraphrasing the Gospel of St Luke, “If they kill me, there will not be left one stone upon another”. And so it came to pass: the centre of Bogotá was almost destroyed in days of rioting. Colombia was plunged into ten years of violence in which perhaps 180,000 people died.

That should be a warning to any would-be assassins and their sponsors. If he is elected Mr Petro may prove to be a bad president. But it is up to Colombia's institutions to restrain him and only they can do so peacefully.





India

Saffron nation

DELHI

Narendra Modi and his party are remaking India into a Hindu state

THE PATTERN is plain to see. On the occasion of a religious festival, youths affiliated to the *sangh parivar*, or the Hindu-nationalist “family of organisations”, march through a densely packed slum. When the rowdy young men, sporting saffron-coloured clothes or flags and brandishing swords, reach a mostly Muslim neighbourhood, their chants turn to taunts and insults. Muslim boys start throwing stones. In the ensuing fight shops get looted, houses burned and lives lost. Reporters tally the damage. This is typically lopsided, inverting the proportions of India’s 79% Hindu majority and 15% Muslim minority. No matter. The *sangh* gleefully choruses its mantra: “Hindus are in danger! Unite!”

Over the past 50 years, Indian governments have repeatedly dampened such local eruptions by mouthing words of regret, paying a bit of compensation and tapping some retired worthy to write a soon-forgotten report. No longer. The Bharatiya Janata Party (BJP) which rules both at the centre in Delhi, the capital, and in about half of India’s states, is itself a child of the

sangh. Many of its top leaders started as foot soldiers in just the sort of gangs that so predictably spark trouble.

Small wonder that as a bigger-than-usual spate of nasty communal clashes broke out across a swathe of central India during this spring’s festival season, BJP officials made scant effort to calm things. Instead they loudly invoked the right of Hindus to “practise their faith”, blamed Muslims for the violence and demanded exemplary punishment. Following a mini-riot in Delhi on April 16th, provoked once again by sword-waving youths menacing a mosque, Kapil Mishra, a local BJP leader, quickly spun the events as a Muslim con-

spiracy. “They should be identified and their homes should be bulldozed,” he declared. A few hours later bulldozers duly rolled in, smashing Muslim property for alleged building-code violations.

The increasing use of summary collective punishment is disturbing enough—the demolitions in Delhi followed identical post-pogrom targeting of Muslims in three other BJP-ruled states. More telling still has been the response from higher up in the party, and in particular from Narendra Modi, India’s prime minister. The leader’s reaction to months of sporadic communal violence and rising social tension, and to loud calls from activists, politicians and even retired civil servants for him to do something has been absolute silence.

To many Indians and in particular to the country’s 200m Muslims, the world’s biggest religious minority, the government’s shrug of indifference to growing distress is deeply ominous. It does more than offer tacit approval to mob violence and mob justice. It suggests that in the emerging Hindu *rashtra* (state) envisioned by the *sangh*, some will always be more equal than others, with religious identity becoming a measure of citizenship. It also suggests that what lies in India’s future may not merely be further sporadic, localised troubles, but something wider and more painful.

India has long stood out proudly in Asia, precisely because of its success in building a nation from an extraordinary diversity of religions and ethnicities. It has ▶▶

→ Also in this section

35 Sri Lanka is falling apart

35 Australians’ dismal electoral choices

36 Covid-19 officially hits North Korea

37 Banyan: The Taliban’s mixed messages

38 Okinawa’s place in Japan

enjoyed both democracy and relative peace, even as its neighbours succumbed to majoritarianism. Pakistan tried to shove the Urdu language down Bengali throats, sparking a bloody war that gave birth to Bangladesh. Sri Lanka's Sinhala majority sought to lord it over the island's ancient Tamil minority, triggering a 26-year civil war that left 300,000 dead. Even tiny Buddhist Bhutan hounded out its entire Nepali Hindu minority—a sixth of its population—in the 1990s. Majority muscle-flexing has reduced all too many Asians from citizenship to tenuous subjecthood.

With its robust democracy, independent courts, noisy press and fissiparous diversity even within big categories such as Hindus, could India really embrace majoritarian rule? Surely this goes against the grain of its own history. In the messy partition at the end of British rule in 1947, Muslims who feared Hindu majoritarianism created the new state of Pakistan, while those who hoped for an all-embracing, secular country remained with India.

White flags

Over time, however, the secular notions enshrined in India's constitution have decayed. In 1992, when Hindu extremists demolished a 16th-century mosque, which they claimed was built on the site of the god Ram's birth in the northern town of Ayodhya, they sparked a decade-long cycle of bloodshed. India's establishment was, by and large, appalled. Yet in 2019, when the Supreme Court ruled that although the demolition was a crime, the property should be given to a Hindu trust, the same establishment cheered.

During this period the institutional vigilance needed to sustain pluralism had slowly eroded, with police, courts and the press across much of India growing partisan. The global wave of Islamist terror in the 2000s, which also struck India hard, did not help. The use of disparaging language about minorities was long shunned in polite society. It is now increasingly acceptable. Even as Muslims grew as a share

of population, their numbers in Parliament, the civil service and security forces did not (see chart).

Hindu-nationalist dogma has filtered into mainstream discourse by a slow-drip process. This has been propagated by the Rashtriya Swayamsevak Sangh or RSS, a volunteer service corps founded in 1925 and once regarded by many Indians as cranks. Myriad affiliated groups (including the BJP) with tens of millions of members, amplify the word. Their main message, that Hindus must unite to face imminent danger, may sound absurd in a country with an unassailable preponderance of Hindus. But the urgency and passion of the cry, set against the heroic narrative of a Hindu *reconquista* after centuries of Muslim and European rule over Mother India, is irresistible for many.

And as the BJP has found, promoting "Hindu consolidation" by pointing to a common enemy—generally Muslims—is electoral magic. It erases the divisions of caste and ethnicity that for decades fragmented the Hindu electorate, and in doing so gave minorities some weight in the game. Again and again the BJP has entered a contest, stirred up hatred, and walked off with victory. That success has brought more power and more money in a self-reinforcing cycle, such that even Mr Modi's political rivals now compete in burnishing their pukka Hindu credentials rather than in defending secular ideals, let alone defending actual Muslims.

In this way, a narrative of the awfulness of Muslims has grown increasingly entrenched, and is all the more easily exploited by the *sangh's* zealots. In states ruled by the BJP this shows in policies to counter such imagined abuses as "love jihad", "land jihad" and "job jihad", supposed campaigns to usurp Hindu women, property and opportunities. Petty rules are imposed to ban veils in schools, ban public prayers, ban the Muslim call to prayer and, in the BJP-ruled state of Karnataka this year, even to ban Muslim street traders from plying their wares near Hindu temples. Tightened

restrictions on cattle slaughter, violently enforced in many parts by vigilantes tacitly supported by the state, have recently been followed by efforts to proscribe *halal* butchery of any kind. Yet another campaign seeks to delete Muslim-sounding names from Indian maps.

At the most extreme end of the Hindu-nationalist spectrum, speakers at public rallies across northern India in recent years have launched bidding wars of threats against Muslims, from mass rape to mass expulsion. On May 7th Haribhushan Thakur Bachaul, a BJP politician in Bihar, in eastern India, declared that Muslims should be burned alive just like effigies of the Hindu demon Ravana.

All but a tiny portion of Hindus regard such talk as madly over the top. Yet in part because of the reluctance of either Mr Modi or his RSS mothership to intervene, the demonising tone has become commonplace, and not just regarding the Muslims minority. Other groups such as Dalits, leftist activists (dismissed as "urban Naxalites") and liberal do-gooders (smeared as "lib-tards" and "pseudo-seculars") have become the targets of digital troll armies and, dismayingly often, of the law.

The large Christian (35m) and Sikh (25m) minorities are not spared, either. False rumours of conversion, in many cases fanned by BJP-appointed officials, have led to mob attacks on priests and church-run schools. When farmers, many of them Sikhs from Punjab, protested against farming reforms last year, the BJP tried to link them to Sikh separatist groups that mounted an armed insurgency in the 1980s.

Green light

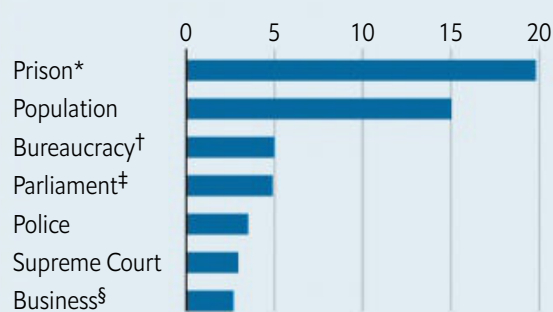
Such charges carry ominous echoes. In 1984, angered by military operations in Punjab, Sikh bodyguards assassinated Indira Gandhi, the prime minister of the day. Anti-Sikh pogroms erupted in some 40 cities, with police often failing to intervene. The death toll is estimated at 10,000-17,000. Given the mounting drumbeat of intimidation against the far bigger Muslim minority, it is frightening to think what spark it might take to set off a similar conflagration today. And Mr Modi's record as chief minister in Gujarat, where his government did nothing to prevent bloodshed during anti-Muslim rioting in 2002, does not offer reassurance in case it does.

So far, India's Muslims have responded to the accumulating humiliations with remarkable cool. When the city's bulldozers growled into a Muslim part of Delhi on May 9th for more punitive "enforcement of building codes", residents simply surrounded them in such numbers that they could not move. But it would be foolish of Mr Modi to imagine that more and more wood can be piled on a pyre, without risk of burning the whole village down. ■

Minority concern

India, share of Muslims, %

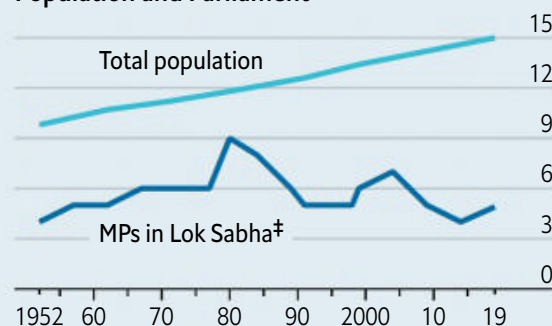
2022 or latest, estimate



*2011-15 average †Among new joiners recruited by the Union Public Services Commission ‡The lower house §Share of directors and senior executives in the biggest 500 companies on the Bombay Stock Exchange

Sources: Pew Research Centre; Common Cause; Lokniti-CSDS; Supreme Court of India; press reports

Population and Parliament



Crisis in Sri Lanka

The morning after

COLOMBO

Sri Lanka has no money and no government. What now?

FOR MORE than a month the anti-government protesters camped along Galle Face, the seafront in the Sri Lankan capital of Colombo, had been mostly peaceful. They were demanding the departure of the president, Gotabaya Rajapaksa, and the prime minister, Mahinda Rajapaksa, his brother. There were tents, stages for political plays, and singing. “Go home Gota!” their signs read, using the name by which the president is commonly known. He did not budge. Neither did the protesters.

All that changed on May 9th when hundreds of government supporters descended on the camp at Galle Face and other protest sites in the city. Unmolested by police, they attacked the demonstrators and burnt down their tents. Many had come straight from a meeting at the residence of the prime minister, who had hosted them in a bid to cling to his job. As anti-government protesters counter-attacked and the violence began to spiral out of control, the prime minister at last heeded calls to resign, in the process triggering the dissolution of his cabinet.

In theory, that should pave the way for a new government of national unity led by a prime minister who enjoys cross-party support, and made up of representatives of all the main parties and perhaps some technocrats. But unity is the last thing on the minds of many Sri Lankans, who are enraged to find themselves demoted from relatively well-off by South Asian standards to begging for handouts from India. The protesters responded to the attacks on them by burning down the homes of many cabinet ministers and a museum dedicated to the Rajapaksas. The buses that had



Party's over

carried government supporters into Colombo were also set ablaze. A minister's car was dumped in a lake.

Hundreds of people were injured as the violence continued into the next day. Several died, including a member of parliament who shot and killed a protester as a crowd surrounded his car, according to police reports. Mahinda and his family were airlifted to safety by security forces on May 10th after an angry mob surrounded his residence. Troops were deployed across the country and ordered to shoot on sight anyone seen damaging property or attacking people. The following afternoon, police told protesters at the Galle Face encampment to clear the area to comply with an island-wide curfew, though they did not immediately enforce the order. The governor of the central bank said he would resign unless political stability was restored.

Perhaps it was this threat that cured the president of the temptation to rule by decree, as he would have been entitled to do following the dissolution of the cabinet. Late on May 11th Mr Rajapaksa addressed the nation, promising to appoint a new government. He appeared to agree to most of the conditions outlined by the opposition, including a reduction in the powers of the presidency, which he had boosted by amending the constitution in 2020.

All-party talks to choose ministers for an interim cabinet were under way as *The Economist* went to press. Ranil Wickremesinghe, a veteran lawmaker, looked set to be sworn in as interim prime minister. But his putative government faces obstacles, not least the fact that many MPs do not want to sabotage their careers by associating themselves with Mr Rajapaksa. The president's refusal to step down may damage the credibility of any interim government from the start. A way forward will require balancing the necessary political stability with enough accountability to com-

mand public support.

That is particularly important given the daunting task facing any new government. Sri Lanka must implement a series of painful economic reforms—a tall order in such a febrile atmosphere. A combination of bad policy and external shocks, notably a collapse of tourism during the pandemic and spiking commodity prices following Russia's invasion of Ukraine, have depleted Sri Lanka's foreign-currency reserves and raised consumer-price inflation to almost 30% year-on-year in April, from 19% in March (see chart). For nearly two months, Sri Lankans have had to live with long power cuts, soaring prices for staples such as rice, and shortages of essentials as petrol—largely a function of the lack of currency with which to pay for imports.

The government's foreign reserves are down to \$50m—nothing, in effect. It burned through all its cash in recent months in a doomed effort to prop up the currency and service its foreign debts. On April 12th it conceded defeat and said it would stop paying interest, seek a bail-out from the IMF and ask creditors, including China and India, to restructure their loans. Since then the government has relied on temporary credit, mostly from India, to import essentials such as food and fuel. Even if the political class gets its act together, turning Sri Lanka's economy around is getting harder by the day. ■

Australian politics

For whom the teals poll

SYDNEY

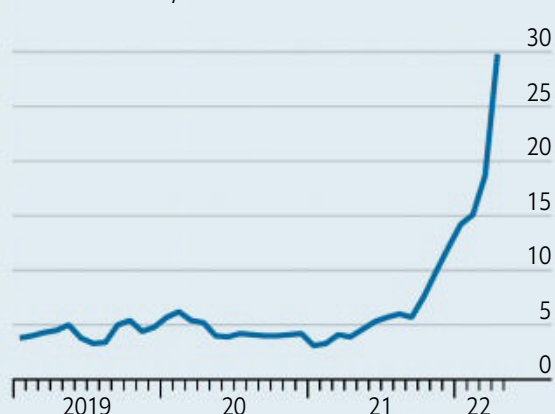
Independent candidates are shaking up this year's federal elections

AUSTRALIANS DISAGREE on much when it comes to politics. Left-leaning parties hold sway in cities and conservatives in the countryside. Voters in resource-rich states worry about the future of mining. Urbanites want to cut emissions. Yet they will be in agreement about one thing when they vote in a federal election on May 21st: disillusionment with their political system. “Too much rubbish goes on,” grumbles a voter in Wentworth, a wealthy constituency in Sydney. “It's just a whinge-and bitch-fest. No one is actually getting the job done,” concludes another in Hunter, a coal-rich seat in New South Wales.

Their frustrations are not as loud as Britain's or America's (nor are their electoral choices as self-harming), but that does not make their politics healthy. In 2019 only a quarter of Australians said they trusted “people in government”, down from 43% in 2007, according to polling by the Austra- ▶▶

Still climbing

Sri Lanka, consumer prices
% increase on a year earlier



Source: Refinitiv Datastream

►lian National University (ANU). Turnout should be plummeting. But voting in Australia is compulsory. Citizens face a familiar choice between the incumbent Liberals, who govern in a permanent conservative coalition with the smaller National Party, and the opposition, Labor.

Big ideas tend not to win elections in Australia, so neither side has put forward many. Both are led by “uncharismatic middle-aged white males who are not exactly inspiring”, says Paul Williams, a political scientist at Griffith University in Brisbane. Many Australians find their prime minister, Scott Morrison, cringe-inducing. He is accused of lying and bullying by members of his own party. Yet he still ranks above Labor’s gaffe-prone leader, Anthony Albanese, in polls of Australia’s preferred prime minister. Mr Albanese has been pilloried for forgetting basic numbers including the unemployment rate.

Still, Mr Morrison’s coalition seems unlikely to return for a fourth term. It has been in government since 2013, and unless opinion polls are spectacularly wrong, Australians want it gone. (Mr Morrison confounded expectations at the previous election in 2019, winning a “miracle” victory. Pundits insist that will not happen twice.) One national count predicts a swing against the coalition of more than 5%, enough to lose 13 seats in the House of Representatives, where it has a majority of one. No government has had a majority in the Senate, which is elected on a system of proportional representation, for years.

To many, the government’s successes against covid-19 feel like ancient history. Inflation is rising and so are interest rates. Mr Morrison’s odds have not been helped by successive scandals. His government has been buffeted by two separate allegations of rape, against a former minister and a political staff member. It has pumped grants into marginal constituencies, feeding complaints about corruption.

Labor, for its part, is “packed with politicians who stuffed up in its last government”, argues John Wanna of ANU. It lost the election of 2019 after proposing reforms to taxes on housing and investment. Its promises now are less controversial. Mr Albanese wants cheaper child care, better nursing homes and a commission to investigate federal corruption. On climate change, he would set a goal to slash emissions by 43% by 2030, from 2005 levels—a big improvement on the coalition’s 26–28%. On the economy, some of his ideas seem likely to fan inflation: he wants to raise minimum wages by over 5%.

Australians are deserting both main parties in growing numbers. Support for them is at historic lows, says William Bowe, a political analyst. Perhaps a third of voters will back minor parties and independent candidates this time. Few of those

will win seats. But a new set of climate-focused independents stands a chance.

These “teal” candidates—so-called for the colour of their campaign materials—are vying for wealthy Liberal seats, where voters are fed up with the government’s dismal efforts on climate change and want to clean up politics. Their campaigns are heavy on vision and light on detail: they would strive for stiffer emissions cuts and “integrity” in politics. Their supporters have built enthusiastic grassroots movements around them. One independent candidate, Zali Steggall, ousted a former Liberal prime minister, Tony Abbott, in 2019. The Liberals could lose at least two more seats to independents in this elec-

tion, Mr Bowe predicts. They are bankrolled, in part, by Climate 200, a political action group established by Simon Holmes à Court, the son of a mining billionaire.

A hung parliament, in which independents and minor parties hold the balance of power is possible, believes Kosmos Samaras, a former Labor strategist. That would give them leverage to pursue their lofty goals, their fans say. It would also cause “chaos and instability”, Mr Morrison argues. The latest polls, however, show Labor extending its lead. It could win enough seats to form a respectable majority in the lower house. That would boost the strength of government. But it is unlikely to lighten Australians’ dour mood. ■

North Korea and the virus

State of emergency

SEOUL

The leadership at last admits to an outbreak of covid-19 within its borders

FOR MORE than two years, North Korea insisted that its border controls had kept covid-19 out of the country even as it devastated most of the rest of the globe. No longer. On May 12th state media said that the country had recorded its first cases of the Omicron variant a few days earlier. Pyongyang was locked down on May 10th.

Even for a country accustomed to bad news, the outbreak is disastrous. North Korea’s response to the pandemic was to close itself off from the world, reduce imports to a trickle and impose domestic travel restrictions. While other countries rushed to vaccinate their people, North Korea gambled that it could ride out the storm. It repeatedly declined offers of vaccines from

China, Russia and COVAX, a UN-backed global effort to supply shots to poor countries. The leadership was reluctant to allow health workers into the country, for fear they might spread the virus or gather information about the dire conditions inside the closed dictatorship. It may have been spooked by rumours of doubts about the safety of the vaccine made by AstraZeneca, offered through COVAX.

Whatever the reasons for the vaccine hesitancy, the approach always looked dubious. There was no guarantee that the virus would evolve to be less dangerous over time, rather than become more infectious and harder to manage, as turned out to be the case. China’s pursuit of a zero-covid strategy was designed to buy time while it vaccinated its population. Though the North Korean leadership blamed those tasked with keeping the virus out for their “carelessness, laxity, irresponsibility and incompetence”, the real folly was the leadership’s failure to set up a vaccination programme in the time it had bought.

North Koreans will now suffer the consequences. Omicron is not especially dangerous in vaccinated populations, but still deadly for the immunologically naive. Hong Kong, which had a poor vaccination rate among the elderly when the variant hit, is a case in point. In late January its death toll stood at 205. Within two months it had climbed to nearly 8,000 after an Omicron outbreak spread like wildfire.

North Korea is likely to do even worse. The impoverished dictatorship lacks the testing and tracing infrastructure that other countries have built over the past two ►►



Going up

Banyan One-way street



The Taliban crave recognition but refuse to do anything to earn it

BEFORE THEIR rout by American-led forces in 2001, the Taliban and their rule in Afghanistan were bywords for medieval violence, bigotry and misogyny. When they swept back to power in August as America effected a calamitous withdrawal, their leadership promised that a new and improved Taliban had come to run the country. Peace and harmony would prevail. They would show mercy to enemies and concern for the vulnerable. They would manage the economy well. And they would engage with other countries, including their former enemy.

Instead, the Taliban are reverting to form. In March teenage girls returning to class for the first day of the school year found the gates closed to them, guarded by armed men. On May 8th the Ministry for the Propagation of Virtue ordered all Afghan women to cover themselves from head to toe on (discouraged) trips outside the home.

Violence against the Hazaras, a Shia Muslim ethnic minority, is mounting; the Taliban, who are Sunni, do not care to protect them. Political opponents are being assassinated. Meanwhile, Taliban administrators are studies in incompetence, having never managed water supplies or power plants. The economy has collapsed. Nine out of ten households are facing hunger, and UN agencies estimate that over half the population of some 40m will need food aid this year.

All of which sharpens questions about how other countries should deal with the government in Kabul. None has yet offered full diplomatic recognition. Western countries defined early on the prerequisites of engagement with the Taliban: improvements in human rights and governance. These parameters have appealing clarity; equally clear is that the

Taliban have fallen short. In the West scepticism about engagement runs deep. But as the EU's special envoy to Afghanistan, Tomas Niklasson, argues, to cut and run would be worse. Afghans badly need humanitarian aid and the Taliban are, in this respect, pragmatic enough to allow it.

Among Afghanistan's neighbours, Iran welcomed the American withdrawal and accredited Taliban officials performing consular duties in Tehran. But distrust of the Taliban goes back decades, and irritation has grown over the group's mistreatment of Shias and its failure to prevent fatal bombings at several Shia mosques. Clashes between security forces at the border have alarmed both countries.

The Taliban's relations with Pakistan are deteriorating, too. The army-led establishment in Pakistan had, after all, nurtured the Taliban for decades, and expected gratitude. Instead, the Taliban have been contesting the border line and give shelter to Tehreek-e-Taliban Pakistan (TTP), a terrorist group that has been stepping up its attacks on the Pakistani security forces. Last month cross-border air



strikes by Pakistan on supposed TTP camps killed dozens of Afghan civilians.

Uzbekistan, to the north, faces perhaps the greatest challenge from an intransigent Taliban, with which it has sought a working relationship. In the short term its efforts have paid off, with the border crossing at Termez now the main supply route for humanitarian aid to flow into Afghanistan. Without such aid, Afghans would be in even worse shape. Uzbekistan is also supplying much of the impoverished country's electricity, though it gets paid irregularly.

Uzbekistan's desire for an open, prosperous Afghanistan is almost existential. It is one of only two countries in the world that is not only landlocked itself, but surrounded by landlocked countries, too. Its chief trade routes run via Russia to Europe. But with war in Ukraine and sanctions on Russia, that outlet will be fraught if not impassable for years. Uzbekistan has drawn up plans for a trans-Afghan railway linking to Pakistan's ports, but the Taliban's misrule makes crucial support from the World Bank and others inconceivable.

As well as hosting the TTP, the Taliban are presiding over a resurgence of al-Qaeda on Afghan soil—the very group that triggered the American invasion two decades ago. Riven by factions and with a shaky grip on some parts of the country, the Taliban have also failed to suppress the Afghan affiliate of Islamic State, a violent rival. Afghanistan is ripe for the wholesale export of terrorists again.

Last month Haibatullah Akhunzada, the de facto head of state, called on countries to engage with Afghanistan on the basis of “mutual respect.” He seeks formal recognition and diplomatic relations. That is not going to happen until other states get a bit of respect back.

► years. Its health-care sector suffered from serious underinvestment even before the pandemic. It does not have enough equipment and medical staff. Hospitals do not have regular power, clean water or proper sanitation. Two years of closed borders have depleted supplies of medicine, much of which is imported. It is unclear how much oxygen or how many ventilators the country has available. And pre-existing conditions make North Koreans especially susceptible to covid-19. Tuberculosis, which worsens the effects of the virus, is rampant. So is malnutrition.

North Korea may turn to China, but its patron is already busy struggling to salvage its own failing zero-covid policy. If North Korea can be convinced to accept help from South Korea, the new president, Yoon Suk-yeol, could make good on his promise that he would provide humanitarian aid “regardless of the circumstance”. North Korea has in the past organised successful mass-vaccination campaigns, notably against measles in 2007, and it has the cold-chain distribution infrastructure necessary to keep vaccines from spoiling. If enough doses were offered and allowed to be ad-

ministered, many lives could be saved.

The irony is that North Korea might have been better off had it let covid spread early in the pandemic when the virus was less infectious (while also jabbing people). Had it done so, the curve of the epidemic would have been flatter and less hard to cope with today. The best-case scenario would be if there have been far more cases in the country than the government has previously admitted, meaning that there is some immunity in the population. For once, North Koreans should hope that their leaders have been lying to them. ■

Japan's far-flung islands

Base case

KUNIGAMI, OKINAWA

Fifty years after Okinawa's reunification with Japan, its people still feel cut off

FLAMES LICKED the sky over Cape Hedo on the northernmost tip of Okinawa's main island, burning bright enough to be seen from the nearby island of Yoron. After the second world war, when Yoron belonged to Japan but Okinawa was under American occupation, locals lit bonfires as signals, as if to say "Hi, we're still here" to their brethren. When the fire burned again in late April, it was to mark the 50th anniversary of Okinawa's return to Japan. Politicians waxed lyrical about peace, occasionally interrupted by American military aircraft overhead. An old protest song blared from a tinny speaker: *Okinawa wo kaese!* (Give back Okinawa!)

Yet for Okinawans the anniversary, on May 15th, is less cause for celebration than for sober reflection on unfulfilled hopes—and on new threats to their islands from tensions between America and China. "It's been 50 years but so many issues remain," laments Miyagi Hisakazu, a former mayor of Kunigami, Cape Hedo's district.

When Japan took back control of Okinawa and the rest of the Ryukyu Islands, locals expected the government in Tokyo to help stimulate the economy and reduce the American footprint (see map). Living standards have improved, but Okinawa is still the poorest of Japan's 47 prefectures. Some American facilities have closed, but more than 250,000 American troops remain on Okinawa, which is home to 70% of American bases in Japan by area. Those installations would play a big role in any conflict with China.

The Ryukyus have often been caught between great powers. For most of their history, they formed an independent kingdom, balanced between Japan and China. Japan annexed it only in 1879, during a period of imperial expansionism. Roughly a quarter of the civilian population perished in the second world war.

After the war, the Americans stayed, making Okinawa a de facto colony and expropriating land for military bases to support operations in the Korean and Vietnam wars. Cars drove on the right. Okinawans used dollars, and needed passports to visit mainland Japan. Violent crimes by American soldiers were common. By the late 1960s, the occupation had come to threaten the alliance between America and Japan. When America returned Okinawa, it insisted on keeping the bases. In return, it agreed to remove nuclear and chemical



weapons located there.

The government lavished Okinawa with subsidies and helped build infrastructure such as ports and roads (Okinawa also receives money for hosting the bases). Before the pandemic hit, the islands had developed a booming tourism industry. Tamaki Denny, Okinawa's 62-year-old governor, recalls that in his youth "there were mainland bars that said, 'No Okinawans allowed.'" Now, being Okinawan is cool.

The relationship with America has evolved too. Generations have grown up alongside American soldiers, forming last-

ing bonds and even families. Memories of the occupation have faded: many young Okinawans know little of the hardships endured before the reversion. Younger Okinawans are "becoming more pragmatic and less ideological", says Mike Mochizuki of George Washington University, leading to greater acceptance of the American presence. Chinese aggression has convinced more Okinawans of the logic of deterrence.

Even so, a majority would still like to see the American bases shrink. For pacifists, Ukraine's misfortune is proof not of the need for more powerful defences, but of the risks of entanglement in great-power competition. Even supporters of the alliance fret that large concentrations of troops and materiel, and with them ordinary Okinawans, are vulnerable to Chinese missiles. During a crisis, China might also seek to exploit division between the mainland and Okinawa.

What unites Okinawans across the political spectrum is the sense that the government in Tokyo ignores them. Hawks would like it to think more about their local residents' safety. Many others feel that its intransigence on the subject of bases is proof of lingering colonial attitudes: mainlanders have been spared the problems, such as noise, accidents and crime, that come with hosting bases.

A particular irritant is Futenma, a base in a densely populated area. After the rape of a 12-year-old Okinawan girl by three American soldiers in 1995, the Japanese government promised to move it. But engineering problems have hobbled its plan to build a replacement off the coast of a quieter part of the island. Most Okinawans oppose that plan anyway. Mr Tamaki has petitioned the authorities in Tokyo to call it off. Doing so, he says, "would show they have listened to our feelings". The government is bent on pushing ahead. ■



Trying to get Tokyo's attention



Hong Kong's civil service

Stay neutral, love the party

An imminent change of leadership hints at China's wariness of Hong Kong's bureaucratic elite

HAVING TAKEN 99.2% of the vote as the sole candidate in an election from which an even higher proportion of Hong Kong's people were excluded, the territory's next chief executive, John Lee, made clear why China's Communist Party engineered his victory. "Protecting Hong Kong from internal and external threats and ensuring its stability", he said, would be of "paramount importance" under his leadership. Mr Lee is a former policeman. The party trusts him to keep Hong Kong in line.

Trust is something that the party does not have in abundance as it surveys the city's elite. Since the territory was handed back to China by Britain in 1997, that elite, minus the British, has remained largely the same. China has relied heavily on two types of people to do its bidding there: businesspeople (the first and third chief executives had such backgrounds) and members of the bureaucratic aristocracy (the second chief executive and the current one, Carrie Lam, once belonged to this group—the *crème de la crème* of the civil

service known as administrative officers, or AOs). Both types have proved underwhelming. The eruption of months of turmoil on Hong Kong streets in 2019, on Mrs Lam's watch, convinced the party that it needed to tighten its grip. It concluded that Hong Kong's traditional elite should be kept on a shorter leash.

The 180,000-strong civil service is in the party's sights. As a policeman, Mr Lee belonged to it, too. But he was not one of the 700 or so AOs. He is a security specialist who only branched out of his area of expertise in 2021 when he became Mrs Lam's chief secretary (ie, deputy). He may appoint fewer AOs to his cabinet than his predecessors did, says John Burns of the University of Hong Kong. Behind the scenes, the party's outpost in Hong Kong, the Liaison Office, will be more hands-on.

It is striking how much the party has trusted civil servants nurtured by the British. The territory's first post-colonial chief secretary, Anson Chan, was an AO. She had also served in that capacity under Hong

→ Also in this section

40 Shanghai tightens up

41 Taming China's waters

41 Covid and the homeless

42 Chaguan: A self-repressing society

Kong's last colonial governor, Chris Patten, who was much despised by China. Mrs Chan later became a pro-democracy politician and critic of the party (she is now retired). Donald Tsang, the second chief executive, had been knighted by the British. Even Mr Lee only gave up his British citizenship when he became under-secretary for security in 2012. He, Mrs Lam, Mr Tsang and Mrs Chan are all Catholics—another attribute to which the party is not, by nature, drawn. (Cardinal Joseph Zen, an outspoken advocate of democracy who is 90 years old, was arrested on May 11th by Hong Kong's national-security police for alleged collusion with foreign forces.)

The upheaval in 2019 stoked the party's anxieties about the loyalty of government officials. Mrs Lam, with Mr Lee as head of security, proved their toughness, cracking down on demonstrations triggered by profound public distrust of the party. China, though, saw disturbing signs of cracks in the establishment. They included anonymous petitions, purportedly signed by hundreds of civil servants (including about 100 AOs), calling on the government to make concessions to the protesters. Thousands of civil servants staged their own demonstration and some went on strike. Participants said they served the public, not the territory's leaders.

Party-controlled newspapers in Hong Kong fumed. "Insider devils", a commentary in one of them called the dissenting ▶▶

officials. To prevent further unrest, China imposed a harsh national-security law on Hong Kong in June 2020 and moved to bar those deemed “unpatriotic” from public office. This included purging the legislature—and the election committee that chooses the chief executive—of opposition politicians (both were already stacked with the party’s supporters).

The party’s press grumbled that requirements that civil servants be “politically neutral” were inadequate. They were being used by bureaucrats as an excuse to snub the party. In 2020 Hong Kong began requiring all civil servants to pledge allegiance to the Basic Law, the city’s post-colonial constitution. From this year civil-service recruits must pass a test on the contents of the security law, in addition to a previously required one on the Basic Law.

Such requirements, and Hong Kong’s lurch towards a style of rule more like the mainland’s, appear to be deterring young people from applying for civil-service jobs. In 2021 the number of applicants for AO positions dropped to about 9,700, down from 14,000 in the previous year. These are normally highly coveted slots, offering handsome pay (HK\$55,995, or about \$7,133, a month for new recruits) and a high level of job security. But the impact may be hard to discern. Only about 45 such posts are available each year; the government will still have a large pool of talent from which to fill them. “The government can control my actions, but cannot control my mind,” says an applicant, professing not to be worried about the new emphasis on loyalty.

Mr Lee has promised to introduce yet more legislation relating to political crimes. He may also implement long-mooted plans to add a new government bureau (ministry, in effect) to look after culture, sport and tourism. In the past some politicians have winced at this, fearing it might be used to promote only culture approved by the party. But with the Legislative Council now shorn of filibustering democrats, there will be no opposition. Last year’s change of leadership of the government’s once feisty broadcasting wing, RTHK, does not augur well. Former employees say the new boss is focused on making propaganda.

Such work may be helped by the opening in December of a training college for Hong Kong’s bureaucrats. It “should strive to nurture civil servants in their sense of patriotism”, said a senior mainland official who joined the launch ceremony by video link. Newspapers controlled by the party have published calls for more instruction of AOs at mainland academies as well. One article, by Andrew Fung, a former senior press handler in the office of the chief executive, said this should include a “short period of military training”. That, no doubt, would help to boost recruitment. ■

Covid-19 in Shanghai

The never-ending lockdown

SHANGHAI

China’s biggest city tightens up again

THE 25M RESIDENTS of Shanghai could be forgiven for not recognising their own city in the pages of the local press. Most have been locked in their homes for weeks because of an outbreak of covid-19. Yet an article published on May 9th in a state-owned rag noted how residents in some districts are happily returning to their local markets. Another explains that, with covid on the wane, interest in Shanghai from global investors is picking up again. The *People’s Daily*, a mouthpiece of the Communist Party, referred to the long lockdown as a “pause”.

It is true that the number of new cases in Shanghai has fallen from more than 25,000 a day in mid-April to fewer than 2,000 recently. But restrictions in the city are being tightened. Areas that were slowly reopening have closed again. New barriers seal off housing compounds that were accessible days earlier. Residents may be carted off to a quarantine facility if an infection is found on a nearby floor. Food-delivery services, crucial to keeping Shanghai fed, have been barred from some areas.

The moves have baffled residents. They are reminded of the earliest days of the lockdown, when fresh meat and vegetables were hard to come by. What’s worse is that the new restrictions have come without any official explanation.

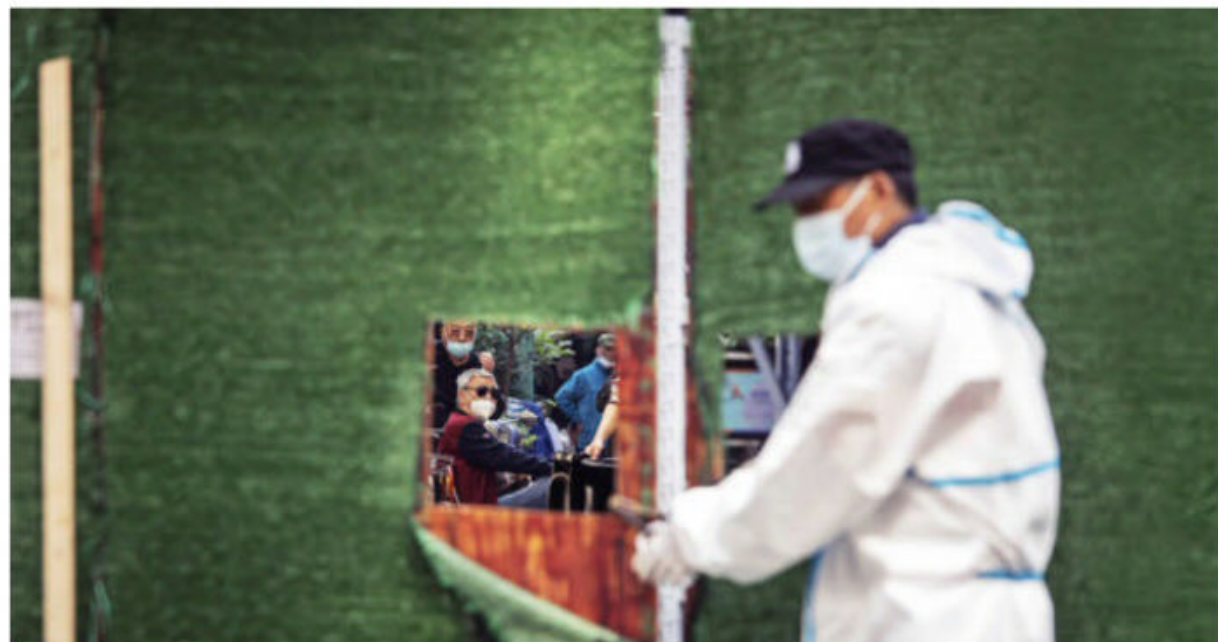
The government has issued guidelines for moving out of lockdown. The plan, which does not include a timeframe, divides communities into three categories depending on how recently new cases have been found there. The first category is the

strictest: residents are unable to step outside their homes, which may be barricaded. The second level allows residents to walk around their housing compound, but not on the street outside. The third allows for residents to be issued passes to walk around their neighbourhoods.

But these guidelines have been widely disregarded by district-level authorities. On May 9th officials in central Shanghai roamed the streets with bullhorns, warning that walking outside was no longer permitted. The tightening of restrictions comes after President Xi Jinping called for stronger anti-covid measures. Officials refer to the stricter regime as a period of *jingmo*, or silence. One in Huangpu district says it is a short-term experiment to see if less freedom of movement leads to a rapid reduction in cases. But there has been no citywide announcement of such a policy.

The authorities’ haphazard approach is stirring anger. Community-level committees, called *juweihui*, have been given broad powers to control the movement of people. But committee members are accused of incompetence. Some have been caught hoarding government rations. They often keep people locked down longer than required in order to avoid being blamed if new cases are found. Videos on social media show angry residents yelling at *juweihui* members, who are often separated from the crowds by fences or gates.

Elsewhere in China, the authorities are similarly cautious. Enforcing the zero-covid strategy, which aims to crush outbreaks before they can spread, is seen as proof of ideological fitness. Restrictions have been placed on Beijing, the capital, in order to stem a small surge in cases. Officials in the city of Jilin continue to keep a tight grip on things a month after claiming to have cut off community transmission, following a long lockdown. That bodes ill for the residents of Shanghai. It is hard to imagine life in the city returning to normal soon, no matter what the papers say. ■



A window into China’s covid strategy

The Grand Canal

Taming the waters

BEIJING

The longest canal in the world is full again. Is that a good thing?

WHEN KUBLAI KHAN tired of spending winters at his pleasure-dome in Xanadu, the Mongol overlord of China, who ruled during the 13th century, built a new capital in what is now Beijing. In order to feed the city, he launched a decade-long hydrological project, extending the Grand Canal, which already snaked through much of eastern China. The oldest sections of the waterway had been constructed centuries before. Kublai Khan was hardly the first ruler to demand that China's waters do his bidding.

Nor was he the last. "To rule a country, first rule its waters," says Xi Jinping, China's current overlord. In a country where floods have wiped out cities and toppled dynasties, this isn't a bad credo. The canal, in particular, has drawn Mr Xi's attention. Much of its northern reaches were disconnected or had run dry by the time the Communist Party took power in 1949. Mr Xi called for the waterway to be "reborn". And indeed it has been: in April water flowed along the canal's entire length for the first time in a century, according to the party.

This is largely a result of the South-to-North Water Diversion Project, which, as the name suggests, aims to pump southern water to northern provinces. In operation for nearly a decade, it is one of the most expensive engineering projects in the world and the largest-ever transfer of water between river basins. It involves two main channels: one in the east, along the Grand Canal, and another that runs through central China (see map). These bring water from the Yangzi river and its tributaries to the north. A third channel, farther west, is in the planning stage.

The north, where around 40% of the population lives, desperately needs water. Beijing is not far from the desert; camel caravans plodded its streets not too long ago. The city can go for months without rain. Thirsty factories and farms add to the strain. The UN sets the threshold for water scarcity at an annual 1,000 cubic metres per person. Most northern provinces fall below that. Some don't even reach 200 cubic metres per person in a dry year. Transfers from the south have "averted a water crisis", says Ma Jun, an environmentalist. Around 75% of Beijing's tap water arrives after a two-week journey north.

With more southern water sloshing around, water sources in the north are recovering. Fishermen have returned to the



banks of the Grand Canal in Beijing, catching silver carp that were not there a few years ago. Groundwater levels have stabilised after falling for decades. Sitting in a slightly damper, greener Beijing, China's governing elite is happy. The decision to move the water was "completely correct", Mr Xi said last year.

But look south and the picture is grimmer. The project displaced hundreds of thousands of people—and there are more evictions planned. Rivers in the south have

been depleted. Pollution was always a problem, but now there is less water to dilute and wash away contaminants. Toxic algal blooms, more often found in ponds, are forming on the Han river, the main source of Beijing's water. Another megaproject, which aims to replenish the Han, will break ground this year. That project will also take water from the Yangzi, further diminishing its flow.

China's engineered fixes to water scarcity are "more like a band-aid", says Britt Crow-Miller of the University of Massachusetts-Amherst. "They're not actually going to solve the problem." It would be better if China used water more efficiently, she says. To start, the government could make it more expensive. Industrial users pay more than they used to, but still much less than the scarcity of the resource warrants, says Mr Ma. Farmers pay even less and often waste water. The price for domestic use in Beijing has risen to 5 yuan (\$0.74) a cubic metre, from 4 yuan a decade ago. That is still only a third of the average price in American cities, where water is more plentiful. Mr Ma hopes that when residents of the capital turn on the taps, they realise the real cost is much higher. ■

Covid-19 and the homeless

Victims, not vectors

BEIJING

The pandemic has made life even harder for those who sleep on the streets

SPARE A LITTLE pity for a Chinese beggar called Mr Jiang. Last month he was blamed for a small covid-19 outbreak in the city of Haining. The media labelled him "patient zero". The authorities noted his "super-strength infectiousness". Samples from the public toilets and empty shops where Mr Jiang slept came back positive for the virus. He tested positive, too. The authorities are prosecuting him for allegedly not co-operating with contact-tracers.

The pandemic has made life even harder for the millions of people who sleep on the streets of China's cities. Most come from the countryside in search of work. Lacking a local *hukou*, or household-registration permit, they cannot obtain benefits. Officials see them as eyesores. Government shelters are obliged to "persuade" them to leave. Now they are seen as vectors of covid.

Anyone who catches covid in China faces social stigma, as a single infection can lead to a lockdown. But it is worse for the homeless. There is no evidence that Mr Jiang caused the outbreak in Haining, yet people called him the "poison king". Researchers at Sun Yat-sen University, in Guangzhou, found that efforts to drive

the homeless out of that city intensified during covid surges. People sleeping on the streets said the police would douse their resting spots with water. "Everyone was fearful of us because they thought we were spreading the virus," said one.

The pandemic has affected the homeless in other ways, too. Many make their living looking through rubbish for recyclables to sell. But local governments, believing refuse spreads covid, have cracked down. Odd jobs, such as unloading trucks, become scarcer when covid controls are tightened. During surges there are also fewer people on the street who might spare some change.

Covid restrictions have decreased the help which is available. An NGO in locked-down Shanghai had to close its drop-in centre, which offered food, showers and legal advice. A charity in Beijing, which is battling an outbreak, had to stop giving out porridge.

There are no official data, but the pressure seems to have pushed some of the homeless out of cities. A worker at a rescue centre in Beijing says the number of people using its facilities has dropped sharply. City officials and covid-cautious Chinese will see no problem with that.

Chaguan | A self-repressing society

Xi Jinping sees strengths in Maoist tools of social control



FOR FOUR decades China has defied received wisdom about the institutions that countries must build to become rich and strong. After the Communist Party's bosses embraced market forces in 1979, many foreign observers predicted that political reforms had to follow, such as the emergence of more independent courts to sustain the rule of law and uphold property rights. In time, the optimistic foreigners ventured, most advanced economies realise that they need democratic—or at least accountable—political systems. Societies with such “inclusive institutions” enjoy both stability and broad-based prosperity, Chinese officials were told.

China's leaders heeded something less than half this advice. Over 40 years successive leaders have tolerated only as much economic and social openness as is compatible with unchallenged party authority. President Xi Jinping, the party chief since 2012, has broken even more decisively with norms that hold sway in much of the rich world. He has explicitly condemned the separation of powers and an independent judiciary as unwelcome Western notions. His China is proud to offer not the rule of law but “law-based governance” via party-controlled courts.

There have been changes at the grassroots, too. In Mr Xi's China, ever more power, including coercive power, is wielded by party members and volunteers with fuzzy legal mandates. During the covid-19 pandemic many residents of locked-down cities have been forced into squalid quarantine sites or sealed inside housing compounds by pandemic workers, swaddled in the anonymous full-body suits that explain their nickname, “Big Whites”. A few are police officers or local officials. But others are zealous volunteers, imposing house arrest without a warrant. Even before covid emerged, Chinese leaders had called for citizens to take more disputes to mediation by unpaid local worthies, rather than to law courts. In recent years private companies, including joint ventures with foreign firms, have been pressed to form or revive party cells made up of employees with party membership, enjoying ill-defined authority.

Scholars of authoritarian politics have taken note of this trend. Two recent books take complementary looks at how the party embraces ambiguity as it controls the masses—or rather, encourages citizens to control one another. By way of case study, both books

examine the same area of public policy, namely urbanisation schemes that have displaced many tens of millions of Chinese. Often the land that they farmed was requisitioned and sold to developers or their homes were demolished, by force and with paltry or no compensation. At the root of such schemes is an institutional void: in China property rights are anything but secure. As Daniel Mattingly of Yale University estimates in “The Art of Political Control in China”, published in 2019, land requisitions have in effect redistributed property worth trillions of dollars from rural collectives to the state. Yet as Lynette Ong of the University of Toronto describes in her new book, “Outsourcing Repression, Everyday State Power in Contemporary China”, resistance to violent land-grabs in China has been fragmented and easily squelched.

One reason, both books suggest, is a tradition of delegating dirty work to non-official agents. These include hired thugs lacking uniforms or badges, sent to wreck homes, cut power and water supplies, or beat up those who try to petition higher authorities. Their links to local officialdom are unprovable but blatant. One gambit involves thugs bulldozing communal lavatories, allowing bureaucrats to declare a village unsanitary and so fit only for demolition, records Ms Ong. Even a threadbare cover for official brutality is useful, though. Drawing on a data set of over 2,000 cases of forced land-taking or demolition recorded by news outlets and rights groups, as well as on hundreds of her own field interviews conducted from 2011 to 2019, Ms Ong finds that citizens were more likely to resist when police acted brutally or officials led thugs into battle in person. Citizens were more fatalistic when attacked by anonymous toughs. The public expects nothing better from them, but is indignant when the state breaks laws, she suggests.

The tyranny of the majority, plus bulldozers

Recorded incidents of violence declined but did not end after 2013, as national leaders urged campaigns of “harmonious demolition”, moved in part by nationwide outrage over citizens killed or driven to suicide during violent land-grabs. In the Xi era anti-corruption campaigns have ensnared some local tyrants who razed scores of villages for profit. Harmonious demolitions may be achieved by recruiting village elders or volunteers with deep community ties to press their own neighbours to sign demolition papers. Some involve the setting-up of *zigaiwei*, or “Autonomous Redevelopment Committees”. Guided by unseen officials, these are not as benign as they sound. Ms Ong describes local power-brokers spying on households that refuse to comply, setting family members against each other, or hunting for individuals vulnerable to pressure, such as public employees who can be threatened with the sack. Hold-outs are publicly shamed for resisting the majority's will. Talk of the majority reveals the Maoist roots of outsourced repression. Mr Xi's China is reviving the “mass line”: a strategy of using rewards and punishments, but also ideological “thought work”, to mobilise the many and ostracise the dissenting few.

Conventional wisdom holds that a strong civil society gives citizens leverage over governments. In fact, co-opted clan leaders and village elders can serve autocrats well, writes Mr Mattingly. Indeed, official biographies of Mr Xi record how, as a young village party secretary in rural Shaanxi, he recruited a local clan leader to help him confiscate land for a dam, including a clan cemetery.

Party bosses grow impatient when foreigners question China's autocratic politics, pointing to years of growth. But economies can also slow. When they do, inclusive institutions offer legitimacy that arm-twisting and opaque power-structures cannot match. ■



Zimbabwe

Savings and groan

HARARE

With inflation surging, an inept regime orders banks to stop lending

“NEITHER A BORROWER nor a lender be” may occasionally be the right answer in a quiz about Shakespeare. It is no way to run a bank. Nonetheless, on May 7th President Emmerson Mnangagwa decreed that Zimbabwe’s banks should cease lending indefinitely. Whether he means it, and how this rule will be enforced, “I have no idea,” says a banker. She and her colleagues are desperately trying to find out.

The rationale appears to be that people have been borrowing money to bet against the Zimbabwe dollar. Others suspect that Mr Mnangagwa wants a scapegoat for the mess his country is in, and bashing bankers pleases voters. “It is absolute madness,” says Tendai Biti, an opposition politician and former finance minister. “Finance is the oxygen of industry. The business of banking is lending.” Banning it is unconstitutional, he adds.

“It’s a crazy environment,” says a local economist. Inflation is 152%, estimates Steve Hanke of Johns Hopkins University.

In February 2019 an American dollar was officially worth 2.5 Zimbabwe dollars. Now the main official rate is around 160 and the black market rate is between 350 and 450. No one trusts the local currency. Many expect a return of hyperinflation, which ravaged the country between 2007 and 2009. Prices were rising so quickly in 2008 that statisticians could not keep up, but by one estimate inflation peaked at a mind-boggling 231,000,000%.

The president’s response has been erratic. He blames “economic hitmen” and “saboteurs” for the country’s distress. He has slapped fines on firms that refuse to ac-

→ **Also in this section**

44 **Savings on the hoof in Zimbabwe**

44 **Reviving Zambia’s economy**

45 **A Palestinian journalist’s death**

46 **Algeria’s anger towards Morocco**

cept the local currency, and sometimes says he will ban the use of the American dollar entirely. Now he is imposing currency controls, and a confusing list of other rules, to “stabilise” the economy. None of this has persuaded Zimbabweans to embrace the Zimbabwe dollar.

A farm worker called Jealous is on strike. He has one demand: to be paid in US dollars. Asked why, he gives a simple explanation: “When we go to the shops, they ask for dollars.” Nearby, a field of ripe blueberries sits unpicked in the sun. A refrigerated building that should be buzzing with people packing fruit into boxes for export is empty and silent. If the strike is not resolved, the fruit may rot. Similar stoppages have afflicted farms across the country.

If hyperinflation returns, it will be the government’s fault. Mr Mnangagwa, who seized power in a coup in 2017 and won a dodgy election the next year, has been spending far more than Zimbabwe can afford and ordering the central bank to print money to plug the gaps. Much of this goes on infrastructure—some of Zimbabwe’s roads have improved on his watch. But a hefty share is stolen.

Money-printing drives inflation, which saps the Zimbabwe dollar’s value. Meanwhile, Mr Mnangagwa insists on skewed exchange rates. Exporters must typically surrender 40% of their proceeds at the confiscatory official rate. A lucky few can ▶▶

▶ buy these dollars for less than half what they are worth. In theory, they go to importers of essential things such as fuel, medicine and farm supplies. But a fat chunk goes to well-connected types. A local parliamentary report in 2019 found that \$3bn disbursed for a government agriculture programme was not properly accounted for. Another report by The Sentry, a watchdog in Washington, DC, detailed how one of the prime movers of that programme, a crony of the president, had amassed a fortune from privileged access to hard currency and state contracts.

For ordinary Zimbabweans, life is a furious scramble for dollars. Percy Msona was a maths teacher, but found it hard to survive on the equivalent of \$30 a month. Now he trades currency in the street. "It's not good for Zimbabwe that teachers like me are quitting," he sighs. Perhaps a fifth of the population has emigrated. Nurses, accountants, waiters and farmhands flock to Britain and South Africa.

Shopping in Zimbabwe is an obstacle course. Informal street vendors display prices in US dollars. Anyone who pays in local currency must do so at the black market rate. Formal shops, such as supermarkets, must price goods in Zimbabwe dollars and use the official rate if customers pay in greenbacks. Since no customer would accept such terms, they offer a huge "discount" for such purchases. Petrol stations are allowed to insist on US dollars. Attendants laugh at anyone who asks to pay in local currency.

Saving Zim dollars is pointless, since their value rapidly shrinks (see box). Saving hard currency is not simple, either. Many Zimbabweans receive remittances from relatives abroad, but few feel safe putting their greenbacks in banks. It is often hard to get them out again, and the government has in the past forcibly converted dollar accounts into local money at a grabby rate. Hence the proliferation of safety-deposit-box firms, which let people store their savings away from the state's greedy eyes. Many people stash cash under the bed. "The

living room is Barclays, the bedroom is Standard Chartered," jokes a Zimbabwean about her mother's squirrelling of savings around the house.

Others who want to save must be creative. Bricks are stacked in many a backyard. Perched on the roof of a half-built house near Harare, the capital, Munyaradzi Dombojena explains why. Every time his family has spare cash, they buy building materials. In time, they will have a house.

Zimbabwe has enormous potential. Its soil is fertile and studded with gold, at a time when both food and minerals fetch high prices. Its people were until recently among the best educated in Africa. Yet their rulers keep them down. A general election is due next year. The government will surely print more money to buy food for ruling-party supporters and truncheons for opposition-party skulls. Mr Biti says the opposition would win a fair contest, but it won't be fair. "We're run by a phalanx of thugs and gangsters," he says. ■

Zambia Copper-bottomed promises

CAPE TOWN

President Hakainde Hichilema has a model to resolve Africa's debt crises

AFTER FIVE unsuccessful attempts and a spell in prison on trumped-up charges of treason, Hakainde Hichilema was elected president of Zambia in August. The businessman's victory was due to voters' anger at the corruption and collapsing economy overseen by his predecessor, Edgar Lungu. The West was cock-a-hoop. So too were mining firms, which had all but stopped investing in Africa's second-largest copper producer because of high taxes and threats of expropriation.

Nine months later, is Mr Hichilema enjoying the job he craved? "It's not fun trying ▶▶

Financial innovation in Zimbabwe

Heiferinflation

SELOUS

Why Zimbabweans buy pensions denominated in cows

KELVIN CHAMUNORWA'S mother was a middle manager at a bank in Zimbabwe. She worked there for 25 years, steadily contributing to a pension. But horrendous inflation, which reached an annual rate of 231,000,000% in mid-2008, wiped out her savings. When she retired, her pension was so small it was barely worth collecting.

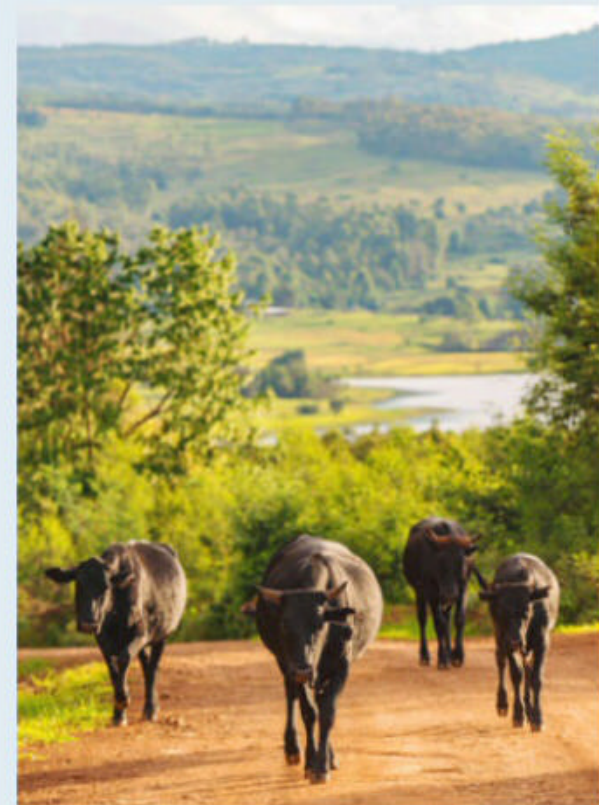
So Mr Chamunorwa, an actuary trained in Britain, started a company, Nhaka Life Assurance, to sell inflation-proof pensions to Zimbabweans. The pensions are not denominated in Zimbabwe dollars, since they quickly evaporate, nor in American dollars, since many Zimbabweans are struggling to obtain any (see previous article).

Instead, they are denominated in cows, which the government can't print. Savers, typically wage-earners such as teachers, chip in cash, which Nhaka immediately turns into cattle. The assets grow by breeding. When a policy matures, clients can demand payment in cows or the cash equivalent.

Zimbabweans have long seen cattle as a store of wealth. Mr Chamunorwa jokes that he has merely updated an old idea and added livestock insurance. His scheme is especially suited to a country where savers have lost all confidence in conventional finance. The only way to rebuild trust is to offer people "things they can touch and see", he says. Nhaka

holds viewing days when some of its 70,000 clients can visit the cows.

Mr Chamunorwa also likes to get away from his office in Harare, the capital, and visit them. At Nhaka's farm in Selous, 75km away, he watches newly weaned calves hungrily munching hay, and offers his actuarial opinion. "Most of these, we'll be putting a bull on them in 12 months' time," he says. That will be "a compounding of the investment return".



Milk those assets

Fantasy v reality

Zimbabwean dollar per US\$
2022, inverted scale



Source: zimricecheck.com

▶ to rebuild a damaged economy,” he tells *The Economist*, “but someone has to do it.”

The job starts with restructuring Zambia’s unsustainable public debt, which is above 100% of GDP. Since the country defaulted in 2020 it has not serviced most of its external borrowing. As is the case with many of the 23 sub-Saharan countries the IMF deems to be in debt distress, it owes money to a more diverse group of creditors than African borrowers did in the 2000s, when loans were forgiven by rich countries and Western-dominated international institutions. Of its \$17.3bn in external debt, only about half is owed to outfits like that. The rest is to Chinese entities (\$5.5bn) and Western fund managers (\$3.3bn), according to Bloomberg. Zambia is trying to persuade its creditors to take losses. The rest of Africa is watching closely.

Many African countries are sceptical of the “Common Framework”, a set of loose principles for resolving debt crises launched in 2020 by the G20, a club of big economies. It is meant to bring China and commercial creditors to the table, yet no country has gained debt relief this way. Mr Hichilema insists the common framework will work and that “China is on board”: it will co-chair, with France, a committee of Zambia’s creditors. At least 18 Chinese entities have lent money to Zambia; some should expect to lose part of their principal, not just see the loans extended, says Situmbeko Musokotwane, the finance minister. That would be unusual for China, which prefers to reschedule debts.

Mr Hichilema does not completely rule out a deal linking debt-restructuring to proceeds from copper mining. But he is aiming for one without “new liabilities” or a reduction in the mining revenues that could be used to invest in Zambia’s economy. He is optimistic about striking a deal with bondholders. He says Zambia has restored good faith with these creditors by making clear the true scale of its debts to China, which were about double what Mr Lungu’s government had admitted.

The IMF’s board will want to see progress on debt-restructuring before it approves a loan of \$1.4bn. Mr Musokotwane is “very confident” this will happen next month. The fund has also endorsed a series of reforms, which will probably include cuts to fuel and electricity subsidies worth about \$800m a year.

“We told the voters that we would deliver change,” says Mr Hichilema. “The type of change that would bring back economic growth.” Won’t some of these policies hurt Zambians? Voters don’t want to pay higher prices, he concedes, but “it’s a necessary process to rebuild our economy.”

There are encouraging signs. First Quantum Minerals, a Canadian miner, will expand a huge copper mine with an investment of \$1.3bn—the largest in Zambia in a



Where is yours mined?

decade. Mr Hichilema wants to increase annual copper production from 800,000 to 3m tonnes over ten years. Zambia would then overtake Congo as Africa’s largest producer. To do so he will also need to resolve the future of other mines that were under-utilised during Mr Lungu’s reign, largely because of disputes with the government.

Mr Hichilema’s free-market instincts are in welcome contrast, not just to those of his predecessor, but to those of many African leaders. Yet there is a risk Zambians will see IMF-endorsed reforms as inflicting pain of the sort that Mr Hichilema vowed to end rather than as necessary medicine. He says he is working “to restore the credibility of the country”. That means wooing friends abroad. But he must keep an eye on what happens at home, too. ■

Palestine and Israel

A death in Jenin

DUBAI

A journalist who covered the conflict with Israel is its latest casualty

LIKE SO MUCH of her life, Shireen Abu Aqleh’s final moments were captured in the stark style of news footage. Seven shots ring out. The cameraman creeps around to show a woman, clad in a flak jacket labelled “PRESS”, lying prone in the dirt. A young man tries to help her, only to retreat after another shot. When he finally manages to lift her limp body, it is clear she is beyond help: one of the most recognisable faces in Arab media has been reduced to a bloody pulp.

Ms Abu Aqleh, a correspondent for Al

Jazeera, a news channel based in Qatar, was killed on May 11th. She was in Jenin, in the West Bank, to cover a raid by Israeli soldiers. Several witnesses, her employer and the Palestinian health ministry say it was those soldiers who shot her.

Naftali Bennett, Israel’s prime minister, said it “appears likely” she was killed by Palestinian gunmen. By way of evidence his foreign ministry shared a 15-second clip showing a masked man shooting down an alley. Nothing indicates when it was filmed or what he was aiming at. Benny Gantz, Israel’s defence minister, later sounded less sure. B’tselem, an Israeli human-rights group, found where the clip was recorded—300 metres away and out of sight of the spot where Ms Abu Aqleh fell.

Ali al-Samoudi, a colleague at Al Jazeera who was also shot, says no armed Palestinians were nearby. Mr Bennett says the shooting that killed her was “indiscriminate and uncontrolled”. In raw footage, volleys of gunfire can be heard in the distance. The shots aimed at the journalists, louder and closer, sound controlled and seem to come from a single gun.

Ms Abu Aqleh, 51, started at Al Jazeera in 1997 and became one of its best-known reporters. Many young Arab journalists, especially women, cite her as an inspiration. A Christian Jerusalemite, she was omnipresent in the West Bank. That meant regular trips to places like Jenin. For the past six weeks Israeli soldiers have conducted almost nightly raids to nab suspects there, following a series of deadly attacks inside Israel, at least two of which were carried out by Palestinians from the area.

Since March, 19 Israelis and 30 Palestinians have been killed. Ms Abu Aqleh was the eighth Palestinian to die in the recent raids on Jenin’s refugee camp. Among the other victims was Muhammad Zakarneh, a 17-year-old shot by soldiers looking for his mother and brother.

Unsurprisingly, anti-Israel sentiment in the camp has soared. Fighters are celebrated as heroes. Alleyways are coated in the flags and graffiti of Islamic Jihad, the camp’s dominant militant group. Make-shift barricades guard its entrances.

This latest killing will rattle Israel’s unwieldy eight-party coalition. The government lost its majority last month when a member of Mr Bennett’s own party defected. Ra’am, a conservative Islamist party, is on the brink of bolting over clashes between Israeli police and worshippers at the al-Aqsa mosque in Jerusalem.

Mansour Abbas, the party’s pragmatic leader, would like to remain in the coalition to secure gains for his Arab-Israeli constituents. On May 11th he said his party would not back an opposition bid to dissolve Israel’s parliament. But events like Ms Abu Aqleh’s killing make staying in government ever trickier for him. ■

Algeria and Morocco

The danger of lighting a gas fire

DUBAI

Algeria hopes a crisis with Morocco will distract from problems at home

THESE SHOULD be heady times for the world's tenth-largest producer of natural gas. Russia's invasion of Ukraine has sent European governments scrambling for new supplies. Algeria sends more than 80% of its gas exports to Europe. Most is piped to Spain and Italy (see map). As the continent's third-biggest supplier, it should be investing in new capacity to produce and transport more of the stuff. Instead it is threatening to send less.

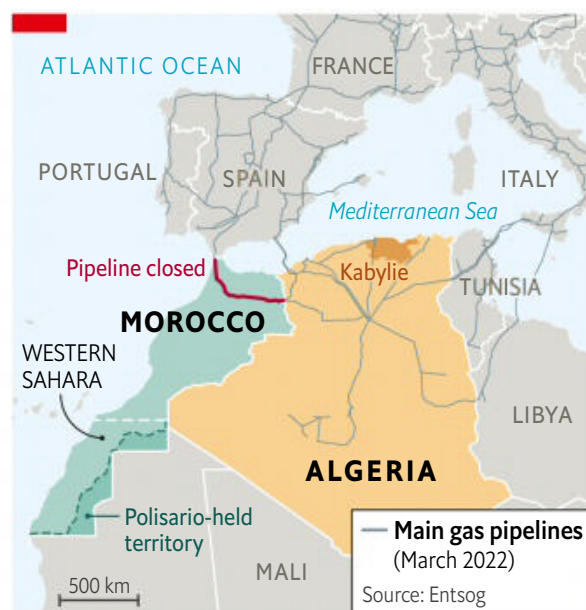
Last year Algeria shut a pipeline that runs to Spain via Morocco. The closure was an act of pique towards Morocco, which takes 7% of the flow as a royalty and gets almost all of its natural gas from Algeria. Spain still receives Algerian exports through a smaller undersea pipeline that bypasses Morocco. However, last month Algeria threatened to close that, too, after Morocco asked Spain to send it gas by reversing the flow of the now-idle Morocco-Spain pipeline. Algeria said it would stop all gas exports to Spain if it did so.

That may well be bluster: Algeria does not want to lose Spanish cash. In any case, Algeria's inflammatory talk has much to do with its troubled domestic politics. But the threats are exacerbating Algeria's long feud with Morocco. Well-connected Algerians say the stand-off with their neighbour could even tip into war.

Tensions between the two countries date back to 1963, when they fought a brief "sand war" over a strip of borderland a year after Algeria had won independence from France. Since then, ideological rivalry has deepened. Morocco is a conservative, pro-Western monarchy, whereas Algeria was a prominent member of the Non-Aligned Movement and friendly to the Soviet Union. The land border between the two has been closed since 1994, to the joy of smugglers and the annoyance of everyone else.

In the 1970s Algeria began backing the Polisario Front, a guerrilla group seeking independence for Western Sahara, which Morocco grabbed in 1975 after the departure of Spain, its colonial ruler. The decision to close the pipeline is linked to events in Western Sahara, where Morocco has been gaining ground both militarily and diplomatically.

It may not mean immediate pain for Morocco's economy. About 60% of its energy comes from oil. Two gas-fired plants are switched on only to handle peak demand. Officials have discussed buying cargoes



from Qatar, the world's largest exporter of liquefied natural gas. Morocco has issued tenders for a regasification plant. It is also pushing ahead with renewables.

Lately Algeria's grievances have grown. International news organisations reported last year that Morocco had used Pegasus, a powerful spyware tool made by Israel's NSO Group, to snoop on the phones of some 6,000 Algerians, including politicians and generals. Morocco denies this.

Mindful of Algeria's support for Polisario, Morocco's ambassador at the UN has called for self-determination in Kabylie, a restive mainly Berber region of northern Algeria. Algeria saw this as a threat. It even blamed Morocco for devastating wildfires

last summer. King Mohammed of Morocco tried to lower the temperature last year, calling for dialogue in his annual speech from the throne. But Algeria seems less keen on reconciliation.

Algeria is in a bad way. A movement called the *hirak* led protests that resulted in the overthrow three years ago of Abdelaziz Bouteflika after 20 years in power. The protesters had hoped that a new generation of leaders would emerge. Instead his fall only formalised the rule of *Le Pouvoir*, a clique of grey men who ran the show from the shadows throughout Bouteflika's long rule. They have done little to reform a hide-bound economy or clean up corruption. Unemployment is around 12%, and higher for the young. Inflation hit 8.5% last year.

A crisis with Morocco is a way to rally increasingly frustrated Algerians. Both sides seem geared up for conflict. Algeria and Morocco have the second- and third-largest armies in Africa. With a defence budget of \$9.1bn, Algeria is the world's sixth-biggest arms importer. Morocco spent \$5.4bn on its armed forces last year, up by about a third from 2019. It ranks in the world's top ten for military spending as a share of GDP; Algeria's is 5.6% versus 4.2% for Morocco. Algerians, however, sound less keen on conflict than their leaders do. Younger ones may prefer their government to focus on jobs and the economy rather than rattle sabres at its neighbour.

Europeans, too, are wary of events across the Mediterranean. Last year Spain got more than 40% of its natural-gas imports from Algeria. A rupture would hit hard, just when energy prices are already sky-high. The Ukrainian war has prompted Spain to forswear Russian gas. It cannot afford to lose another supplier. On top of that, a conflict between nearby Arabs could mean a wave of migrants. In short, nobody would benefit. ■



Wending their wiggly way to Europe



 → Also in this section

48 Putin's parade

49 Germany's SPD takes a beating

50 France's radical left

50 "Borgen" is back

52 Charlemagne: The EU and crises

Ukraine

No ports in a storm

KYIV

It will be hard for the economy to sustain a long war. The suspension of all maritime exports is a critical blow

FOR SOMEONE trying to run an economy in the middle of an invasion, Serhiy Marchenko is oddly upbeat. The Russians may have occupied or blockaded his country's main ports and forced the shutdown of most of its businesses, but Ukraine's finance minister radiates calm. "The situation is very difficult, I am not going to minimise that," he says over a latte in a slick café near his ministry. "But we can manage it." When an air-raid siren interrupts the interview, he simply ignores it.

Reasons not to panic are quite numerous. Ukraine went into the war in good shape, with its economy growing at an annualised quarter-on-quarter pace of almost 7%; strong prices for its exports of grain, iron and steel; a well-regulated banking industry and a government deficit of less than 3% of GDP last year. Its debt stood at just under 50% of GDP, a number that many finance ministers can only dream of. An impressively digitised tax and benefits system means that revenues are still coming in smoothly from the parts of the economy that are still functioning. Pensions and government salaries are all

still being paid, even in areas that are now under Russian occupation, thanks to resilient digital systems and a surprisingly unscathed internet. Most businesses, for now, are still paying their employees, even if they cannot operate as normal, or at all. Amazingly, payroll taxes are down by only 1%, the minister says.

But it isn't easy. The World Bank has



predicted that Ukraine's GDP will shrink by perhaps 45% in 2022. ("Our estimate is 44%," Mr Marchenko grimaces.) And both estimates are, of course, hugely uncertain. Customs revenues, a significant part of the government's tax take, have crashed to around a quarter of their pre-war level thanks to lower imports and the suspension of many duties. Military salaries are another big burden. It all adds up to a financing gap of around \$5bn every month, he says. That is roughly 5% of Ukraine's depleted GDP for every month that the war goes on.

How to fill that? In part, Mr Marchenko says, by having the central bank print more money. In part, too, by issuing war bonds, on which the government currently is paying around 11% interest, which is less than the inflation rate. But the main source will need to be foreign. And that, the finance minister says, is how he spends most of his day, lobbying foreign governments for help. America is where he has the highest hopes. On April 28th President Joe Biden said he was asking Congress to authorise a further \$33bn in new funds for Ukraine, since a previous facility is almost exhausted. The House of Representatives has voted to raise the amount to \$40bn. Most of the money will be for arms, but at least \$8.5bn is for economic support. "It's good news, but what will the American package look like, and when will it arrive? We don't know," says the minister.

The IMF has helped as well. It has encouraged America and other countries to ►►

▶ take over part of Ukraine's allocation of special drawing rights at the fund, in effect channelling hard currency to the government in Kyiv. But the end result of all these appeals is that, for the second quarter of this year, Ukraine has so far totted up grants totalling only about \$4.5bn, against a fiscal shortfall of \$15bn.

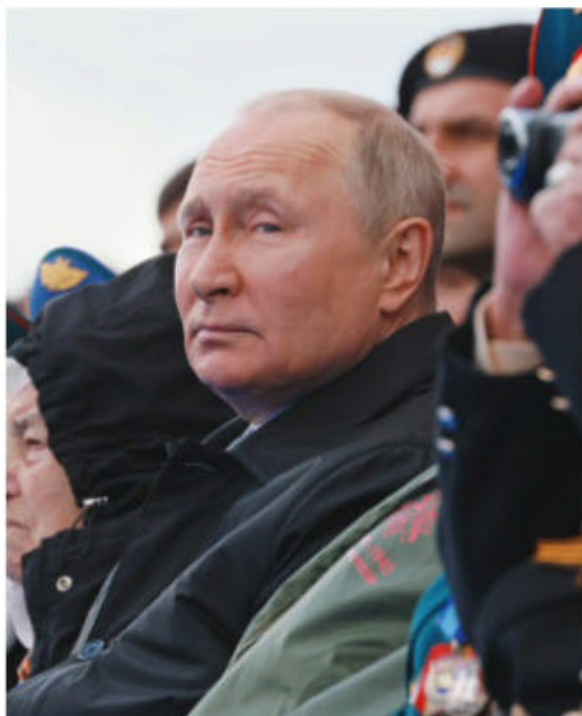
This is not sustainable, admits Mr Marchenko, who fears that if the war lasts more than another "three or four months", painful measures will be needed, involving huge tax rises and swingeing spending cuts. The real fear is that what has become in recent years a fairly market-driven, free-wheeling economy might see a wave of nationalisations, undoing years of hard-fought progress.

An even more immediate problem is already, literally, sprouting. Across the country, the sowing season for this year's crop of wheat, barley, sunflowers (for oil) and other grains and staples has been completed. Astonishingly, roughly 80% of the usual crop has gone into the ground, sometimes planted by brave farmers wearing bulletproof vests. But what to do with it? Harvesting should be no great problem, since the frontlines have been pushed back and Russia looks unlikely to make further gains. The hard part is shipping the stuff out of the country.

The presence of the Russian navy in the Black Sea, as well as the defensive deployment of mines by Ukraine's navy, means that Odessa, Ukraine's principal port, is shut down completely. The same goes for its second and third ports, located nearby. Berdyansk and Mariupol, the fourth and fifth, are under Russian control. Nor can much grain be stored; the country's grain silos are mostly full of the recently harvested winter crop, which would normally have been sent abroad by now.

Mustafa Nayyem, a former journalist and protester turned Ukraine's deputy infrastructure minister, is in charge of solving the problem. If the grain cannot get out by sea, it will have to travel by road and rail, via Poland, Romania and Hungary. But problems abound, he says. The roads cannot handle that much heavy traffic; the alternative ports have limited spare capacity.

Worst of all, crossing Ukraine's frontiers with the EU is arduous. Customs and phytosanitary checks are already causing 10km tailbacks at entry points. The club's rules say that, since Ukraine is not a member, only a limited number of its lorries can enter. Bureaucracy is gumming up the works, and unless they are unblocked Ukraine, Europe and indeed the world will face severe food shortages after the harvest in September. "We need every country in Europe to allow free access to our trucks," says the minister. "They don't seem to understand the sheer amount of wheat that is about to hit them." ■



Russia

Putin's parade

The Victory Day that wasn't

THE RULE of Vladimir Putin, a former KGB operative turned dictator, rests on lies, violence and militarism. And on May 9th, the day marking the Soviet Union's victory in the second world war, all three of those traits were paraded on Moscow's Red Square. Mr Putin has long hijacked the victory over Nazi Germany and built it into something resembling a religious cult to serve his regime. Now he is invoking it as he fights his war against Ukraine and anyone inside Russia who stands in his way. As Ben Wallace, the British defence secretary, said in a speech of his own on the same day, Mr Putin and his generals "are now mirroring the fascism and tyranny of 77 years ago...resplendent in their mani-

→ BAFTA award

Fearless: the women fighting Putin, a co-production between *The Economist* and Hardcash Productions for ITV, has won the BAFTA for best current-affairs film. It was filmed and directed by Sarah Collinson of Economist Films



cured parade uniforms, weighted down by the gold braid and glistening medals."

Just as the Nazis justified their unprovoked attacks on Poland in 1939 and the Soviet Union in 1941 by claiming to be acting in pre-emptive self-defence, so did Mr Putin claim in his speech at the parade that Russia had launched a pre-emptive strike against Ukraine and NATO. "An absolutely unacceptable threat to us was steadily being created right on our borders...[the invasion] was forced, timely and the only correct decision."

The parade was more notable for its absences and omissions than for its pageantry. The reduced number of troops marching in Red Square showed the lack of spare capacity. The usual airforce flypast was scrapped. Ostensibly that was because of low clouds, but some intelligence sources suggested it was really because of security concerns. A low-flying military plane being shot down by a Stinger missile over Red Square would not have made good publicity for the regime. Such concerns would not be outlandish. A series of mysterious fires and explosions have struck strategic sites across Russia in recent weeks. The latest occurred on May 1st at a military plant in Perm in the Urals, where propellant for Grad and Smerch missiles is made.

Also missing from the parade was Valery Gerasimov, the chief of the general staff. Russia's top soldier was spotted on May 1st near Izyum, the site of the fiercest fighting in eastern Ukraine, and has not been seen since. Ukrainian intelligence sources believe he was wounded there. But perhaps the most notable absence from the Victory Day parade was the victory itself. After more than two months of fighting even Mariupol, a port city that has been pounded by every conventional weapon imaginable, is not entirely in Russia's hands.

Having lost more men and equipment in two months than the Soviet Union lost in the ten years of its war in Afghanistan, Mr Putin, an ageing dictator, cut a defensive and frustrated figure, as though trying to make excuses for what may well rank as the biggest military blunder in Russia's history. His final "For Russia! For Victory! Hurray!" seemed strangely downbeat.

But this does not mean Mr Putin will be stopping soon. As he laid flowers on a series of war memorials and firework displays lit the skies over Russian cities, the skies over cities across Ukraine were lit up by Russian missiles. Although Russia now controls the majority of the eastern Donbas region, its offensive to take the rest of it is proceeding slowly. A Ukrainian counter-offensive around Kharkiv has almost pushed Russian forces back over the border there, showing that Russia's grip on its newly acquired territory is precarious.

Ukrainian forces, newly confident, are also hoping to liberate Kherson province, ▶▶

▶ where the invaders are stealing grain and shipping it back to Russia. Russian forces are also trying to impose the ruble as the local currency. Yet Russia's hold is so shaky that Russian collaborators are said to be asking the Kremlin to annex the territory without attempting a referendum of the sort that was used to justify the annexation of Crimea in 2014.

Dmytro Kuleba, Ukraine's foreign minister, says that Ukraine's vision of victory has now changed from pushing Russia back to its pre-war positions to liberating all of its territory, including areas seized in 2014. To do so will require a lot more manpower and equipment than Ukraine currently has. Mr Putin's plan is to dig in, wear out Ukraine militarily and strangle it economically, by blockading its ports (see previous story).

To sustain a long war, Mr Putin could yet declare martial law to justify a wider mobilisation. This would not only produce more soldiers to fight in Ukraine, but could also be a tool for even more repression. But how far Mr Putin goes and how long he can sustain his offensive depends not only on the strength of the Ukrainian army and the resolve of its allies, but on Mr Putin's situation at home. As Oleksiy Danilov, Ukraine's national security adviser, told *The Economist*, without instability in Russia, it will be hard for Ukraine to succeed.

Mr Putin has met fierce resistance in Ukraine; but he has so far been much more successful in his offensive against Russia, demoralising its elite, silencing any criticism and isolating the country from the world. A degree of resistance to the war has continued. In the run up to May 9th the Russian security services pre-emptively detained a number of anti-war activists. On the day itself, some 125 people were detained for carrying signs like "No to New War" or "My Grandfather Fought Against Fascism". In another act of defiance, two editors of Lenta.ru, a pro-Kremlin news website, took over their own home page with the headlines "Vladimir Putin lied about Russia's plans in Ukraine", "The Russian army turned out to be an army of thieves and looters" and "Russia abandons the dead bodies of its troops in Ukraine."

Yet the Russian elite has remained pliant, and much of the population is cowed. "The passive silence of the median Russian voter and the conformism of the elite is the main resource in this war," says Kirill Rogov, a political analyst. The technocratic elite, once deemed liberal, is paralysed by fear of reprisals. As Petr Akopov, a Kremlin propagandist, wrote this week, "Offshore oligarchs and thieving officials, incompetent generals and cowardly Russophobes, 'showbiz stars'—we now have to purge ourselves of all these. Without [purification] we cannot win. Not in Ukraine, but in that battle for Russia that has just begun." ■

Germany

A portent or a blip?

BERLIN

The Social Democrats' crushing defeat in Schleswig-Holstein

"OF COURSE THE result is bitter," said Saskia Esken, putting it mildly after the cataclysmic defeat of her Social Democratic Party (SPD) at a state election in Schleswig-Holstein on May 8th. Yet the co-chair of the party insisted that despite the worst score in its history in a place that was once a stronghold, the SPD can still win the vote that really counts, in North Rhine-Westphalia (NRW), Germany's most populous state, on May 15th.

The centre-right Christian Democratic Union (CDU) of Daniel Günther, the incumbent state premier, won 43.4% of the vote in Schleswig-Holstein, up more than 11 percentage points on the previous election. The SPD got only 16%, down about the same amount. The Free Democrats, who are in coalition with the SPD at the national level, also had a poor night. But the worst reverse was suffered by the far-right AfD, which was kicked out of a state parliament for the first time in its history (which admittedly dates back only nine years), as it failed to meet the 5% threshold for gaining any seats. It was a happier day for the Green Party, also in the ruling national coalition, with 18.3%, a gain of 5.4 points.

The CDU had one great advantage: polls show that Mr Günther is the country's most popular state premier. The 48-year-old is very different from Friedrich Merz, the spiky and conservative national leader of the CDU. Mr Günther is a centrist who was nicknamed *Genosse* (comrade) Günther because he once said he understood CDU politicians in eastern Germany who are co-operating with the far-left *Linke* party. He has governed his state in coalition with both the free-market FDP and the Greens. He did not back Mr Merz's campaign to become national leader of the CDU in 2018 (when he failed) or 2021 (when he won). So a big suc-

cess for Mr Günther does not necessarily indicate that Mr Merz is doing well.

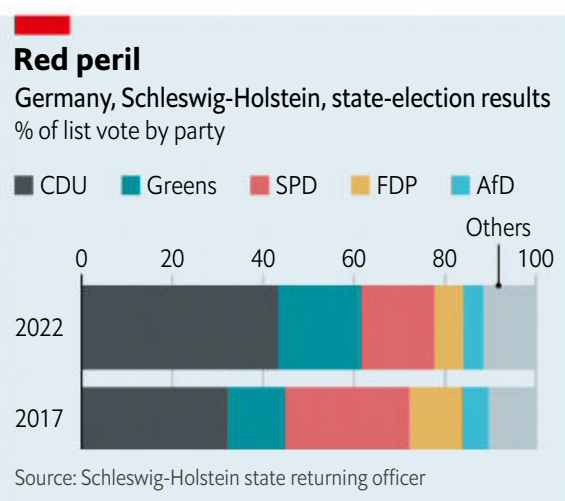
Still, the impressive win in Schleswig-Holstein undoubtedly gives the CDU a dollop of precious momentum as it heads into the eagerly watched NRW vote at the weekend. With its 18m inhabitants (over a fifth of Germany's total population), NRW is home to 37 of Germany's top 100 companies. Its poll is sometimes called the "little federal election"; with a high proportion of immigrants and a mix of thriving and struggling districts, it is seen as a miniature Germany. Whoever can run NRW has a good shot at running the country.

North Rhine-Westphalia used to be the heartland of the SPD, which governed there continuously for 39 years, from 1966 until 2005. Since then it has been a swing state. In 2017 the CDU's Armin Laschet beat the SPD's Hannelore Kraft, the incumbent. But Mr Laschet stepped down as state premier last year after his resounding defeat in the general election, in which he was the CDU's candidate for the chancellorship. He picked Hendrik Wüst, his transport minister, as his successor. A lawyer by training, Mr Wüst is closer to Mr Merz's conservative camp than is *Genosse* Günther.

Mr Wüst is now neck-and-neck with Thomas Kutschaty, the largely unknown SPD candidate whose main claim to fame is that he is a former state justice minister. Mr Kutschaty is betting on support from Olaf Scholz, the chancellor, but that strategy might backfire. Mr Scholz's popularity has slumped in recent weeks because of his hesitant response to Russia's invasion of Ukraine. In a poll last month in *Der Spiegel*, a weekly, fully 65% of those surveyed said they thought Mr Scholz was not a strong leader.

If Mr Wüst can pull off a win for the CDU, he will probably remain in coalition with the FDP. But if that combination does not yield a majority, he will need to persuade the Greens, who are forecast to get around 18% of the vote, to join his government, too. They might prefer to join forces with the SPD, in which case Mr Wüst could lose his job even if the CDU gets more votes than any other party.

Mr Wüst's political career is of course at stake on May 15th. But Mr Merz, who himself hails from NRW, badly needs a second win. The CDU lost a state election in Saarland at the end of March. The CDU's leader recently visited Kyiv to meet Volodymyr Zelensky, Ukraine's president, hoping to gain an advantage over Mr Scholz, who has yet to visit the Ukrainian capital. Mr Merz received non-stop coverage in the media during his visit, but also a lot of criticism. The trip, most pundits reckoned, was an obvious attempt to score points off Mr Scholz ahead of the two state elections rather than, as he claimed, a show of solidarity with Ukrainians. ■



The French left

NUPES and dupes

PARIS

A new left-wing alliance wants to block Macron

IN A POLITICAL takeover that upends the past half-century's political order, the radical French left has swallowed the centre-left. Jean-Luc Mélenchon, a 70-year-old firebrand with a gift for oratory and a fondness for Latin American autocrats, launched on May 7th an electoral alliance ahead of next month's parliamentary elections. Snappily named the "New Popular, Environmental and Social Union", or NUPES, its main purpose is captured in his election poster: "Mélenchon, prime minister". To the dismay of old-time moderates, the Socialists and Greens (as well as the Communists) have officially signed up.

Mr Mélenchon has pulled off this coup thanks to his 22% of the vote, and third-place finish, in the first round of last month's presidential election. The anti-NATO Eurosceptic, who is against arming Ukraine, vastly outperformed all other left-wing candidates, including those of the Greens (4.6%), Communists (2.3%) and the once-mainstream Socialists (just 1.8%). This has enabled Mr Mélenchon more or less to dictate terms. His party's candidates will stand in 328 of France's 577 constituencies; the Socialists in just 70.

The terms of the alliance include pledges to lower the pension age from 62 years to 60, impose rent controls and price controls on basic goods, put unionists on company boards and bring back the wealth tax. The pro-nuclear Communists have accepted its anti-nuclear stance. The centrepiece, though, is "disobedience" of the European Union's rules on deficits, competition and farm support, among others. A former Socialist senator, Mr Mélenchon quit the party in 2008 partly due to his Euroscepticism. He once published a book about "the German poison", in which he called Angela Merkel's Germany "a monster". To win over the pro-European Socialists, the joint agreement speaks of their promise to "derogate" from certain rules rather than to "disobey" them. But nobody is fooled as to whose version would ultimately prevail.

Mr Mélenchon's deal has raised hopes in some quarters on the left that it could now take over the National Assembly at elections on June 12th and 19th. If so, this would not only block almost all of President Emmanuel Macron's planned reforms for his second term but also undo those he has implemented. "Everything is becoming possible" ran the front page of *Libération*, a left-leaning newspaper. Thomas Pi-

ketty, a French economist, welcomed "the return of social and fiscal justice", noting that this left-wing alliance is less ambitious than the one that came to power in 1936 (under Léon Blum) or 1981 (under François Mitterrand). On his blog on May 10th, Mr Mélenchon referred jauntily to Mr Macron's (as yet unidentified) new prime minister as "my predecessor".

The pact has stunned many on the centre-left, however. François Hollande, a Socialist former president, called it "unacceptable" and the new alliance unelectable. Ten years ago his party held the presidency, both houses of parliament, and a majority of regions and big cities. This agreement gives them just two constituencies in the whole of Paris, and—pointedly—not even Mr Hollande's former consti-

tuency in Corrèze. Bernard Cazeneuve, Mr Hollande's former prime minister, quit the party in sorrow.

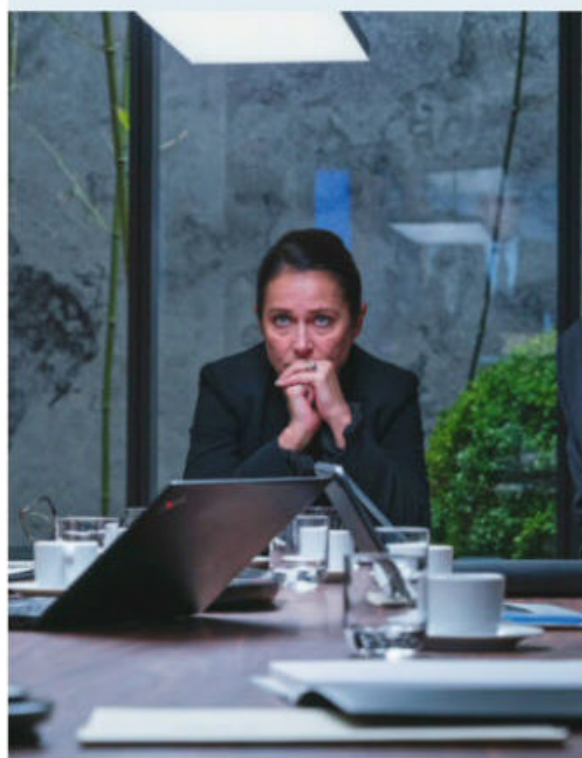
Can Mr Mélenchon really grab the prime ministership? He certainly has momentum. Young voters are drawn to his strong green policies. He has become the second-most popular politician in France, according to one poll. Yet under the country's two-round, first-past-the-post voting system, he will struggle if voters on the right swing behind Macron-backed candidates in second-round run-offs. A new poll suggests that Mr Mélenchon could secure 135-165 seats, which would make his alliance the second-biggest force in parliament. But it still projects 310-350 seats for Mr Macron's coalition of centrist parties, a comfortable presidential majority. ■

Danish TV

Back to "Borgen"

A new season of the beloved Danish political series has a darker tone

THE DANISH TV series "Borgen" introduced Europe's madly intricate coalition politics to viewers in simpler lands such as America and Britain. The show's first three seasons, which aired in 2010-13, followed Birgitte Nyborg (played by Sidse Babett Knudsen), leader of the fictional Moderates, as she became Denmark's first female prime minister, then resigned and founded a new party. Striking compromises and pursuing liberal values, Nyborg was a heroine for her time. American Democrats wishing for Danish-style health care (or at least *hygge* and cardamom buns) fell in love. Soon Denmark had a real female prime minister, Helle Thorning-Schmidt.



It doesn't get easier

Nine years later "Borgen" is back, and its fourth season shows how Denmark and Europe have changed. Nyborg is now foreign minister in a government in which the leaders of the main parties are women (as in most Nordic countries). This has not rendered politics less vicious. She is exasperated by the radicalism of today's youth, notably her own son. In a side plot, the white head of news at the national broadcaster and a non-white anchor, both women, get into a feud over political correctness.

The more pervasive change is in global politics. The season's main plot imagines oil discovered off Greenland. This pits two of Nyborg's principles against each other: indigenous self-determination and fighting climate change. Russia, China and America get involved to pursue their strategic interests. A bossy American secretary of state is a familiar stereotype of European film. But the Chinese ambassador who scolds a Nordic minister in aggressive "Wolf Warrior" style is new.

Like today's Europe, the season has an overarching tone of pessimism. A decade ago it portrayed a messy but enviable Denmark, where responsible politics meant bickering and back-stabbing to achieve social goals. Now those goals seem out of view. The earlier seasons' fantasies of Denmark and Europe's global relevance are harder to sustain. In the Obama era, Nyborg was a role model for the frustrated centre-left because, in an impasse, she always asked, "What are my options?" Since then her options, like Europe's, have narrowed.



ESG Is Everyone's Business

It's all hands on deck for increasing ESG engagement, says Rob Fisher, KPMG's US ESG lead

For years, companies have been feeling pressure from investors, employees, customers and other stakeholders to ramp up their environmental, social and governance (ESG) engagement. In KPMG's 2022 CEO Outlook survey, more than 70% of CEOs reported that they were being held personally responsible for making the changes that will be needed in the years to come by reducing emissions, sourcing renewable energy and adopting policies that make companies better corporate citizens.

In recent weeks, the proposal by the US Securities and Exchange Commission (SEC) for climate-related disclosures has garnered a lot of attention from the business community. Details of the proposal will continue to be pored over as business leaders assess how to operationalise a climate strategy that would meet new requirements.

The SEC's proposal would require public companies to report both their greenhouse gas (GHG) emissions and the impact of climate risk on financial statements. This will make accurate, climate-related financial disclosures a baseline expectation for companies, undoubtedly demanding deeper ESG engagement from businesses to rapidly advance their climate disclosure strategies and transition plans.

CEOs see this as far more than a reporting and compliance exercise. It presents business leaders with a unique opportunity to invest, engage and show their investors, employees, customers and other stakeholders how they are responding to their demands by reducing their carbon footprint and accounting for climate risks. The companies that do this effectively will gain an ESG advantage by building trust among their stakeholders.

Boards should look at their decarbonisation strategies now. Aligning with the Task Force on Climate-related Financial Disclosures (TCFD) framework, upon which the SEC's proposal was largely modelled, is a good first step. In 2020 just one-fifth of the top 100 companies were reporting climate disclosures in line with the TCFD.

Many boards and leaders have, however, been preparing and investing for this moment by becoming much more knowledgeable about climate change. C-suite confidence on the issue appears to be high: 74% of corporate leaders in a 2021 global KPMG survey said they believe they have the climate knowledge that is needed to meet new requirements.

Business leaders will also need a strong technology and governance approach.

Companies must evaluate their current operations and their ability to track Scope 1 and 2 emissions (and material Scope 3 emissions), and any gaps in their climate data. From there, they will need to identify the people, processes and technology necessary to create and execute a climate risk strategy and transition plan. As this roadmap takes shape, it will be essential for companies to take an integrated approach, embedding ESG into all of their operations.

Companies will also need to develop a strong data strategy that recognises that carbon footprint data are not as easily accessible as financial data in an enterprise resource planning (ERP) system. Climate data can come from multiple sources, and sometimes require complex calculations. No one can be expected to get this exactly right the first time, which is why companies will need to be nimble and prepared to refine their work.

In the end, with more transparency, strong governance and a new imperative to get things done, businesses that lean in and effectively embed ESG into all of their operations will be able to leverage this watershed moment into a strong ESG narrative that will set them apart from competitors and build trust with their most valuable stakeholders.

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Charlemagne | Fifth time lucky

Europe's handling of war on its doorstep breaks a decade-long streak of fumbled crises



IT TOOK FOUR horsemen to mete out God's apocalyptic punishment. The biblical wrath conveyed by two of them will sound familiar to Europeans worn down by disease and now war in Ukraine. But a mere quartet of steeds would not have sufficed to deliver the calamities the EU has had to contend with in the past decade or so. No fewer than five crises have befallen the continent in that time: in addition to covid-19 and fighting on its doorstep, Europe has been visited by the protracted euro-zone slump, soon followed by a migration emergency and then Brexit. Any normal polity would be worn down by living in near-perpetual crisis mode for so long—not least since the episodes rarely showed the EU at its best. It is only the war in Ukraine that the bloc has handled remotely deftly. Is it possible that the EU has learned how to avoid turning problems into existential dramas?

Crisis holds a special place in the hearts of believers in the European project. Jean Monnet, one of the EU's founding fathers and the nearest thing Brussels has to a patron saint, thought the continent's political arrangements would be "forged in crises, and will be the sum of the solutions adopted for those crises". Like most religious parables, this is not wholly true. The bloc's most notable shunts towards ever-closer union, from the euro to the single market by way of open borders, were agreed on without the spectre of impending meltdown. But crises help to disrupt the status quo. The temporary chaos they bring about allows new ideas to emerge. Apply enough pressure—and in Europe that can mean the prospect of the entire edifice of the EU collapsing—and what was politically unthinkable yesterday becomes inevitable tomorrow.

Thus it was that the euro-zone crisis resulted in once-*verboten* sovereign bail-outs and a souped-up central bank. In 2015 a surge of migrants crossing the Mediterranean prompted the EU to recruit its own gun-toting officers to patrol its external borders. The economic rout brought by covid-19 saw the creation of a jointly guaranteed recovery fund of the sort even the protracted euro-zone mess had not made possible. In each instance the lurch to "more Europe" came after new circumstances made business-as-usual unpalatable. In the corridors of Brussels Eurocrats bemoaned the crisis of the day, all the while knowing it represented an opportunity to deepen integration. In what other circumstanc-

es than an all-night summit could leaders breach their own red lines and agree some federalising leap in the hope of being released to their hotel rooms?

If a trend can be spotted, it is of Europe dealing with crises rather better over time. Nobody these days boasts about how the euro was saved, ruing instead the many missed opportunities to avert a meltdown in the first place. The migrant surge in 2015 was no better: squabbles over how to treat refugees from war-torn countries showed Europe at its most divided and unkind. Brexit was, relatively speaking, a triumph of EU co-ordination. No doubt preserving a unified Brit-bashing front reduced the risk of other countries leaving—but at the expense of a still noxious relationship with an important neighbour. Europe's covid-19 response is touted as a success in Brussels, yet many citizens will not forget the delays in the arrival of vaccines the EU was asked to buy for them.

For the current batch of EU leaders and bureaucrats who are handling Ukraine, in other words, the bar is low. On the whole they have done a creditable job. Wave upon wave of sanctions have hurt Russia enough for it to squeal. Weapons, some of them paid for with EU money, have found their way east, along with cash to keep the government in Kyiv going. Refugees were welcomed with open arms. Ukraine's electricity grid was hurriedly plugged in to Europe's to free it from Russia's—a fiddly operation that would normally have taken a year but was pulled off in a fortnight. America has pitched in lots, too, as has Britain. But Europe has little to blush about thus far.

Why the improvement? The nature of the situation is part of it. War is the very thing the European project was designed to make impossible. Its resurgence nearby has helped to forge unity. Nor does armed conflict lend itself to kicking the can down the road, a habitual European sin. By all accounts the EU's institutions have done a good job of paving the road for national capitals to approve sanctions. That every package has been a slog—a sixth one, focused on Russian oil, was being hammered out as *The Economist* went to press—shows that Brussels is pushing as hard as the EU's various member-states are willing to go. Could Europe have done more? Certainly, but it could also have done less.

Apocalypse later

A striking feature of this crisis is the lack of a grand federalising scheme of the sort predicted by Monnet, which helped stem previous calamities. A plan to repeat the joint borrowing of the post-covid stimulus was floated by France's President Emmanuel Macron in March, but has gone nowhere. His call on May 9th to revise the EU's founding treaties, for example to get rid of national vetoes that have slowed down sanctions, has been greeted coolly. Mr Macron thinks the EU should strive for "strategic autonomy", but if any institution gets a refresh as a result of this crisis it is likelier to be NATO, which Sweden and Finland are now set to join.

All that may change as the war unfolds. Grand, crisis-defying schemes are usually concocted by the EU's dominant duo, Germany and France. Both have been on the back foot over Ukraine. Neither is trusted in eastern European capitals when it comes to dealing with Russia. Both Olaf Scholz in Berlin and Mr Macron in Paris have had plenty on their plates domestically. Maybe as they regain their European footing a bold new apocalypse-defying plan of the sort Monnet would have cheered will be on the cards. Some would see that as a sign of further progress in the crafting of the union. The real breakthrough, in fact, would be if the EU could handle crises without needing to rewire itself every time. ■



An interview with Boris Johnson

A hawk on the wing

OVER THE NORTH SEA

Security deals with Finland and Sweden showcase the prime minister's thinking on the war in Ukraine

THE INVASION of Ukraine by Vladimir Putin was a massive punctuation point in post-war history," says Boris Johnson, the British prime minister. "We are now in a new era." One sign of this new age came on May 11th, when Mr Johnson travelled first to Sweden and then to Finland to sign "solemn declarations" with the leaders of both countries; in each case the signatories affirmed that should either one be attacked, the other would be ready to respond with military aid. Another sign came the next day, when Finland's leaders announced they favoured joining NATO.

The events of this week underscore the dramatic changes in Europe's security landscape since Mr Putin's decision to invade on February 24th. They also shed light on Britain's place in Europe and illustrate Mr Johnson's frustrating duality—bold abroad and timid at home.

Start with the pacts. Finland was neutral in the cold war, and Sweden hasn't fought a big conventional war in 200 years.

With both countries now moving swiftly towards NATO membership, the agreements with Britain offer particular reassurance against Russian attack during the "grey-zone period" between applying to join and ratification of their membership. If they do join the alliance, "it would be a complete repudiation of Putin's assumptions," says Mr Johnson, speaking to *The Economist* on the plane back to London.

Sceptics might say that making commitments is easy when the risk of a conventional assault is low, at least in the immediate future. Russia's army is bogged down in Ukraine and barely has the manpower to advance in the Donbas region, let alone turn its attention to Finland and Sweden. "Looking at Russian military forces right now, they are rather occupied in Ukraine," noted Magdalena Andersson, the Swedish prime minister.

Finnish and Swedish officials think that a far bigger risk is a prolonged and intense campaign of "hybrid" warfare—

→ Also in this section

54 Sir Beer Starmer

55 Bagehot: Labour and the Lib Dems

→ Read more at: [Economist.com/Britain](https://www.economist.com/Britain)

— The protocol is back

— The cost of doing business

— Chelsea's change of owner

— A berry big problem

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meaning cyber-attacks on critical infrastructure, incursions by Russian war-planes, disinformation campaigns and the like. The agreements cover closer co-operation in areas such as intelligence-sharing and cyber-security, and are meant to stand in perpetuity. "Are we safer with this agreement? Yes, we are. Of course this means something," Ms Andersson concluded.

The deals fit with Britain's evolution over the past decade into one of the most active defenders of NATO's northern flank and eastern front. It is central to a network of bilateral pacts and groupings, including the Joint Expeditionary Force, a cluster of ten states around the Baltic and the North Sea. Britain shunned a treaty on foreign policy and security when it left the EU. As a result, says Richard Whitman of the University of Kent, its policy in Europe resembles a "Polo mint": it has a hard outer rim, and a hole in the middle.

Hard-edged is a good way of describing Mr Johnson's view of the war in Ukraine. Dmytro Kuleba, Ukraine's foreign minister, has raised the country's goals to nothing less than the liberation of the territories invaded by Russia in 2014. Ukraine's war aims are a matter for them, but that aspiration is "entirely logical", Mr Johnson says. Ukrainians feel they cannot "negotiate sensibly with someone who is in the process of trying to devour their country. And I have to say I agree with them. So ▶▶

▶ everyone is then forced into the same logical position, which is the only answer is to keep going until Putin is back to the status quo ante of February 24th—at least.”

In the long run, he says, the West must help Ukraine through a “doctrine of deterrence by denial. So that even without invoking the question of NATO membership, Ukraine is being given NATO-compatible weaponry, training and intelligence sharing of such quality and quantity that no one will ever invade Ukraine again.”

Mr Johnson’s hawkish tone is not shared by other European leaders. In a speech on May 9th President Emmanuel Macron of France suggested a means must be found to spare Russia “humiliation”. Mr Johnson discounts this concern. “It is one of the paradoxical advantages of the situation that the strength of Putin’s popular support gives him the opportunity actually to be completely flexible. And to say, for instance, that certain objectives have been achieved, ‘denazification’, whatever, and that’s why the operation is over.”

Mr Macron’s idea of a community of EU and non-EU states that co-operate on security, migration and more is also likely to fall on stony ground. “I think most fair-minded observers would say that after some sort of initial anxieties and hesitations, an independent UK foreign policy has really been important,” says Mr Johnson. “I think that our ability to take decisions at speed, to be out in front, to campaign for outcomes that we want, that we think are right has been very valuable...we are able to give a lead in a different way.”

Fair-minded observers might also point out that Britain has been far from the biggest donor to Ukraine, in cash terms or as a share of GDP, and not particularly generous in taking refugees. But its policy has had a nimbleness which has won Mr Johnson a genuine and widespread gratitude in Ukraine itself. Britain was dispatching anti-tank weapons before the invasion began; Mr Johnson was the first western European leader to walk the streets of Kyiv after the repulse of the Russian assault, and the first to address its parliament.

Mr Johnson is hardly the architect of Britain’s policy in Ukraine, notes Robin Niblett of Chatham House, a think-tank. Rather, he has been following a trajectory, largely shaped by the Ministry of Defence, of preparing Ukraine against Russian aggression that has been in place since 2015. But the prime minister deserves credit for not recoiling as the crisis emerged, says Mr Niblett. “He’s been looking for a bigger purpose for British policy. Sometimes history throws you a card, and your positioning could be just right.”

The contrast with Mr Johnson’s timidity at home is striking. A fear of aggravating his backbench MPs and core voters was on full display on May 10th in a safety-first

Queen’s Speech, which laid out the government’s legislative programme for the coming parliamentary session. His bombast often seems clownish, his character questionable, and his judgment weak: threats to rip up Britain’s deal with the EU over trade arrangements in Northern Ireland are deeply wrong-headed.

But on Ukraine at least, and in his commitments to Sweden and Finland, flourish and boldness have served Mr Johnson well. His predecessor, Theresa May, flew on a plane decked in dull air-force grey. These days it is liveried in red, white and blue, with gold lettering down the fuselage. ■

Partygate 2

Sir Beer Starmer

A late-night beer and curry may end the Labour leader’s career

ON FRIDAY APRIL 30TH 2021, at around 10pm, a £200 (\$248) order of takeaway curry arrived at a Labour Party constituency office in Durham. A year on, the circumstances surrounding the delivery are subject to a police investigation that will decide the future of Sir Keir Starmer, the Labour leader.

Last year’s local elections took place during a partial lockdown. After a day of campaigning in north-east England, Sir Keir was recorded through a window drinking a beer while waiting for the fateful curry. The Labour leader insisted that since this was a work event, it was legal. After finishing his bottle of beer, he returned to the political coalface, firing off missives about the following day.

But one witness claims no work was done and that it was, in effect, an end-of-



Called to the bar

week bash. After complaints from a local Conservative MP, Durham police decided to examine the case. And on May 9th Sir Keir pledged to step down if fined by the police for breaking lockdown rules.

Sir Keir’s curry is the latest twist in a long-running scandal. For the past six months, British politics has largely been shaped by who drank what, where and when during a series of lockdown-busting parties in 2020 and 2021. Anger rose after it emerged that Downing Street and parts of Whitehall had hosted a series of soirées throughout the peak of lockdown. Juicy details, such as civil servants smuggling a suitcase full of wine into Downing Street, triggered apoplexy among voters and a slump in Boris Johnson’s poll ratings.

In April the prime minister became the first holder of that office to be fined for breaking the law. However, his £50 penalty was related to the least egregious event, in June 2020, when officials gathered to sing Mr Johnson “Happy Birthday” in the middle of the working day. Rishi Sunak, the teetotal chancellor, who was there because he had arrived early for a meeting, was also fined. Far worse allegations, including an ABBA-inspired party in Mr Johnson’s private Downing Street flat, still hang over the prime minister. But because Sir Keir called on both to resign over the birthday-party fines, the Labour leader has pledged to do the same if he gets one.

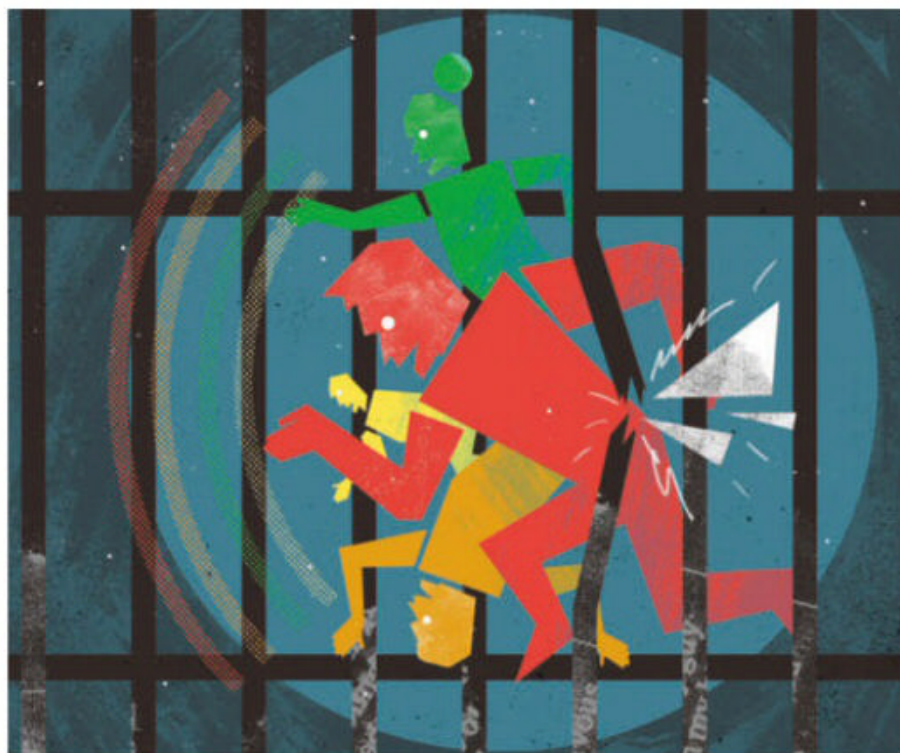
Sir Keir’s decision to stake his political career on a decision by a regional police force is risky. But he would have faced pressure to quit in the event of a fine, or look a hypocrite. Sir Keir, a former director of public prosecutions, has pitched himself as a man who follows rules, unlike Mr Johnson, who revels in breaking them.

This is not a new strategy. Sir Tony Blair employed a similar tactic in the middle of the cash-for-peerages scandal, when Labour donors were pledged seats in the House of Lords, in the final years of his tenure. Advisers let it be known that the then prime minister would resign if interviewed under caution. The upshot was that police skipped over Sir Tony in their inquiries. Sir Keir has some wriggle-room, too: if police say he broke the rules but choose not to fine him, he will stay in office.

“Beergate”, as the scandal is lazily known, is the Labour leader’s first taste of a Fleet Street monstrosity. Photos of the event first appeared in the *Sun*, a tabloid, at the start of 2022. Conservative MPs recirculated them as a cheap hit ahead of local elections on May 5th. From there things snowballed into a fortnight of stories that repeatedly graced the front pages of pro-government newspapers such as the *Sun* and the *Daily Mail*. If Sir Keir steps down, it would show that these papers still have a lot of clout, even if they have fewer readers than of old. ■

Bagehot | A progressive prisoner's dilemma

Labour and the Lib Dems are learning to play nicely with each other



A HIERARCHY OF hate exists on the progressive wing of British politics. True, Labour wallahs may not like their Conservative colleagues. But they save their real contempt for the Liberal Democrats, whom they deride as spineless cynics and dirty campaigners. In a feat of projection, the Lib Dems detest the Greens because it is annoying to have a small party with no chance of power snatch precious votes. Meanwhile, everyone loathes the Scottish National Party (SNP) to the point that, when its Westminster leader, Ian Blackford, rises to speak in the House of Commons, an audible groan often echoes around the chamber.

Progressive parties in Britain struggle to work together, which keeps them out of power. That is not because of a lack of voters. Surprisingly, for a country that usually elects Conservative governments, the bulk of British voters support progressive parties. In every post-war election bar 2015, more voters supported progressive parties (Labour, the Liberal Democrats, the SNP and the Greens) than conservative ones (the Conservative Party and its cousins on the radical right). Yet, owing to the iniquities of Britain's first-past-the-post electoral system, the government usually has a conservative bent.

In effect, Britain's progressive parties are stuck in a prisoner's dilemma. Co-operation would be better for all, yet they never quite manage it. Signs are emerging, however, that the dilemma has been solved. Changing electoral geography, a shift in Labour's politics and canny voting behaviour suggest that Britain's progressive parties could, for once, be more than the sum of their parts. Although Labour are only slightly ahead of, or level with, the Conservatives in most polls, progressive parties have a 20-point lead over their conservative rivals. A happy equilibrium has been reached. The prisoners could soon escape.

For starters, there is less incentive to fight each other. Progressive parties no longer tread on the turf of their peers. Sheffield Hallam, a leafy suburb of the Yorkshire city, is the only marginal constituency where Labour faces off against the Lib Dems. The Lib Dems predominantly battle the Conservatives in tighter races: around 70 of their 90 winnable target seats are Tory-held. As a result, peace has broken out in recent by-elections. Labour barely put up a fight in North Shropshire, when the previously safe Con-

servative seat fell to the Lib Dems. A similar strategy will be employed in forthcoming by-elections. A new era of non-aggression between the two parties, similar to one in the 1990s, is under way.

There is also less to scrap over in terms of ideology. Politics has settled down after a frenzied period, when both Labour and Conservatives dabbled in populism on the left and right. Brexit is no longer the be-all-and-end-all of British politics. Jeremy Corbyn, the former, hard-left Labour leader, made those wavering between the Lib Dems and the Conservatives nervous about not plumping for the Tories. Now, Labour is a more centrist option. Sir Keir Starmer was elected to lead the party on a soft-left ticket, and has since dragged Labour even more to the right. A mushy consensus blurs the lines between Labour, the Lib Dems and the SNP.

That means progressive parties can focus on their target voters. If there is no challenge from rival parties for their metropolitan base, Labour can focus on winning seats that turned Tory at the last election. Likewise, the Liberal Democrats have previously been an incoherent mixture of low-tax liberals and disaffected social democrats. Now the party can focus on well-off, liberal Conservative voters in southern England. Call them Tesla Tories: those voters who were happy under David Cameron but chafe at the populist diet of illiberalism and tax rises served up by Boris Johnson.

Across southern England, Conservative MPs are nervous. Councils such as Somerset fell to the Lib Dems in local elections on May 5th. Talk of "levelling up" northern England sounds a lot like taking tax revenues raised in the south and spending them in the north. If Conservative voters in the Home Counties wanted that, they would have voted Labour in the first place. To placate them the Conservatives could admit that levelling up involves little money actually being spent. But that would upset their new supporters. Clinging on to both sets of voters, without the centripetal force of Brexit, is a tricky task.

It is one made harder by the efficiency of the Conservative vote. British politics follows the same principles as Wilkins Micawber's finances. Theresa May managed 42.4% of the vote in 2017. Result: misery, and a hung parliament. In 2019 Mr Johnson won an extra 300,000 votes, hitting 43.6%. Result: happiness, and an 80-seat majority. A small swing has a big effect. British politics obsesses over the newest marginal voter—the extra shilling in Mr Micawber's formula. It was new voters across the Midlands and northern England that won Mr Johnson his majority. It is forgotten Conservative voters in the south of England who stand to take it away.

Knight, knight Boris

A formal deal between progressive parties would either be pointless or harmful. Scottish independence would become a live issue if the SNP were involved in a pact. Oliver Dowden, part Conservative Party chairman and part political Rottweiler, accused Labour and the Liberal Democrats of a secret stitch-up ahead of the local elections. By causing a fuss, the hope is that a Tesla Tory in Winchester may still blanch at voting Lib Dem because of the thought of a Labour-led government. The truth is that there is no need for a formal pact when a tacit one is already in place.

Breaking out of jail will be the easy bit. Even pollsters optimistic about Labour's chances think that a governing coalition of opposition parties is likely to be a total mess. Any such coalition would probably consist of three parties, or a complicated confidence-and-supply deal, in which junior parties support a Labour government on specific votes. The progressive parties do still hate each other, after all. But being in power beats being in prison. ■

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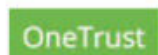


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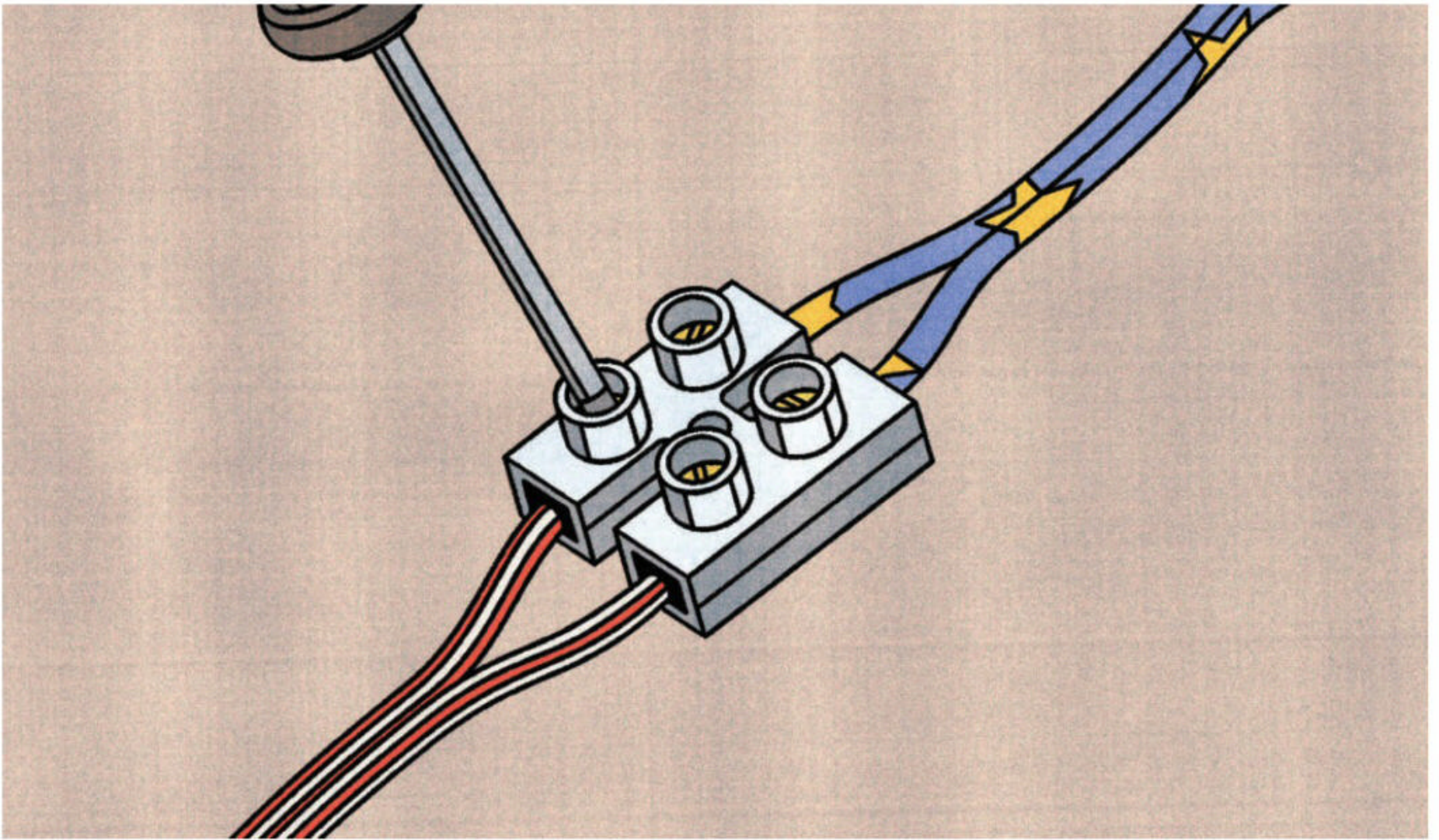


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International relations

Connective action

BERLIN AND SAN FRANCISCO

The war in Ukraine has not just rejuvenated transatlantic co-operation in defence, but in tech too

A COMMAND CENTRE to scan the digital realm for global disinformation campaigns. Standardised plugs for electric cars that will work both in America and in the European Union (EU) and so lower the cost of building the infrastructure needed to decarbonise. A transatlantic team to scout for attempts by China and others to manipulate global technical standards in their favour. These sorts of initiatives sound like common sense, but they are difficult in a world where even allies have competing regulators, vying for technological dominion. Happily, a transatlantic diplomatic undertaking that most people have never heard of is trying to change all that.

The group in question, called the “Trade and Technology Council” (TTC), will convene in Saclay, a suburb of Paris, on May 15th and 16th. A constellation of grand officials from either side of the Atlantic—including America’s secretary of state, commerce secretary and top trade negotiator, and the EU’s commissioners for trade and competition—will be meeting for the second time. Whereas their first meeting in

September in Pittsburgh was mainly meant for participants to get to know each other, the gathering in France will assess progress on their work so far and set goals for the next two years.

It is a momentous task. The TTC is the West’s response to efforts by China and others (notably Russia after its invasion of Ukraine) to build an autocratic digital world and bring the physical supply-chains that underpin it under their control. “The big question is whether democratic governments can develop a meaningful alternative,” explains Marietje Schaake of the Cyber Policy Centre at Stanford University. If America and the EU resolve their differences in tech, other countries are bound to follow their lead: the pair account for 55% of the global market for information technology, whose value is expected to reach a staggering \$4.4trn this year, according to Gartner, a consultancy.

The TTC was set up last year as a “transatlantic inter-agency”, in the words of Paul Triolo of the Albright Stonebridge Group, a foreign-policy consultancy. It is supposed

to be the main venue in which America and the EU co-ordinate policy for the digital realm. The two sides have created ten working groups, ranging from “technology standards” and “secure supply chains” to “investment screening” and “climate and clean tech”.

The structure of the TTC allows the relevant agencies and experts in Brussels and Washington to develop working relationships that go beyond ad hoc encounters that have long dominated transatlantic policymaking. It is a practical forum in which they can resolve their digital differences. Officials once barely knew who was in charge of a given topic on the other side of the Atlantic. Now they can just jump on a video call. “The TTC has become the conduit for much of the US-EU co-operation,” explains the chair of one of the council’s working groups.

The TTC has already helped move negotiations along in several areas, particularly with regard to a new version of “Privacy Shield”, an agreement to create a clear legal basis for flows of personal data across the Atlantic. The original was struck down by the European Court of Justice in 2020. It ruled that the agreement did not sufficiently limit American law-enforcement agencies’ access to the personal data of European citizens.

Although talks to reform “Privacy Shield” are not officially on the TTC’s agenda, they involve many of the same officials. Their familiarity with each other was one ▶▶

▶ big reason why President Joe Biden and Ursula von der Leyen, the president of the European Commission, were able to announce in March that both sides had finally agreed on a deal “in principle”. This will provide the basis for more progress in the TTC. If America and the EU had not even been able to agree on data flows, says another official, other attempts at transatlantic co-operation in tech policy would have been futile.

Another project that has benefited from the TTC is the “Declaration for the Future of the Internet”, which was announced on April 28th and signed by more than 60 countries. Complementing the TTC, this document lays out the priorities for an “open, free, global, interoperable, reliable, and secure” internet—describing in effect an alternative to China’s and Russia’s increasingly autocratic technosphere. Yet it is not aimed mainly at those two powers, both of which are certain to ignore it. It serves instead as a warning to other countries tempted to copy some of the pair’s authoritarian ways.

Russia’s invasion of Ukraine has both spurred the council’s efforts and proved their usefulness. Officials had, among other things, to decide which technology exports to block, how to strengthen cyber-security defences and what to do about Russia’s online disinformation campaigns. “That has given us something to co-operate on,” says another TTC participant.

Unsurprisingly, in light of the war, the beefiest proposals in a leaked draft of the “joint statement” to be published at the end of the meeting in Saclay relate to security. Both sides wish to share more information and harmonise regulations, a step which could one day lead to a common list of sensitive technologies to be kept out of the hands of autocratic regimes. As for supply chains, the idea is to develop, among other things, an early-warning system to avoid the sort of bottlenecks that have led to the current shortage of microchips. The two sides will also vow to refrain from further “subsidy races”, a clear danger in the semiconductor industry.

But in most areas, the council’s woolly pledges hint at the difficulty of the task ahead. In AI, the EU and America aim to “develop a shared hub/repository of metrics and methodologies for measuring AI trustworthiness and AI risks”. In climate and clean tech, both “work towards a common methodology for joint EU-US recommendations on selected carbon-intensive products”. In tech investment, the pair are thinking about holding a “tabletop exercise” to learn how the other side reacts when a Russian or Chinese firm comes knocking to acquire a local company. In other words, officials still are trying to find a common language.

If concrete “deliverables” are few and

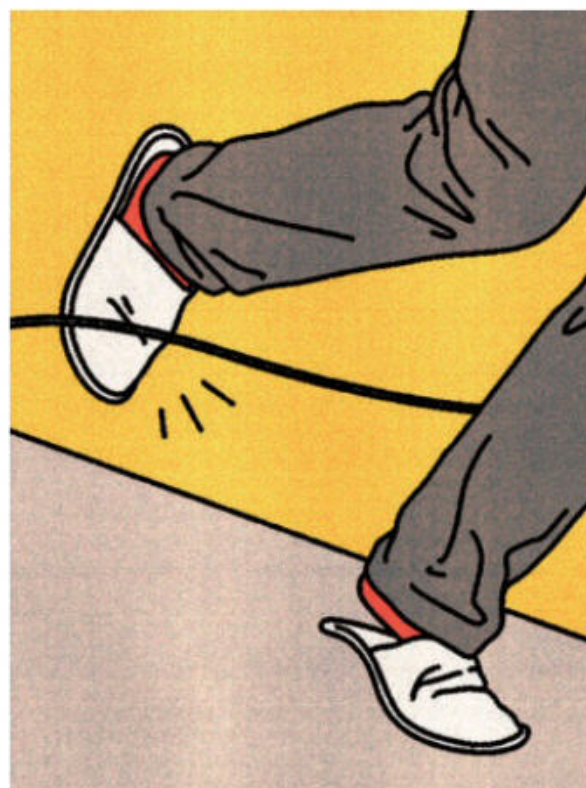
Digital divide

Share of respondents who say they trust technology companies, November 2021, %



far between, it is because America and the EU still live on different digital planets when it comes to regulating big online platforms like Facebook and Google. The EU is putting the finishing touches on a series of sweeping laws, including the Digital Markets Act, meant to increase competition, and the Digital Services Act, to control harmful content. No equivalent bills are likely to make it through America’s Congress. Optimists note that ordinary Americans, if not their elected representatives, seem open to the idea of such rules: they trust tech companies even less than Europeans do (see chart).

That is partly a function of America’s political gridlock, but partly also economic nationalism, in that far more of the firms to be regulated are American than European. The EU is guilty of similar protectionism: America’s negotiators want the TTC to speed up the deployment of two new ways of building mobile networks called OpenRAN (short for Open Radio Access Network) and “virtualisation”. These should make it easier for new providers of telecommunications gear to emerge, which would provide more competition



for Huawei, a Chinese information-technology giant which is accused of working closely with spooks in Beijing. But OpenRAN and virtualisation also weaken two big European firms, Ericsson and Nokia, which are in the same business as Huawei. And they create opportunities for America’s big cloud providers, in particular Amazon Web Services and Microsoft, to get involved in telecoms.

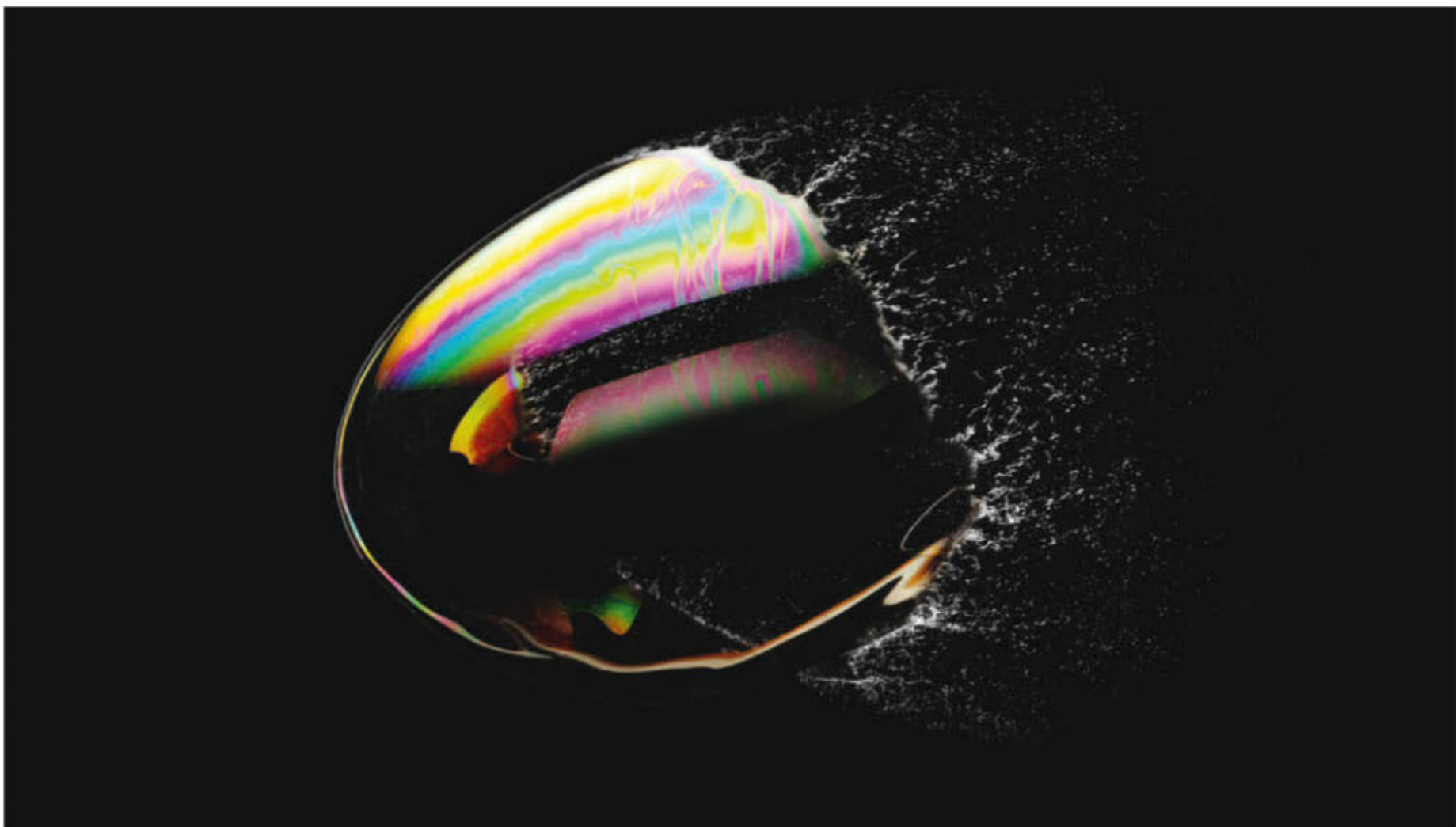
More such squabbles are likely to emerge once the TTC focuses more narrowly on its original purpose: challenging China. “It’s one thing to negotiate export controls for Russia, where the economic impact is quite small, but things become much more difficult to do this for a giant like China,” says Martijn Rasser of the Centre for a New American Security, a think-tank. China is central to most tech supply chains. Many firms from both America and the EU have big investments there.

Another problem is that neither side can really be trusted to keep its promises. If Donald Trump is re-elected in 2024, or another Trump-like president enters the White House, the TTC may soon be forgotten. As for the EU, the European Court of Justice may yet strike down the new version of “Privacy Shield”, too. Similar lawsuits are possible in America as well. “It’s a legal Rubik’s Cube,” says Peter Swire of the Georgia Institute of Technology, who helped develop the new agreement, which has not yet been made public.

Counting your chips

The TTC’s admirers argue that the logical response is for the council to be more ambitious while it still can. They applaud its bolder aims, such as creating common rules for AI and increasing transatlantic co-operation on cyber-security. Another way to strengthen the group would be to invite other like-minded countries, such as Japan and South Korea, or even large companies and other organisations, to join its deliberations. (Big tech firms and other entities will attend the pow-wow in Saclay on an informal basis.)

Some would even like the TTC to evolve into a “tech alliance” of democracies, the digital NATO called for when Mr Biden was elected in late 2020. Recent developments suggest a more probable outcome will be a network of bilateral undertakings. In April the EU agreed such a deal with India and has embarked on a similar process with Japan. Tech is also being discussed in the Quad, the security dialogue between America, Australia, India and Japan. “Just as regulation tends to mirror the industries that it’s regulating, the international system is starting to mirror the industries that they’re trying to address,” says Tyson Barker of the German Council on Foreign Relations, another think-tank. “Expect an ecosystem of alliances.” ■



The tech crunch

Pop!

Tech bubbles are bursting. Some more loudly than others

A FAVOURITE PASTIME in Silicon Valley, second only to inventing the next new thing, is bubble-spotting. Even industry insiders tend to get these things spectacularly wrong. “You’ll see some dead unicorns this year,” Bill Gurley, a noted venture capitalist, predicted in 2015, the year that incubation of these startups worth more than \$1bn really got going.

The game has just become much easier: the sound of bubbles popping can be heard all over the place. Tech shares, initial public offerings (IPOs), blank-cheque companies (known as SPACs), startup valuations and even cryptocurrencies: all the assets that climbed to dizzying heights over the past few years are now coming down to earth. It is harder to say how loudly they will burst—and which might still reflate.

The decline of tech shares is the most spectacular. The NDXT, the index of the 100 largest tech firms on the Nasdaq exchange, is down by a third since its peak in early November. Firms in this index have lost a combined \$2.8trn in market value.

High-flying startups that went public in recent years have been hit hard, too. The

shares of Robinhood are 80% below the level at which the retail-trading app went public in July 2021. Those of Peloton, which makes internet-connected exercise bikes, have lost over 90% of their value from their peak. As a group, the largest newly listed firms are worth 38% less than at the start of the year (see chart on next page).

Small wonder that IPOs have dried up. From January to April 2021 some 150 companies went public in America, most of them techie. This year only 30 have done so. The boom in SPACs, which go public and then find a startup with which to merge, has imploded. Of the more than 1,000 such firms that have floated in America since

2018, only a third have merged with a target. Many of those that have done deals have lost their shine. According to an index that tracks the 25 largest de-SPACed vehicles, they have lost 56% of their value since the beginning of the year.

As tech shares crash, they are pulling valuations of private firms down with them. CB Insights, a research firm, reckons that tech startups raised \$628bn globally in 2021 in more than 34,000 deals. Between January and March this year the number of transactions fell by 5% compared with the previous quarter. The amount of capital invested dropped by 19%, the biggest quarterly decline since 2012. The unicorn boom’s superstar investors have been walloped. On May 12th SoftBank, a Japanese tech investor with a penchant for risky bets, most of which are private, reported that its flagship funds lost an eye-watering \$33bn in the past 12 months.

Although they were meant to reach the Moon no matter what, cryptocurrencies are also coming a cropper. Even some hardened “hodlers” have been getting cold feet. On May 12th bitcoin, the largest cryptocurrency, was trading below \$26,000, less than half its peak in early November. Other digital monies have shed even more value. The next four biggest coins have lost more than 70% since their peak. Non-fungible tokens (NFTs), even more speculative titles to digital assets such as art that can be traded, have been hammered, too. Sales of NFTs in ether, another big cryptocurrency, have dropped by more than half in recent

→ Also in this section

61 Razing baby Amazons

61 The zero-covid industrial complex

62 The surveilled office

63 Bartleby: Woolly words in business

64 Schumpeter: Taming the activists

► weeks on OpenSea, a big NFT marketplace. The industry has suffered from an abrupt reversal of fortunes, explains Mark Mahaney of Evercore ISI, an investment bank. In recent years more than one factor gave tech a boost: the coronavirus pandemic pushed life and work online; government stimulus programmes further increased demand; and super-loose monetary policy made tech's long-term growth more attractive to investors. Now people are turning away from screens and leaving home again; the war in Ukraine is creating paralysing uncertainty; and economies around the world are suffering from inflation and soon, perhaps, recession.

Then there are rising interest rates. Besides possibly triggering a downturn, they reduce the present value of tech companies' profits, most of which lie far in the future. If inflation does not come down, central banks will pile on more rate rises, putting further pressure on risky tech stocks.

How bad will things get? Although stockmarkets have stabilised a bit in recent days, no one is ready to call the bottom. Just as markets have overshot in the past few years, they can undershoot. There is more of a consensus over what could happen when the dust has settled. According to Daniel Ives of Wedbush, another investment bank, the tech industry is at a "fork in

the road". As interest rates go up, he argues, investors will turn their back on more speculative growth stocks and focus on the quality names in tech.

No prizes for guessing which ones. Although the combined market value of America's tech titans—Alphabet, Amazon, Apple, Meta and Microsoft—has dropped by nearly 25% since November and their latest results were less stellar than in earlier quarters, they remain safe bets. Together they booked \$359bn in quarterly sales and \$69bn in net profits. Their core businesses are still growing—in particular cloud computing. Collectively, Alphabet, Amazon and Microsoft, the world's three biggest cloud providers, took in \$43bn of sales for such services in the first three months of 2022, up by 33% from a year earlier.

More unexpectedly, older tech and hardware stocks seem in decent nick, Mr Ives notes. Intel, a veteran chipmaker, is down by a relatively modest 13% since November. IBM, a software icon, is up by 12%. Makers of business software with steady sales and high margins, such as Adobe, Oracle and Salesforce, may rebound fast. Hard though it may seem given Coinbase's crash on May 11th, so may payments and crypto platforms, which have joined the financial mainstream. Cyber-security firms, such as CrowdStrike or Palo Alto Networks,

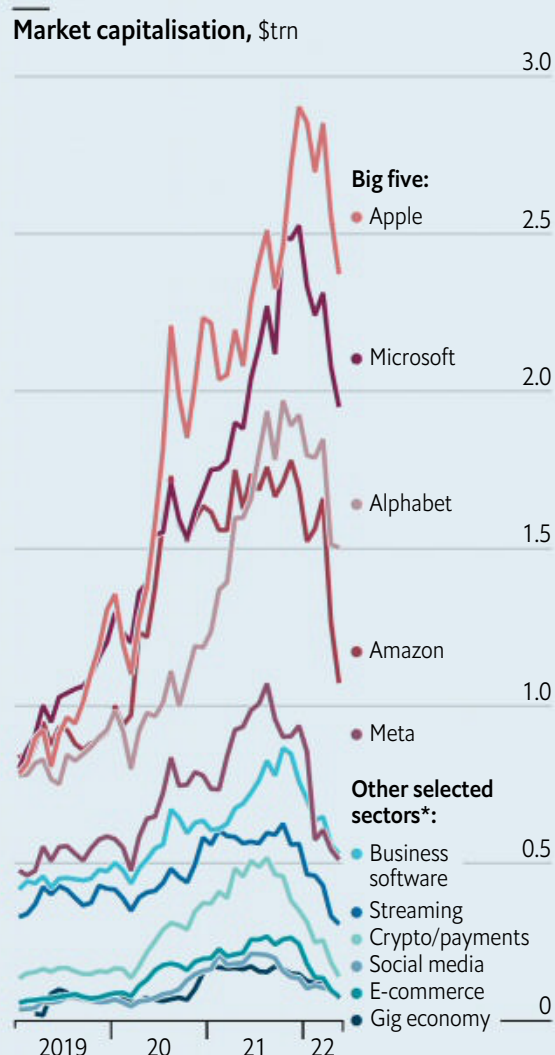
could see their fortunes return thanks to fears of Russian and Chinese cyber-attacks. Geopolitical rifts may even lift Palantir, a secretive analytics firm that works with security services, whose share price plunged by 20% on May 9th after it disclosed slowing sales growth.

Persistently unprofitable gig-economy firms look shakier. Uber, the ride-hailing and delivery champion which reported on May 4th that trips and users rose by nearly a fifth year on year in the first quarter, still lost nearly \$6bn. The heavy repricing of video-streamers, with multibillion-dollar content expenses and reversing (Netflix) or even steady (Disney) subscriber growth, may be permanent. The same may be true for second-tier firms in areas such as social media (Snap) or e-commerce (Shopify), which are dominated by Meta and Amazon, respectively.

It would be wrong to compare the current tech slump to the bursting of the dot-com bubble two decades ago. Back then companies had neither healthy balance-sheets nor promising business models. Nowadays many of them have both. The stomach-churning market gyrations are unpleasant to a generation of tech founders, workers and investors who have lived a long bull run. But they are unlikely to stop digital technology eating the world. ■

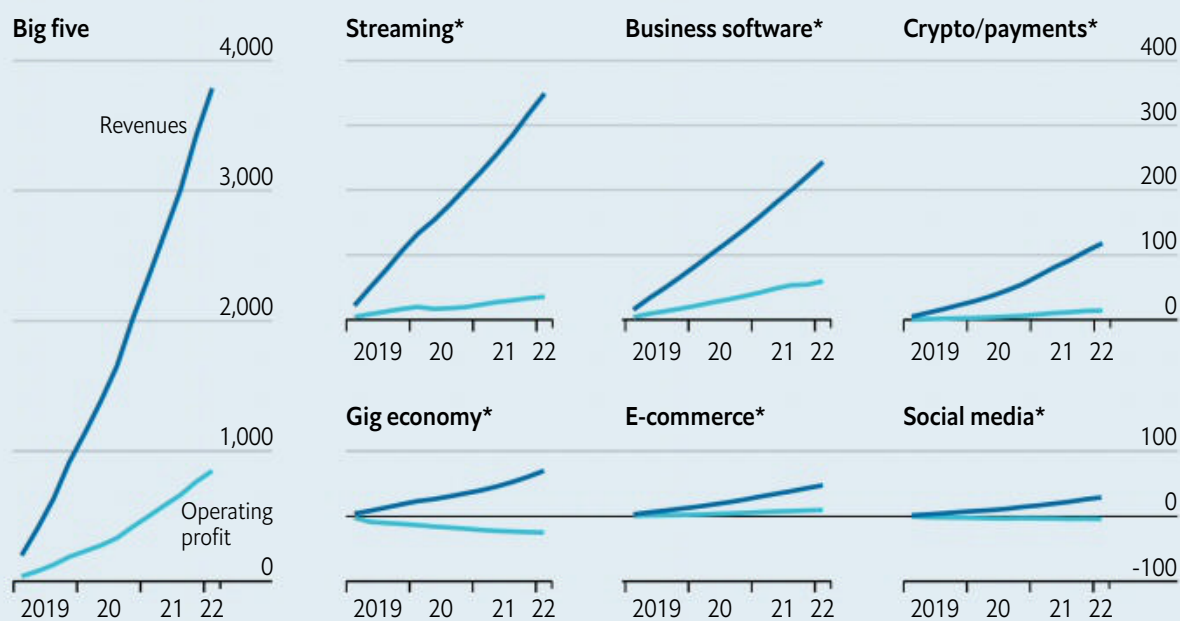
Snap, crackle...

United States, tech companies

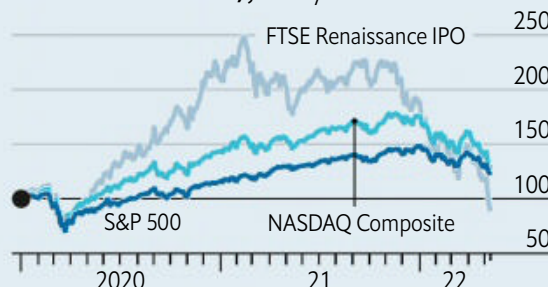


Sources: Refinitiv Datastream; Bloomberg; Dealogic

Financials, cumulative, \$bn

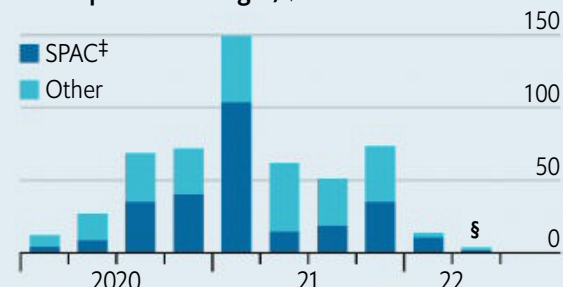


Stockmarket indices, January 1st 2020=100



*Combined top three companies, excluding big five

Initial public offerings[†], \$bn



†Includes non-tech companies ‡Special-purpose acquisition companies §To May 10th

The tech crunch (2)

Can Coupang deliver?

SEOUL

Shopping baskets? Yes. Profits? Maybe

COU-PANG'S OFFICES in Seoul afford a view of the South Korean e-merchant's promise. Every dawn the forest of high-rise apartment blocks teems with its vans dropping off orders made the night before. This self-styled "rocket delivery", and Koreans' love of it, fuelled Coupang's stratospheric rise. When it debuted on the New York Stock Exchange in March 2021, its shares nearly doubled in value in an instant. It closed its first trading day with a market capitalisation of \$80bn. It was the biggest non-American initial public offering (IPO) since Alibaba, a Chinese e-commerce behemoth which listed in 2014.

Things have gone downhill from there. Coupang's share price is around three-quarters below its peak. In March SoftBank, a Japanese tech-investor and Coupang's largest shareholder, offloaded 50m shares for \$1bn, having sold a tranche of the same size for \$1.7bn six months earlier. The firm has been caught up in a broader sell-off in volatile tech stocks, especially in unproven companies. The rise of e-commerce may be easing off as the pandemic sales boom fizzles, just as interest rates rise to contain inflation. This has hurt the world's Amazon wannabes (see chart) and made investors less tolerant of heavy losses in the pursuit of growth—\$1.5bn last year in Coupang's case.

The firm remains confident. On May 11th it reported buoyant first-quarter results. Sales rose by 22% year on year, to \$5.1bn. Although it booked another net loss, its core business actually turned profitable on an adjusted basis, earlier than expected. Its shares looked set to start trading a fifth higher the next day, after *The Economist* went to press.

Nearly half its net loss last year was explained by reinvestment, especially in its infrastructure. Some 70% of South Koreans now live within 10km of one of its warehouses. E-commerce rivals such as Naver and eBay Korea lack its footprint. Traditional retailers with established logistics networks are less technologically sophisticated. Its workforce is made up of employees rather than gig workers, making it less prone to a regulatory backlash. As for SoftBank's divestment, it may have had more to do with the Japanese group attempting to lock in profits as its other risky tech investments sour than with concerns about Coupang, thinks Park Eun-kyung of Samsung Securities, a broker.

Coupang with stress

Share prices, March 11th 2021=100



Source: Refinitiv Datastream

To shore up its dominance, Coupang is getting into food and grocery delivery, video-streaming and fintech, with a "buy-now-pay-later" scheme to complement its own e-payment system. That has helped it draw more people into its empire. In the first quarter the number of active customers grew by 13% year on year, to 18m, having risen by double digits in previous quarters. Last year it launched in Japan and Taiwan. Like South Korea, those countries have high smartphone penetration, ingrained online-shopping habits and dense cities—in other words, Coupang's rocket fuel. ■

The zero-covid industrial complex

Acing the test

SHANGHAI

The biggest corporate winners from China's harsh pandemic strategy

PRESIDENT XI JINPING'S zero-covid policy has been a plague on China's firms and a headache for Western ones reliant on its suppliers and consumers. The 25m residents of Shanghai, the country's commercial hub, have been confined to their homes since April 1st. Beijing, the capital, is teetering on the edge of lockdown. Rail and air travel on a recent national holiday were, respectively, 80% and 75% below the level during last year's festivities. Retail spending has crashed. GDP may shrink in the second quarter.

Regardless, on May 6th the Politburo's Standing Committee doubled down. China's highest decision-making body vowed to fight against "any words or actions that distort, doubt or negate" Mr Xi's crusade to quash covid-19. Gone was language like "reconciling zero-covid with growth" and "minimising the impact of the pandemic on the economy", which sought to balance covid-control with economic growth. The stockmarket shuddered. Except, that is, for

one industry. The market value of Dian Diagnostics Group, a maker of PCR tests, soared by more than 10% after the Politburo's pledge. Daan Gene, another big test-maker, and Yiling Pharmaceutical, which produces traditional Chinese medicine that has been heavily promoted as a covid treatment since 2020, also made gains.

Prospects for this zero-covid industrial complex indeed look bright. Covid testing is moving from makeshift tents on street corners into a network of semi-permanent kiosks where residents will be tested regularly for the foreseeable future; Shanghai alone will build 9,000 of them. In big cities tens of millions of people may have their throats or nasal passages swabbed every 48 hours. An analyst at Soochow Securities, a local broker, says that testing at this pace will cost China about 1.7trn yuan (\$254bn) this year, or around 1.5% of GDP.

The amount firms can charge for tests has fallen since 2020, when a single swab could cost more than 350 yuan. The government, which pays for most mass-testing, has ordered the 20 or so listed makers of test kits to lower the price to around 20 yuan. The test-makers have nevertheless continued to rake in cash. Dian Diagnostics' net profit increased by more than 120% year on year in the first quarter, before testing intensified. Guangdong Hybri-bio Biotech, another test provider, reported a jump of almost 200%.

The testing frenzy is minting covid tycoons. Liang Yaoming, founder of Guangzhou Kingmed Diagnostics, which also makes tests, has become a billionaire during the pandemic. The value of shares in BGI, a \$4bn biosciences darling, held by its founder, Wang Jian, has shot up by more than \$300m since 2019 to about \$2bn. Chen Haibin's 26% stake in Dian Diagnostics is worth just shy of \$1bn.

Some voices have raised concerns about the rise of covid-related big business. Guan Qingyou, an economist at the Xinrui School in Beijing, recently warned of the risk of special-interest groups "misleading and kidnapping" public policy on the pandemic. They could eventually create something akin to America's military-industrial complex, he said in a post on Chinese social media, which has since been deleted.

Mr Guan may be on to something. Zhong Nanshan, China's leading respiratory-disease expert, has promoted Yiling's traditional Chinese medicines used to treat covid-19 while maintaining undisclosed links to the company, the *Financial Times* has reported. More egregiously, the chief representative of a subsidiary of Guangzhou Kingmed Diagnostics was arrested earlier this year on suspicion that he was trying to spread covid in order to benefit his business. Not quite what the Politburo ordered. ■

The future of work

Big Brotherly boss

Welcome to the era of the hyper-surveilled office

BOSSES HAVE always kept tabs on their workers. After all, part of any manager's job is to ensure that underlings are earning their keep, not shirking and definitely not pilfering. Workplaces have long been monitored, by inspectors, CCTV cameras and more recently all manner of sensors, to check how many widgets individual workers are assembling or whether anyone is dipping too liberally into the petty-cash box. In the past few years, however, and especially as the pandemic has forced work from the controlled enclosure of the corporate office to the wilderness of the kitchen table, both the scope and scale of corporate surveillance have ballooned.

A study by the European Commission found that global demand for employee-spying software more than doubled between April 2019 and April 2020. Within weeks of the first lockdowns in March 2020 search queries for monitoring tools rose more than 18-fold. Surveillance-software makers' sales jumped. At Time Doctor, which records videos of users' screens or periodically snaps photos to ensure they are at their computer, they suddenly trebled in April 2020 compared with the previous year. Those at DeskTime, which tracks time spent on tasks, quadrupled in that period. A survey of more than 1,000 firms in America in 2021 found that 60% of them used monitoring software of some type. A further 17% were considering it.

In an acknowledgment that snooping is

on the rise—and raising eyebrows—on May 7th a New York state law kicked in requiring firms to tell staff about any electronic monitoring of their phone, email and internet activity. Corporate scofflaws can be fined between \$500 and \$3,000 per violation. New York joins Connecticut and Delaware, which have mandated similar disclosures since the late 1990s and early 2000s, respectively, and Europe, where companies have had to prove that monitoring has a legitimate business basis—such as preventing intellectual-property theft or boosting productivity—since 1995. More such rules are poised to emerge. They are unlikely to deter more offices from embracing Big Brotherliness.

Smile, you're on candid webcam

Firms have valid reasons to monitor workers. Safety is one: tracking staff's whereabouts in a building can help employers locate them in case of emergency. Another is to keep money and data safe. To ensure employees are not sharing sensitive information, banks such as JPMorgan Chase trawl through calls, chat records and emails, and even track how long staff are in the building. In 2021 Credit Suisse, another lender, began requesting access to personal devices used for work.

Startups are offering more sophisticated threat assessments. One, Awareness Technologies, sells software called Veriato, which gives workers a risk score, so that

the employer can assess how likely they are to leak data or steal company secrets. Another, Deepscore, claims its face and voice-screening tools can determine how trustworthy an employee is.

A further big reason for companies to surveil workers is to gauge—and enhance—productivity. The past couple of years have seen an explosion in tools available to managers that claim not just to tell whether Bob from marketing is working, but how hard. Employers can follow every keystroke or mouse movement, gain access to webcams and microphones, scan emails for gossip or take screenshots of devices—often, as with products such as FlexispY, leaving the surveilled workers none the wiser. Some monitoring features are becoming available on widely used office software like Google Workspace, Microsoft Teams or Slack.

Many surveillance products are powered by ever cleverer artificial intelligence (AI). Enable claims its AI can measure how quickly employees complete tasks as a way of weeding out slackers. Last year Fujitsu, a Japanese technology group, unveiled AI software which promises to gauge employees' concentration based on their facial expression. RemoteDesk alerts managers if workers eat or drink on the job.

Collected responsibly, such data can boost a firm's overall performance while benefiting individuals. Greater oversight of workers' calendars can help prevent burnout. Technology can empower employees facing bias or discrimination. Parents and other staff with caring duties can show they are as productive as their office-dwelling colleagues. And people tend to tolerate bag checks and CCTV cameras, which they see as legitimate ways to improve security. Likewise, many accept that their work calls and email are fair game.

Critics of surveillance nevertheless fear that firms are not to be trusted. In 2020 a staff backlash forced Barclays, a British bank, to scrap software that tracked the time employees spent at their desks and nudged those who spent too long on breaks. That year Microsoft came under scrutiny for a feature it rolled out to rate workers' productivity using measures including how often they attended video meetings or sent emails. The software giant apologised and made changes to avoid identifying individuals. On paper, the goal was to provide detailed insight into how organisations work. In practice, it pitted employees against each other.

That points to another problem: many surveillance products aimed at boosting productivity are not well tested. Some risk being counterproductive. Research has associated monitoring with declines in trust and higher levels of stress, neither of which is conducive to high performance. In one study of call centres, which were



▶ early adopters of surveillance tech, intensive monitoring of performance contributed to emotional exhaustion, depression and high employee turnover. In a separate survey of 2,000 remote and hybrid workers in America by ExpressVPN, a virtual private network, over a third faced pressure to appear more productive or to work longer hours as a result of being monitored. A fifth felt dehumanised, nearly half pretended to be online and almost a third employed anti-surveillance software, specifically designed to dodge online monitoring. Add concerns about privacy—special-

ly as the snooping shifts from the office to the home—and no wonder that workers are wary. According to a survey in 2018 by Britain's Trades Union Congress, an umbrella group, only one in four workers thought monitoring offered more benefits than downsides. Three in four viewed facial-recognition software as inappropriate. They had similar concerns about the monitoring of their social-media use outside work hours and using webcams to spy on them. Gartner, a consultancy, last year found that employees in nine large economies consistently favoured non-digital

monitoring, such as in-person check-ins by managers, to the digital sort. Only 16% of French workers felt that any form of digital surveillance was acceptable.

With laws like New York's coming into force, lots of employees are about to learn that their employers' views on the appropriateness of such methods may be quite distinct from their own. Employers, for their part, may need to temper their enthusiasm for snooping on staff. Most companies will probably arrive at a sensible compromise. Those that don't may find that too much knowledge is a dangerous thing. ■

Bartleby The woolliest words in business

Innovation. Sustainability. Purpose. Yuck

FIRE-FIGHTING FOAM starves the flames of oxygen. A handful of over-used words have the same deadening effect on people's ability to think. These are words like "innovation", "collaboration", "flexibility", "purpose" and "sustainability". They coat consultants' websites, blanket candidates' cvs and spray from managers' mouths. They are anodyne to the point of being useless.

These words are ubiquitous in part because they are so hard to argue against. Who really wants to be the person making the case for silos? Which executive secretly thirsts to be chief stagnation officer? Is it even possible to have purposelessness as a goal? Just as Karl Popper, a philosopher, made falsifiability a test of whether a theory could be described as scientific, antonymy is a good way to work out whether an idea has any value. Unless its opposite could possibly have something to recommend it, a word is too woolly to be truly helpful.

Woolliness is the enemy of accuracy as well as utility. A word like "sustainability" is so fuzzy that it is used to encompass everything from a business that thinks sensibly about the long term to the end of capitalism. This column may well count as sustainable because it keeps recycling the same ideas. The lack of precision opens the door to grandstanding and greenwashing. Earlier this year Morningstar, a data provider, culled 1,200 funds from its European sustainable-investment list after a closer review of their prospectuses and annual reports. Regulators in America and Europe have been scrambling to define standards of sustainability disclosure.

Woolliness also smothers debate about whether you can have too much of a good thing. Take "innovation", for example. Too much innovation can be a

turn-off for customers. A recent paper from Yingyue Luan and Yeun Joon Kim of the Judge Business School at the University of Cambridge looks at the effect of perceived novelty on the response of audiences to films. The researchers find that there is a sweet spot in experimentation, where films are distinctive enough to pique curiosity but not so radical that they up-end expectations. In that space between "Home Alone 4" and "Tenet" lie the real moneymaking opportunities.

Innovation can also be trying for employees. Researchers at the Massachusetts Institute of Technology (MIT) recently looked at factors that predicted high levels of attrition among companies' workforces. To their surprise, they found that employees were more likely to leave firms—like Tesla and Nvidia—with high levels of innovation. The authors hypothesise that the long hours and high pressure that typify innovative cultures can lead to higher staff turnover.

"Collaboration" is another word that repays closer scrutiny. It can be marvelous: boundaries dissolved, expertise and

ideas flowing. But collaboration can also run wild. It often means having more and more people on every email thread and in every meeting. It can paralyse decision-making, as everyone and their dog gets to weigh in with their view. (To be fair, the dog often makes the most useful points.)

And the rewards that flow from collaborativeness are uneven. "The No Club", a new book by Linda Babcock, Brenda Peyser, Lise Vesterlund and Laurie Weingart, examines the disproportionate amount of "non-promotable work" done by women—tasks like covering absences, organising logistics and mentoring. Collaboration is a much less attractive proposition if helping others means spending less time on the sort of work that gets recognised when it is time to hand out actual promotions.

A host of other woolly words also mask genuine trade-offs. The supremely fluffy notion of "purpose" disguises hard-edged questions of how managers should balance the interests of multiple stakeholders. "Flexibility" sounds like a boon to workers, but the reality for employees of coping with last-minute changes to schedules is often very different. The MIT study found that having a regular schedule was six times more powerful as a predictor of blue-collar-employee retention than having a flexible schedule.

Traits like innovativeness or collaborativeness are still qualities for firms to aspire to. And this is not an argument for constant qualification of what is meant: the one way to make "purpose" more annoying is to put the word "smart" in front of it. But it is a plea for managers to use woolly words thoughtfully. They are not going away, but they do not have to suffocate mental activity.



Schumpeter | Where the wild things were

Activist investors are becoming tamer. They must not become extinct



“WHEN WE GO at ‘em,” Carl Icahn growls, proudly, “we go at ‘em.” After decades as chief executives’ number-one tormentor, the 86-year-old’s disdain for them has softened only a tad. “I wouldn’t call them buffoons,” he told Schumpeter recently, “but, with many exceptions, they are in way over their heads.” Mr Icahn continues to browbeat managers for poor performance. As *The Economist* went to press he was in the final throes of a fight with Southwest Gas, a utility. His gripes are broadening, too. This month and next he will seek to oust directors at McDonald’s and Kroger over the treatment of sows. Yet Mr Icahn also considers himself a vanishing breed. “Activism is dying,” he laments.

Not on paper. In the first quarter of the year activists launched 73 campaigns, the busiest three months since Lazard, an advisory firm, began keeping track in 2014. This week Bluebell, a newish activist fund based in London that made its name last year by ousting the boss of Danone, a struggling French yogurt-maker, set its sights on Saint-Gobain, another icon of France SA. Still, Mr Icahn has a point. Activism isn’t what it used to be.

Activist investing, simply defined, involves buying a stake in a company, then pushing for change. Activists might urge a firm to boot out its boss or sell a subsidiary, say, in the hope of driving up the share price. Mr Icahn became an activist to correct what he deems a broad failing of corporate boards to oversee management. “I’m no genius,” he says, “but I made billions and billions of dollars from this crazy system.”

In making their billions and billions, activists would pair financial acumen with ferocious insults, hurled mostly at companies but sometimes also at each other. After Bill Ackman of Pershing Square, a hedge fund, bet against Herbalife, Mr Icahn invested in the multilevel marketing firm. In a notorious televised spat between the two of them in 2013, Mr Icahn called Mr Ackman a “cry-baby” and declared, “I wouldn’t invest with you if you were the last man on Earth.” Activists’ open letters to firms are only slightly more temperate. “Years of value destruction and strategic blunders”, Daniel Loeb of Third Point, another fund, wrote to one boss in 2005, “have led us to dub you one of the most dangerous and incompetent executives in America.” In 2018 Third Point’s quest to sack the board of Campbell Soup included a video in which the

company’s famous jingle morphed from “mmm, mmm, good” to “mmm, mmm, BAD”.

For CEOs, such antics pose a headache at best, requiring expensive lawyers, bankers, proxy advisers and public-relations gurus. Targeted bosses have occasionally struggled to keep their cool. In 2017 Arconic, an industrial firm, faced a campaign from Paul Singer’s Elliott Management. Klaus Kleinfeld, Arconic’s chief executive, wrote a letter alluding to a raucous trip to the World Cup and suggesting that Mr Singer might have performed “Singin’ in the Rain” in a fountain. Mr Kleinfeld resigned soon after.

In the past few years such altercations have grown rarer. That is partly because there are plenty of newcomers who lack the old guard’s abrasive ways—even if some, such as Politan or Mantle Ridge, were founded by alumni of the veteran funds. First-time activists accounted for 25% of the campaigns launched in the first quarter, according to Lazard, up from 17% in 2019. But some veterans, too, are mellowing with age. In March Mr Ackman declared that his firm had retired permanently from activist short-selling, which he called the “noisiest form of activism” (unsurprising, perhaps, given his volatile record on such gambles). Elliott has built a buy-out arm, so it can take companies private rather than simply badgering them in public. In March it helped lead a consortium to acquire Nielsen, a data company, for \$16bn.

Activism is, in other words, becoming if not dull, exactly, then more subtle. Many activists are choosing to operate quietly, pushing a company’s board in private and preserving the ability to grumble in public if the board resists. “Several years ago, when activism was a narrow asset class, the personalities were as big a focus as the actual substance of the campaigns,” says Avinash Mehrotra of Goldman Sachs. Now Mr Mehrotra reckons that for every public campaign on which the investment bank advises a company, it is working on four to five times as many private ones. Politan’s campaign last year at Centene, a health insurer, had little press coverage before an agreement was announced to replace the firm’s boss and add new board members. In quiet campaigns, says another activist investor, the public sees no engagement followed by the “kumbaya” result. Even Mr Loeb has adopted a new tone. He wants Amazon to spin off its cloud business; in a letter in February he praised “Amazon’s talented and focused new CEO Andy Jassy”, seeming less inclined to kick Mr Jassy’s backside than to kiss it.

The risk of rewilding

Just as activists are becoming less confrontational, though, regulators are turning more so. Although America’s Securities and Exchange Commission (SEC) is making it easier for investors to elect their candidates to corporate boards, in other ways the stock-market watchdog is making activism harder. A new definition of a “group” would limit activists’ ability to make their case to other shareholders. Another rule would require quick disclosure of ownership of derivatives, which could push up the target’s share price, sapping the incentive to build a large stake. Tellingly, the proposals are supported by corporate lobbies such as the Business Roundtable. Elliott, in comments filed to the SEC, warned that the rules would “virtually shut down activism”.

That would be too bad. Research shows that activism lifts returns for activists and long-term value for other shareholders. Robert Eccles of Saïd Business School and Shivaram Rajgopal of Columbia Business School have told the SEC its rules would lead to “less value creation, worse governance, and more acrimony at public companies”. No one wants that—least of all the gadflies. ■



Global housing

Braced for a storm

Which property markets are most exposed to coming interest-rate rises?

STOCKS ARE sinking, a cost-of-living crisis is in full swing and the spectre of global recession looms. But you wouldn't know it by looking at the rich world's housing markets, many of which continue to break records. Homes in America and Britain are selling faster than ever. House prices in Canada have soared by 26% since the start of the pandemic. The average property in New Zealand could set you back more than NZ\$1m (\$640,000), an increase of nearly 46% since 2019.

For more than a decade homeowners benefited from ultra-low interest rates. Now, however, changes are brewing. On May 5th the Bank of England, having forecast that inflation in Britain could exceed 10% later this year, raised its policy rate for the fourth time, to 1%. The day before America's Federal Reserve had increased its benchmark rate by half a percentage point, and hinted that more tightening would follow. Investors expect the federal funds rate to rise above 3% by early 2023,

more than triple its current level. Most other central banks in the rich world, ranging from Canada to Australia, have either started pressing the monetary brakes, or are preparing to do so.

Many economists believe that a 2008-style global property crash is unlikely. Households' finances have strengthened since the financial crisis, and lending standards are tighter. Scarce housing supply together with robust demand, high levels of net household wealth and strong labour

markets should also support property prices. But the rising cost of money could make homeowners' existing debt burdens difficult to manage by increasing their repayments, while putting off some prospective buyers. If that hit to demand is big enough, prices could start to fall.

Homeowners' vulnerability to sharp rises in mortgage payments varies by country. In Australia and New Zealand, where prices jumped by more than 20% last year, values have got so out of hand that they may be sensitive to even modest rises in interest rates. In America and Britain, where markets are a little less torrid, interest rates may have to approach 4% for house prices to fall, reckon analysts at Capital Economics, a consultancy.

Alongside price levels, three other factors will help determine whether the housing juggernaut simply slows, or comes crashing to a halt: the extent to which homeowners have mortgages, rather than own their properties outright; the prevalence of variable-rate mortgages, instead of fixed-rate loans; and the amount of debt taken on by households.

Consider first the share of mortgage-holders in an economy. The fewer homeowners who own their properties outright, the greater the impact of a rate rise is likely to be. Denmark, Norway and Sweden have relatively high shares of mortgage-holders (see table on next page). A relaxation of ▶▶

→ Also in this section

67 A fading export boom in China

67 Russia's record trade surplus

68 Inflation, inflation everywhere

69 Buttonwood: Italian debt anxieties

70 Digital finance takes off in Brazil

72 Free exchange: India, growth motor?

► lending standards in response to the covid-19 pandemic turbocharged borrowing. In Sweden tax breaks for homeowners have further fuelled the rush to secure mortgages, while a dysfunctional rental market, characterised by overpriced (and illegal) subletting, has pushed more tenants into home ownership. All this puts Nordic banks in a tricky position. In Norway and Sweden housing loans make up more than a third of banks' total assets. In Denmark they account for nearly 50% of lenders' books. Sharp falls in house prices could trigger losses.

Home and dry

By contrast with the Nordics, where home ownership has been fuelled by the growth of mortgage markets, many households in central and eastern European countries bought homes without taking on debt in the 1990s because property was so cheap. In Lithuania and Romania more than four-fifths of households are outright owners. Mortgage-free households are also more prevalent in southern Europe, notably Spain and Italy, where inheritance or family support is a common route to home ownership. Germans, for their part, are more likely to rent than own their homes. Rate rises will consequently have less direct impact on prices.

The structure of mortgage debt—the

second factor—also matters. Rising interest rates will be felt almost instantly by borrowers on variable rates, which fluctuate with changes in policy rates; for those on fixed rates, the pain will be delayed. In America mortgage rates tend to be fixed for two or three decades. In Canada nearly half of home loans have rates that are set for five or more years. By contrast lending in Finland is almost entirely priced at floating rates. In Australia around four-fifths of mortgages are tied to variable rates.

Just looking at the proportion of borrowers on fixed versus variable rates can mislead, however. In some countries mortgage rates may often be fixed, but for a period that is too short to protect borrowers from the interest-rate storm. In New Zealand fixed-rate mortgages make up the bulk of existing loans, but nearly three-fifths are fixed for less than a year. In Britain nearly half the fixed-rate stock is for up to two years.

Resilience to rising rates will also depend on the quantum of debt taken on by households—our third factor. High indebtedness came into sharp focus during the global financial crisis. As property prices fell, households with towering mortgage repayments relative to their incomes found themselves squeezed. Today households are richer—but many are saddled with more debt than ever. While Canadi-

ans added C\$3.6trn (\$2.8trn) to their combined pile of savings during the pandemic, buoying their net wealth to a record C\$15.9trn at the end of 2021, their ravenous appetite for homes has pushed household debt to 137% of income. The share of new mortgages with extreme loan-to-income ratios (ie, exceeding 4.5) has also risen, prompting Canada's central bank to issue a warning about high levels of indebtedness in November last year.

Financial regulators in Europe are equally worried. In February the European Systemic Risk Board warned of unsustainably high mortgage debt in Denmark, Luxembourg, the Netherlands, Norway and Sweden. In Australia, homeowners' average debt as a share of income has swollen to 150%. In all these countries households will face heftier monthly repayments just as soaring food and energy costs eat into their incomes.

All shapes and sizes

Bring this together, and some housing markets seem set for more pain than others. Property in America, which bore the brunt of the fallout from the subprime-lending crisis, appears better insulated than many large economies. Borrowers and lenders there have become more cautious since 2009, and fixed rates are much more popular. Housing markets in Britain and France will fare better in the short term but look exposed if rates rise further. Property in Germany and southern and eastern Europe appears less vulnerable. By contrast, prices may be most sensitive to rate rises in Australia and New Zealand, Canada and the Nordics.

One floor for house prices is that, in most countries, demand still vastly outstrips supply. Strong job markets, hordes of millennials nearing home-buying years and a shift to remote working have all increased the demand for more living space. New properties remain scarce, which will sustain competition for homes and help keep prices high. In Britain there were 36% fewer property listings in February compared with the start of 2020; in America there were 62% fewer listings in March than the year before.

Nor does the alternative to owning a home—renting—look particularly attractive. Across Britain average rents were 15% higher in April than in early 2020. In America they rose by a fifth in 2021, with bigger rises in hotspots, such as Miami, where they jumped by almost half. Rent controls cause a different sort of pain. Prospective tenants of such properties in Stockholm face an average waiting time of nine years.

As the era of ultra-cheap money comes to an end, then, demand for housing is not about to collapse. Yet one way or another, renters and homeowners will face an intensifying squeeze. ■

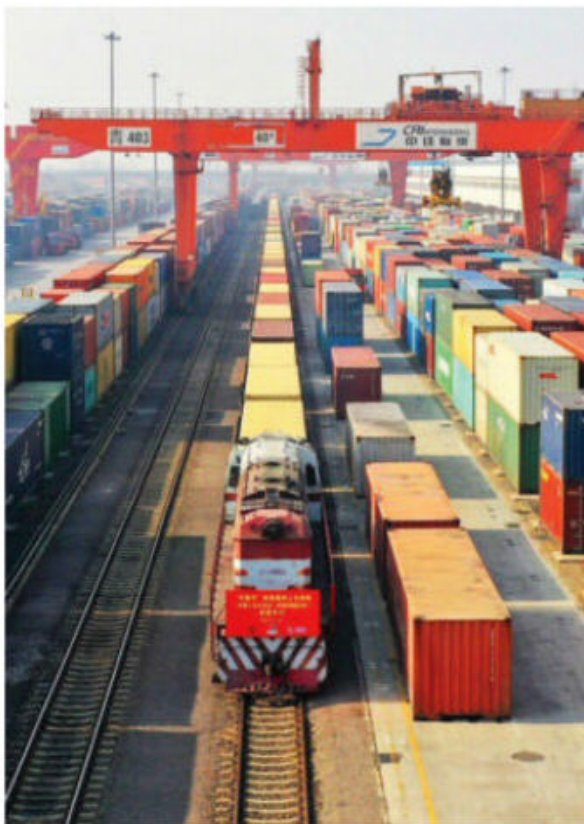
House of scorecards

Housing-risk indicators, selected countries

(Ranking out of 20*)	House-price increase, Q4 2019-Q4 2021, %	Share of homeowners with a mortgage, 2019 [†] , %	Variable-rate mortgages as a share of total, 2018 [†] , %	Total outstanding residential loans to disposable income of households, 2019 [†] , %
Sweden (1)	28	43	69	177
Netherlands (=2)	30	49	16	182
New Zealand (=2)	46	67	18	142 [‡]
Norway (4)	16	50	94	169
Australia (=5)	28	32	81	150
Luxembourg (=5)	31	34	47	147
Canada (7)	26	39	28	137
Denmark (=8)	17	38	16	170
United States (=8)	31	40	15	70 [§]
Finland (10)	9	31	96	73
Poland (11)	22	11	100	33
Ireland (12)	17	26	39	70
Britain (13)	18	31	7	101
Germany (=14)	22	18	12	71
Lithuania (=14)	15	9	97	28
Hungary (=16)	24	12	16	17
Spain (=16)	2	24	36	64
France (18)	14	24	2	71
Romania (19)	10	1	75	13
Italy (20)	6	10	33	32

Sources: OECD; Hypostat; Suttle Economics; Knight Frank; *The Economist*

*Average of four indicators (1=most exposed to interest-rate rises)
[†]Or latest available [‡]Estimate [§]2018



Global trade

A slow train from China

HONG KONG

An extraordinary export boom comes to an end

LAST MONTH a yellow-striped freight train rumbled into Budapest carrying solar-power equipment, air-conditioning kit and other bits and pieces. It had travelled for 16 days, all the way from Shandong, a province in eastern China. As part of China's Belt and Road Initiative, freight trains now serve more than 50 cities in Europe and Asia from Shandong. They are called "Qilu" trains, a nod to the ancient Qi and Lu kingdoms that flowered in that part of China in the Confucian era.

China's exports, whether by rail, road, sea or air, have made rapid progress in the past two years. They rose by almost 30% in dollar terms in 2021. Over 5,000 Qilu trains have left the station since 2018. But in April, China's export growth slowed to a desultory chug. In dollar terms, exports were only 3.9% higher than a year earlier.

Even that modest increase was something of a miracle. It came despite China's increasingly surreal battle against covid-19, which has locked down Shanghai, one of the country's biggest trade hubs, and imposed onerous restrictions on mobility elsewhere. According to Nomura, a bank, stringent limits remain in 41 cities, accounting for almost 30% of GDP. Towns

have been so anxious to avoid outbreaks that officials have sealed lorry drivers into their cabs while they wait to pick up cargo at motorway checkpoints. These kinds of precautions have also gummed up international trade. In mid-April, 506 vessels were waiting outside Shanghai's port, according to Windward, a shipping-analytics firm, compared with 260 in February.

Optimists had hoped that China's export machine could weather occasional outbreaks of the Omicron variant. Workers, they pointed out, could isolate themselves on the job, living where they work in a so-called "closed loop". But no modern factory is entirely self-contained; every "closed" loop must remain open to its suppliers. And if any loop in the supply chain succumbs to the virus, it can disrupt production in all of them. Tesla's car production in Shanghai has, for example, been hampered by a shortage of wiring harnesses from a virus-hit supplier, according to Reuters, a news agency.

To increase trade by any amount in these conditions is impressive. But the headline 3.9% expansion reported by China's customs agency on May 9th was more nominal than real. More detailed statistics, published later in the month, are likely to show that the price of China's exports rose by perhaps 8% or more in April, compared with a year earlier, according to UBS, a bank. If so, the volume of China's exports must have shrunk last month.

These price increases have raised fears that a locked-down China will exacerbate inflation in its trading partners, particularly America. The alarm is often exaggerated. Goods made (in whole or in part) in China made up less than 2% of American personal consumer spending in 2017, according to economists at the Federal Reserve Bank of San Francisco. China's covid-related bottlenecks could have larger ripple effects, say by allowing rival manufacturers to raise their prices. Most American inflation, however, is made in America.

Indeed, China's exports may be more a victim of America's woes than a cause of them. America's slowdown is contributing to weaker demand for China's goods on top of self-inflicted disruptions to their supply. Surveys of purchasing managers have revealed falling export orders every month so far this year. And China's official statistics showed declining exports last month of the computers and household appliances that were in such high demand when the West too was locking itself down.

Not everything is slowing, however. China's imports from Russia have continued to grow since Vladimir Putin's invasion of Ukraine, as sanctions have hindered Russia's access to Western markets (see next story). The offerings included 50 carriage-loads of barley, carried to Shandong province on a Qilu train. ■

Russia's economy

Bearing up

Why Russia is on track for a record trade surplus

WITHIN DAYS of Vladimir Putin's invasion of Ukraine, Russia's financial system seemed on the verge of collapse. The West imposed a range of financial sanctions, notably on the Russian central bank's foreign-exchange reserves, that sent the rouble plunging and led citizens to withdraw cash frantically. Then the central bank raised interest rates, imposed capital controls and injected liquidity into the banking system, and some of these misfortunes reversed. Although a chunk of Russia's currency reserves remains frozen, the country still generates about \$1bn a day from its energy exports.

Russia has stopped publishing detailed monthly trade statistics. But figures from its trading partners can be used to work out what is going on. They suggest that, as imports slide and exports hold up, Russia is running a record trade surplus.

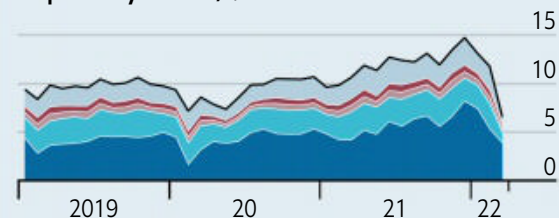
On May 9th China reported that its goods exports to Russia fell by over a quarter in April, compared with a year earlier, while its imports from Russia rose by more than 56%. Germany reported a 62% monthly drop in exports to Russia in March, and its imports fell by 3%. Adding up such flows across eight of Russia's biggest trading partners, we estimate that Russian im- ▶▶

Surplus surprise

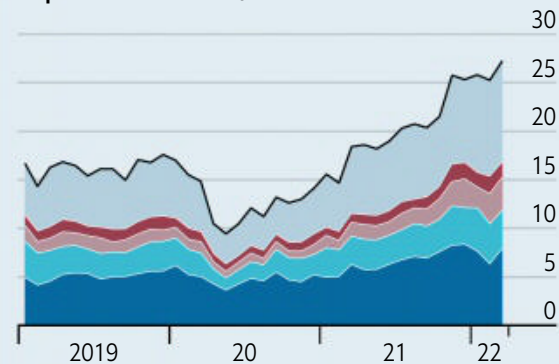
Russia, total trade with selected countries

■ China ■ Germany ■ Italy ■ Japan ■ Other*

Imports by Russia, \$bn



Exports from Russia, \$bn



*France, South Korea, Turkey and United States
Sources: Refinitiv Datastream; national statistics

Correction: In a leader last week ("The rate fate that awaits"), we called Australia's central bank the "Bank of Australia". It should, of course, have been the "Reserve Bank of Australia". Sorry.

ports have fallen by about 44% since the invasion of Ukraine, while its exports have risen by roughly 8%.

Imports have collapsed partly because sanctions on the Russian central bank and the expulsion of some lenders from the SWIFT interbank messaging network have made it harder for consumers and firms to buy Western goods. Elina Ribakova of the Institute of International Finance (IIF), a bankers' group, says that regulatory uncertainty was also a big factor at first, as Western firms were unsure which Russian banks came under sanctions. Logistical disruptions, including decisions by Western firms to suspend deliveries to Russia, mattered, too. The early depreciation of the rouble also dampened Russian demand for imports, says Claus Vistlesen of Pantheon Macroeconomics, a consultancy.

Russia's exports, meanwhile, have held up surprisingly well, including those directed to the West. Sanctions permit the sale of oil and gas to most of the world to continue uninterrupted. And a spike in en-

ergy prices has boosted revenues further.

As a result, analysts expect Russia's trade surplus to hit record highs in the coming months. The IIF reckons that in 2022 the current-account surplus, which includes trade and some financial flows, could come in at \$250bn (15% of last year's GDP), more than double the \$120bn recorded in 2021. That sanctions have boosted Russia's trade surplus, and thus helped finance the war, is disappointing, says Mr Vistlesen. Ms Ribakova reckons that the efficacy of financial sanctions may have reached its limits. A decision to tighten trade sanctions must come next.

But such measures could take time to take effect. Even if the EU enacts its proposal to ban Russian oil, the embargo would be phased in so slowly that the bloc's oil imports from Russia would fall by just 19% this year, says Liam Peach of Capital Economics, a consultancy. The full impact of these sanctions would be felt only at the start of 2023—by which point Mr Putin will have amassed billions to fund his war. ■

"core" inflation, which excludes food and energy prices; the dispersion in inflation rates for the sub-components of the consumer-price index; labour costs; inflation expectations; and Google searches for inflation. To gauge where inflation has become most pervasive, we rank each country according to how it fares on each measure, and then combine these ranks to form an "inflation entrenchment" score.

Continental Europe, so far at least, seems to have escaped the worst of the scourge. Inflation is leaving barely a trace on Japan. But it is entwining itself around Anglophone economies. Canada is faring slightly worse even than America. Britain has a big problem on its hands (see chart).

A few factors explain the differences. Total fiscal stimulus across Anglophone countries in 2020-21 was about 40% more generous than in other rich places, according to our estimates. It was also more focused on handouts to households (such as stimulus cheques). That may have further stoked demand. Monetary policy in the euro area and Japan was already ultra-loose before the pandemic, limiting the amount of extra stimulus central banks could provide. Britain's inflation may also reflect an idiosyncratic factor: Brexit. It turns out that breaking with your largest trading partner causes costs to rise.

The simplest component of our ranking is the rate of core inflation. This measure gives a better sense of underlying price pressure. Among our ten countries, America leads the pack (though core inflation is above average pretty much everywhere).

A second measure, of dispersion, helps capture how broadly based price pressures are. Headline inflation being driven by one or two items—say, the cost of a restaurant meal—is less worrisome than if the price of everything is going up quickly. We divide a country's consumer-goods basket into as many as 16 components, then calculate the share where the inflation rate exceeds 2%. In Japan just a quarter cross that threshold. ▶▶

Consumer prices

Public enemy

SAN FRANCISCO

America was first. Now inflation is starting to look entrenched in other places

INFLATION DOMINATES the American popular psyche to an extent not seen since the 1980s, when prices were last rising at the current pace. Much like complaining about the weather or last night's basketball play-offs, moaning about higher prices has become a conversation starter. According to figures published on May 11th, consumer prices rose by 8.3% in April, compared with the previous year. A day earlier, President Joe Biden called fighting

inflation his "top domestic priority". Newspapers are publishing four times as many stories mentioning inflation as they did a year ago; several polls suggest that Americans believe inflation is a bigger problem for their country than the war in Ukraine. But America is not alone. Inflation is also becoming baked into everyday life in other parts of the rich world.

The Economist has gathered data on five indicators across ten big economies—

Baked in

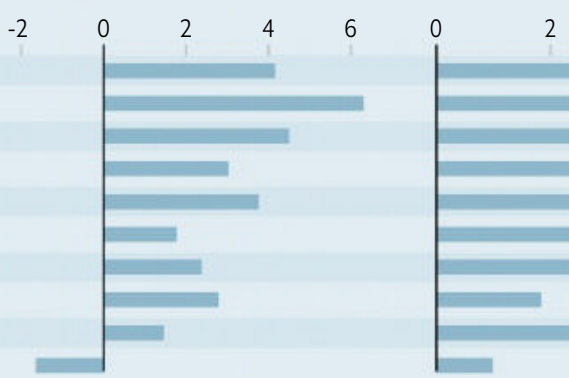
The Economist's inflation entrenchment score*

May 2022, most entrenched=100



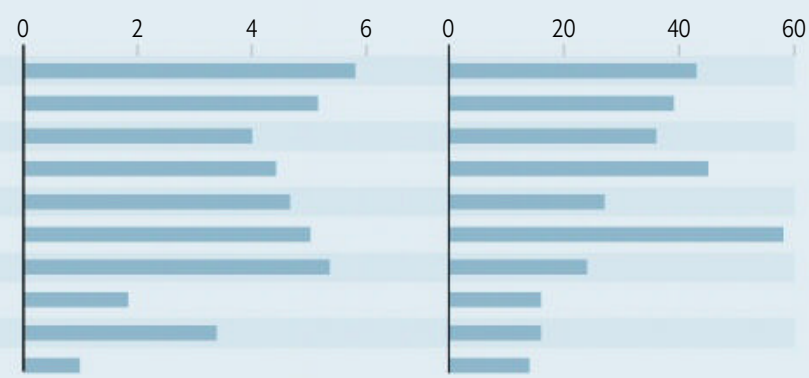
Core consumer prices†

Q1 2022, % change on a year earlier



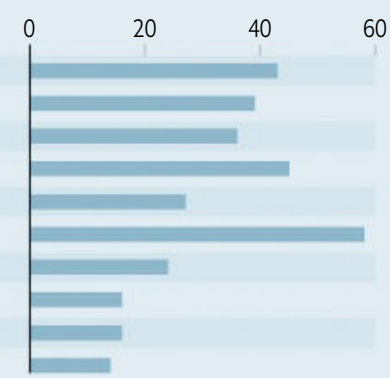
Consumers' expectations of inflation over the next 12 months

Apr 2022, %



Google search volume for "inflation", Feb-May 2022 average, top country=100‡

Feb-May 2022 average, top country=100‡



*Average ranking of five indicators in selected OECD countries: core inflation, inflation dispersion, inflation expectations, Google-search interest, change in unit-labour costs †Excluding energy and food ‡Based on data for 66 countries Sources: Bank of England; Federal Reserve Bank of Cleveland; Google Trends; Morning Consult; OECD; Raphael Schoenle; national statistics; *The Economist*

▶ But in Australia more than two-thirds do. JPMorgan Chase, a bank, breaks down Britain's consumer-price index into 85 components, and finds that inflation rates for 69% of them are running above their 1997-2019 averages.

Inflation could also spiral if workers demand higher wages to compensate them for rising prices (and firms raise their prices in turn). Unit labour costs, which measure the relationship between what workers are paid and the value of what they produce, are rising far faster than their long-run average in many countries. On May 5th

America's statisticians revealed that these rose by 7% in the first quarter, compared with a year ago, up from a pre-pandemic average of around 2%. Michael Saunders of the Bank of England has noted that with pay deals being struck at up to 5% a year, but productivity growth of only around 1%, Britain's unit-labour-cost growth is probably "well above the pace consistent with the inflation target [of 2%]".

Our last two measures assess households' expectations. The higher these remain, the more likely it is that inflation becomes embedded. One proprietary data

set, provided to *The Economist* by researchers at the Federal Reserve Bank of Cleveland, Morning Consult, a consultancy, and Raphael Schoenle of Brandeis University, is a rare reliable cross-country gauge of public inflation expectations. In May 2021 a respondent in the median rich country thought inflation over the next 12 months would be 2.3%. Now they expect a rate of 4.5%; Canadians, an even higher 6%. A measure of Google searches also suggests the subject is weighing on people's minds. Britons now search more frequently for "inflation" than they do for Taylor Swift. ■

Buttonwood The Italian sob

Anxiety about Italy's public debts will, like the poor, always be with us

A SURE WAY to cause shudders in Italian economic-policy circles is to talk up the prospect of higher inflation. For years subdued price pressures were the rationale for the European Central Bank's super-lax monetary-policy stance. They provided necessary cover for an array of ECB bond-buying schemes that covertly but effectively bailed out Italy's huge public debts.

Just now nerves in Rome are a little jangled. Annual inflation across the euro zone rose to 7.5% in April. ECB officials have been warming up markets for a possible interest-rate rise as soon as July. That would first require an end to the central bank's main bond-buying programme. The yield on ten-year German bunds has surged in anticipation. So has the excess yield between riskier sorts of government bonds, notably Italy's BTPs, and bunds. Italian bond spreads rose above two percentage points earlier this month (see chart).

Looked at one way, this rise is eye-catching, though not yet alarming. Italy's spreads are not obviously out of line with those of corporate bonds of a similar credit rating, allowing for differences in maturity. Looked at another way, it is disappointing. After all the efforts over the past decade to make the euro zone crisis-proof, a BTP behaves not like a bund but like an investment-grade corporate bond—with spreads narrowing in calmer times but blowing out at the whiff of trouble.

Italy has long been the weakest big link in the euro-zone chain. It has emerged from the pandemic with government debt of 151% of GDP, the highest of any large economy bar Japan (where inflation is still quiescent). In the right conditions, such debts are manageable. Indeed, if Italy's nominal GDP growth

Two steps ahead

Ten-year government-bond yields, %



Source: Refinitiv Datastream

rate can stay ahead of the interest rate it pays, the debt burden would fall—as it did last year, when the economy bounced back from recession. Mario Draghi, the former ECB chief who is now Italy's prime minister, has been following what might be called a "denominator" strategy with regard to the debt-to-GDP ratio. He has tapped the EU's recovery fund, a €750bn (\$790bn) pot financed by common bonds, to finance an investment splurge with the intention of lifting Italy's GDP. These funds are conditional on reforms, which Mr Draghi has set in motion.

Inflation has upset this strategy in two ways. First, it puts a big dent in real output. The sharp rise in energy prices following the invasion of Ukraine makes Italians poorer and less able to spend on other things. Italy's GDP shrank in the first quarter. Growth forecasts have been slashed. Second, the inflation shock has prompted a global rethink of monetary policy and widespread risk aversion in financial markets. The widening in Italian spreads is a consequence. With interest rates rising and central banks ceasing bond-

buying, capital is being rationed more carefully. The safest credits get first call. Riskier borrowers get what's left.

If sustained, higher yields will over time raise the cost to Italy of servicing its debts. Borrowing costs of 3% are not ideal. But Italy has locked in low interest rates on the stock of its existing debt, which has an average maturity of seven years. Over the longer haul Italy should be able to manage nominal GDP growth of at least that 3% rate—1% real GDP plus 2% inflation, say. Indeed, the current surge in prices, while deadly to real output, is adding to the inflation part of nominal GDP.

A big worry is that spread-widening gains momentum. Andrew Balls of PIMCO, an asset manager, detects a "cuspiness" to BTP yields—meaning that when they rise beyond a certain threshold, they tend to attract more panicky sellers than bargain-hunting buyers, leading to even higher yields. Anxieties about Italy's politics are never far from the surface. Mr Draghi is trusted in Berlin and Brussels, but he is due to stand down before elections next spring. He may not last even that long, since cracks are emerging in his coalition over the war in Ukraine.

In those circumstances, the instinct is to look to the ECB to check the widening in spreads. But with inflation where it is, the central bank's continued use of tools such as negative interest rates and asset purchases looks improper—hence the scramble to "normalise" monetary policy. Yet inflation seems less entrenched in the euro area than in, say, America. Wage growth is still fairly modest, for instance. The ECB, therefore, may not have to raise interest rates quite as much as financial markets are pricing in. Nervous technocrats in Rome will be keeping their fingers crossed.

Cashlessness

Pix perfect

SÃO PAULO

Digital payments have gone viral in Brazil

FOR YEARS Brazilians had little incentive to abandon cash. Wiring 50 reais (\$10) to a friend would set you back an extra 16; swiping a credit card, 2% of the cost of your purchase. For e-commerce firms this made doing business particularly cumbersome. Customers wanting to buy something online, but not wanting to incur the costs of a digital payment, could choose instead to print a payment slip (*boleto*), take that slip to a shop or post office, and hand over the cash. The problem for e-commerce firms, however, was that not everyone who printed a *boleto* ended up going to a shop to fork over the cash—meaning that many transactions were never completed.

Then came Pix, an instant-payments system operated by the central bank. Launched in November 2020, it has transformed the way Brazilians make payments. The platform allows consumers and merchants to send and receive money via a QR code, without having to share details of their wallet, fintech provider or bank. In April around 118m people used the platform—or more than two-thirds of Brazilian adults. In the last quarter of 2021 they made a staggering 3.9bn payments. Already Pix has surpassed debit and credit cards as the most popular method of payment in Brazil. One in five transactions now takes place on the platform's mobile app.

As an idea, Pix is not new or unique. In-

dia's Unified Payments Interface (UPI) began life in 2016. Other countries have established similar schemes. Nonetheless, Pix has been a remarkable success. For years the central bank sought to make Brazil's financial system more competitive, digital and inclusive. Pix has helped achieve those aims. Its rapid adoption could also contain lessons for others.

Several factors explain why Pix has been so popular. For a start, it is easy to use. Setting up an account takes a matter of minutes. A user's identifying "key" can be a CPF (a sort of tax ID), a phone number or a randomly generated string of digits. Sending money to recipients at another bank is quick and painless.

Policymakers also acted to encourage adoption. Unlike its Mexican counterpart, whose Pix equivalent has been less successful, Brazil's central bank compelled big banks and fintech firms to join its platform. During the covid-19 pandemic it mandated that emergency payments made by the government should also be available through the app. In this way, up to 30m unbanked Brazilians received a cashless payment for the first time.

Most payments are of small value and take place between individuals. The ubiquity of Pix is such that beggars often ask for money with a QR code. These transactions are possible because they are so cheap. Pix

is free to use for individuals, and is by far the lowest-cost option for firms.

The introduction of Pix has had a mixed effect on the country's banks. Current-account service fees charged by Brazil's five biggest lenders were almost 2.7bn reais lower in 2021 than the year before. But banks insist that Pix also presents them with opportunities. For one thing, as society goes cashless, they are spending less on transporting lorryloads of banknotes. And although it is not necessary to have a bank account to use Pix, the platform seems to encourage people to open one. According to Mastercard, a credit-card giant, Brazil reduced its unbanked population by as much as 73% during the pandemic. There are now more potential customers to sell credit products to, says Julio Paixão of Bradesco, one of the big five banks.

One of the biggest surprises is that despite the astronomical success of Pix, the number of credit-card transactions has continued to grow. Pix is not just serving as a substitute for other cashless payment methods, but increasing them.

There have been some unforeseen problems. Since Pix has been introduced, the number of "lightning kidnappings" has surged, as criminals forced users to transfer large sums of money. In response, Pix has introduced a night-time limit on transactions. Staff at the central bank have been on strike, on and off, since early April, raising concerns about the operability of the system. Others worry about the possibility of a data breach (though so far there do not seem to have been any). By and large, however, shortcomings are being rapidly addressed.

The central bank has plans for further expansion. By the end of this year Pix should be available offline and further integrated into open banking, a system that allows customers to share their transaction data with fintechs. Soon there will be an option to pay for things in instalments. And in the coming years, there are plans to make the app available abroad, which would facilitate remittances and other cross-border payments.

The success of platforms such as Pix may have far-reaching implications. Hyun Song Shin of the Bank for International Settlements, the central bank for central banks, considers them "a huge leap" towards the adoption of central bank digital currencies (CBDCs). A retail CBDC requires a register of users and their real names, and a full record of who pays what to whom and when, he explains. With Pix, you have all that already, as well as the technical standards that govern the exchange of information; it is 80% of the way to a CBDC, he reckons. Brazil's central bankers, who are working on a CBDC of their own, seem inclined to agree. The Pix revolution could be just the beginning. ■



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Free exchange | Engine repair

The global economy needs a new motor. Can India fit the bill?



THE WORLD could use more economic hope. The war in Ukraine has dealt a heavy blow to global growth prospects. Lockdowns and a property slowdown have sapped China, the erstwhile growth engine, of its vim. Given its size and potential, it seems reasonable to ask if India could be the world's next economic motor. In April the IMF reckoned that Indian GDP might grow by more than 8% this year—easily the fastest pace among large countries. Such a rapid expansion, if sustained, would have a profound impact on the world. But, in large part because of the shifting structure of the global economy, things are not as simple as India taking up China's mantle.

In the 2000s China accounted for nearly a third of global growth—more than America and the European Union combined—adding new productive capacity, each year, equivalent to the present-day output of Austria. By the 2010s China's contribution had roughly doubled, such that each year of expansion was worth an additional Switzerland. From the turn of the millennium to the eve of the pandemic, China grew into the largest consumer of most of the world's major commodities, and its share of global goods exports rose from 4% to 13%.

Could India replicate such feats? It is the world's sixth-largest economy—as China was in 2000. And its output today stands broadly where China's stood two decades ago. China went on to manage an average annual growth rate of about 9%. India grew by just under 7% per year over the same period. It might easily have done better, though, were it not for policy mistakes—such as Prime Minister Narendra Modi's shock decision to withdraw some banknotes in 2016—and macroeconomic vulnerabilities, including an overextended financial sector. The government may have learnt from the first; both policymakers and the banks have worked to address the second. Before the war in Ukraine the IMF had reckoned that India might grow by 9% this year. Some optimists argue that, in the right circumstances, India could manage such rates on a sustained basis.

A closer look, however, suggests that India is not a substitute for China. One problem is that the world economy is much larger than it used to be, such that a given rise in India's GDP raises global growth by less. Sustained annual growth of 9% would vastly im-

prove the lives of Indians, and meaningfully tilt the balance of global economic and political power. But it would not mean that the world economy would revolve around India, as it did around China over the past two decades. India's contribution to global growth would remain smaller than that of America and Europe combined, for example.

Perhaps more important, global economic conditions may be considerably more forbidding than those that enabled China's rise. From 1995 to 2008, the value of world trade rose from 17% of global GDP to 25%. The share of goods exports participating in global value chains rose from about 44% of world exports to 52%. China was at the forefront of both trends. It was the most dominant trading country since imperial Britain, according to an analysis of "hyperglobalisation" published in 2013 by Arvind Subramanian of Brown University and Martin Kessler of the OECD, a rich-country think-tank.

India, by contrast, is a trade minnow. On the eve of the pandemic it accounted for less than 2% of global merchandise exports. It hopes to raise that share by investing in infrastructure, providing public subsidies to manufacturers and negotiating trade deals with uncharacteristic enthusiasm. But times have changed. World trade has fallen as a share of global GDP since the early 2010s. Economic nationalism could stymie a recovery. India may nonetheless hope to increase its exports by capturing market share from other economies—including China. But businesses and governments that were once willing to rely heavily on China in the name of efficiency have become more cautious. Their reluctance to become too dependent on any one source of supply could check India's ambitions.

Dominating global supply chains may not be the only route to economic influence. India is a precocious exporter of tech and business services; though its GDP is only one-sixth that of China's, its services exports only just lag behind the latter's. Research published in 2020 by Richard Baldwin of the Graduate Institute in Geneva and Rikard Forslid of Stockholm University argues that technological change is expanding the range of exportable services, and providing more opportunities for workers in poor countries to compete with services workers in the rich world. But while tech and business services may continue to thrive in India, their expansion may be limited by an inadequate system of education, which performs well on measures of enrolment but not of learning outcomes, and by the protected nature of rich-world service sectors, which may be better insulated against foreign competition than were industrial workers against Chinese imports.

Subcontinental surge

Even if India manages a growth rate of nearer 6% than 9%, that would be nothing to sneeze at. It would make India the world's third-largest economy by the mid-2030s, at which point it would contribute more to global GDP each year than Britain, Germany and Japan combined. Indian demand for resources would then drive commodity prices; its capital markets would tantalise foreign investors. A large English-speaking population and a democratic political system, if India can keep it, may allow Indian tech and cultural exports to wield more global influence than did China's at similar income levels.

But the world by then will have recognised, if it has not already, that the rise of China was a unique event. Indian growth will be world-changing. But you should neither hope for, nor fear, a reprise of the Chinese experience. ■



Genetic disease

Building the future of screening

Full-genome check-ups for newborns are now on the cards

OVER THE years, doctors have described more than 7,000 rare diseases, generally defined as those affecting fewer than one in 2,000 people. So, though individually unusual, such illnesses are collectively a serious problem—a long-tail of need which is hard to treat because patients are few in number and their symptoms often picked up too late. Three-quarters of rare diseases are genetic, and Global Genes, an American advocacy group, reckons 400m people around the world are affected by them. For medicine to do better, people with them need to be noticed earlier, preferably in the first days of their lives.

To that end, doctors in many places want to sequence and screen babies' entire genomes at birth. In America there are projects to do just that at Boston Children's Hospital, Columbia University and Rady Children's Hospital in San Diego. A pioneering group at Harvard, known as BabySeq, has recently received money to expand its small-scale work to include 1,000 babies. In Europe, a five-year project called Screen4Care is starting. And efforts are also under way in Australia, China and Qatar.

But the project to watch is in Britain. There, a government-owned company called Genomics England, originally set up to run a study called the 100,000 Genomes Project, which investigated genetic diseases and cancer in adults, will soon start a pilot project intended to sequence the genomes of 200,000 babies. That could presage a national programme.

Screen saver

Screening babies for genetic diseases is not a novel idea. Across North America, Europe and the Middle East, in particular, newborns are often checked at birth for a handful of common heritable illnesses, such as sickle-cell anaemia, thalassaemia and cystic fibrosis. But a whole-genome sequence offers the prospect of spotting thousands

of disorders rather than the few which are currently searched for.

Early diagnosis means earlier treatment. This, in turn, means that children's lives will be improved and even saved. But the power of the technology also means it is possible, in theory, to screen for conditions that would occur later in life, or even to help parents avoid having other children with the same genetic mutation.

Just how many risk-associated variants it is appropriate to screen for is an open question. BabySeq, which was the first project of its kind, tested for about 1,000. It found that 11% of the 159 infants it looked at harboured at least one variant associated with a child-onset disorder.

While techno-utopians might think it a good idea to test for everything, parents of newborns are more cautious. On May 4th, at a meeting held in London by Genomics England, Rick Scott, the organisation's chief medical officer, said discussions with parents and doctors had led his team to conclude that people want any genomic-screening programme for newborns to look for a far narrower set of conditions than BabySeq sought. The most appealing tests were for variants associated with a high probability of childhood illness, and which would benefit from early treatment.

The set of variants Genomics England will seek is therefore being decided "cautiously", says Dr Scott. At the moment, the proposed list has several hundred items on it. If implemented *in toto*, this would result in about one baby in 200 receiving a diag-

→ Also in this section

74 Bugs fed by the immune system

75 Bats mimic hornets to frighten owls

76 Science, Russia and the Arctic

► nosis of a rare genetic disorder. That list would be likely to grow as understanding improves and new treatments arrive.

This public consultation has shown that some parents want to know everything possible about their child while others very definitely do not. One particular finding, according to David Bick, a clinical geneticist who advises Genomics England, is that parents want certainty. They feel it is no use being told that a child is “fairly likely” to have a condition. Rather, they want a pretty clear “yes” or “no”.

Many also do not want to know of adult-onset illnesses that their children may one day suffer. This means rejecting tests which might indicate a newborn’s risk, later in life, of contracting cancer, diabetes or Alzheimer’s disease. That information would bring with it the burden of deciding what to tell their child, and when. Rather, these parents feel, it should be up to the children themselves, if they so wish, to seek that information when they are older—which would be easy if their genomes were already on file.

There are, however, still some conundrums. For example, Pompe’s disease is a disorder in which a carbohydrate called glycogen builds up in the body’s cells. The infant-onset form of this illness must be treated straight away. The adult-onset form can be left until those with it are in their 30s. The current genetic test cannot distinguish between these forms. The cost of prompt treatment for youngsters is therefore that some parents must carry the knowledge that their offspring will suffer eventually, though not immediately.

Tay-Sachs disease, an illness fatal in childhood, causes another dilemma. Some parents absolutely do not want to know about it, because that would spoil their experience of the early years they have with their child. Others feel knowledge is power, and so do wish to know.

One of the trickiest questions of all concerns Duchenne muscular dystrophy, a degenerative illness that starts in childhood. Screening for this would find it in six of every 100,000 children tested. But only a small number of these have forms of the disease that can currently be treated, and the drugs needed are not widely available. However, learning that one’s child has this disease could also allow children to join trials of new drugs.

Over the coming year Genomics England, along with doctors, patients and the wider public, will wrangle with such questions, armed with a set of principles (which are themselves up for discussion) about what tests should be done. These principles include the idea that screening should lead to improved outcomes in those it is applied to; that this should not involve many invasive follow-up tests; and that there is strong evidence the genetic

variant being tested for does indeed cause the condition in question.

And there is one other thing. This is the tricky question of how to ensure that the data are kept safe for a lifetime. Properly informed consent for all the various uses such data might be put to is central to the British plan. Other places may not be so scrupulous. Moreover, things change. The temptation to crack open genetic databases for police investigations might prove irresistible. Insurance firms would surely be delighted to snoop as well, if they were allowed to.

Most important, such data are a veritable Aladdin’s cave for medical researchers—a cave to which only some parents will be prepared to add their children’s sequences. (Informed consent means data

should not be used in this way unless parents have explicitly agreed to it.)

Combining the fruits of future scientific advances with people’s full DNA sequences, collected at birth, could bring huge medical benefits. But it might also be a double-edged sword. Current knowledge of how genomes work is primitive. There is also a lot of so-called dark genetic matter in them, which does things currently unknown. Genomes may conceal secrets of, say, potential mental illness, or of behavioural predispositions that a genome’s owner would rather stayed private. Current rules say that they should. But for those who have opened the door to doctors and scientists to look at their data, the question of whether those data will remain secure for a lifetime may be a gamble. ■

Immunology

Fed by the hand that should bite it

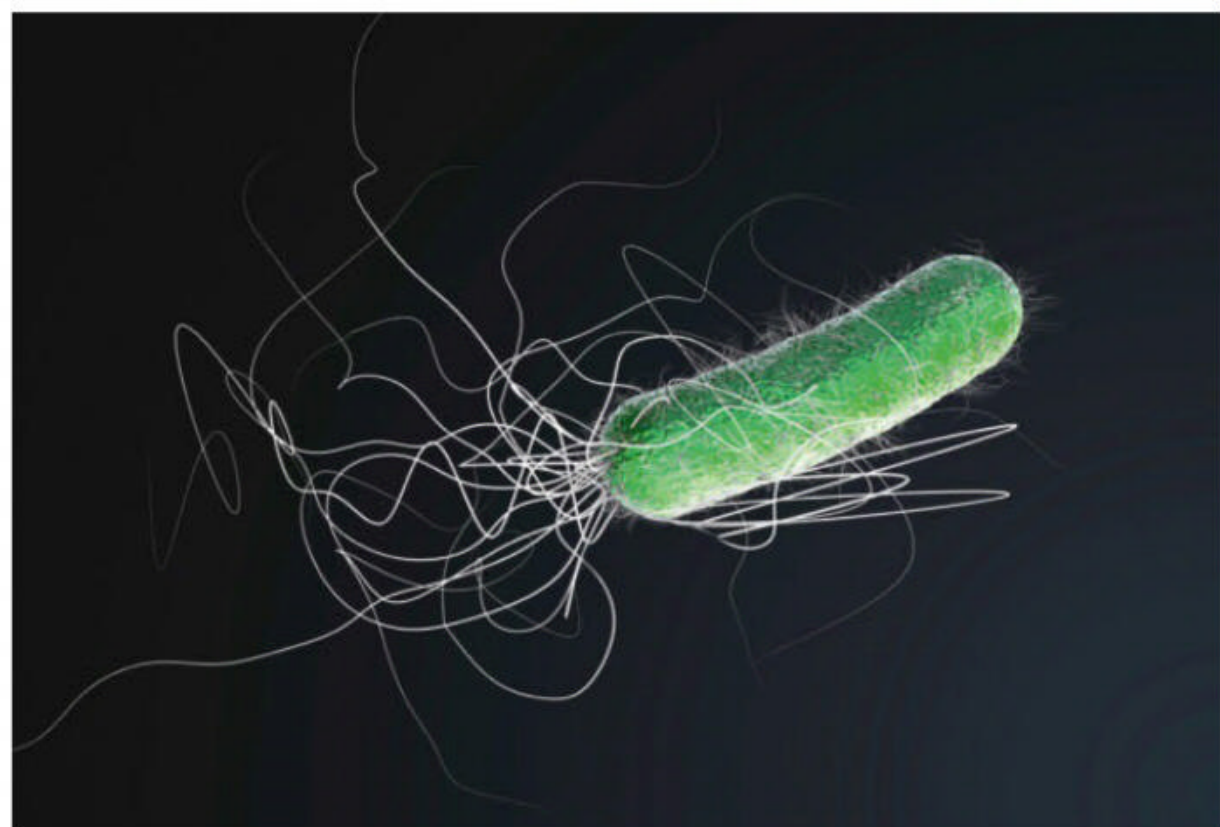
A bacterium that tricks the immune system into nurturing it

THE IMMUNE system has many weapons with which to counter hostile incomers. But what works against one may not be effective against another. An interloper can take advantage of this by misdirecting the system into thinking it is fighting an enemy that it is not. This buys time for that interloper to become entrenched. That is sneaky. Sneakier still, though, is the approach just discovered by Ruslan Medzhitov of Yale University. As he and his colleagues report in *Immunity*, they have

found a bacterium that induces its host’s immune system to release compounds on which it can then feed.

Mammalian immune systems have two modes of attack. Type-1 is used against bacteria and viruses; type-2 against multicellular parasites such as worms. Some invading bacteria, however, provoke a type-2 response when type-1 would be appropriate. Dr Medzhitov decided to take a closer look.

He and his colleagues studied the behaviour of *Pseudomonas aeruginosa*, a bac- ►►



A tricky customer

▶terium which causes stubborn infections in people with cystic fibrosis. They suspected it was leading the body to mount an ineffective type-2 response against it and wanted to know how it was doing this.

To explore the matter, they grew laboratory cultures of the sorts of epithelial cells that line human airways and monitored their gene-expression profiles when exposed to LasB, a toxic enzyme produced by the bacterium. They found that LasB activated signalling pathways which drove the epithelial cells to make a protein called amphiregulin. This forms the basis of a thick mucus that excels at ensnaring parasitic worms. It also recruits immune cells called eosinophils, which are adept at attacking multicellular parasites.

A type-2 error

That finding alone is interesting, because it helps explain why cystic-fibrosis patients with bacterial infections often develop copious mucus in their lungs, even though this does nothing to counter the bacteria. More intriguing, though, was what happened when the researchers tried growing *P. aeruginosa* on samples of this mucus. So long as LasB was present, the bacteria did not merely thrive, but actually consumed the mucus. Not only is *P. aeruginosa* tricking the immune system into an inappropriate response, it is also feeding on the result. And to make things worse still, Dr Medzhitov also discovered that all this immune manipulation makes the surrounding tissues prone to allergy.

Allergic reactions are, essentially, exaggerated and inappropriate type-2 immune responses. The researchers therefore wondered whether the reactions being created by LasB could cause lasting allergies to develop. To find out, they sprayed mice infected with *P. aeruginosa* with egg-white protein (often used as an experimental allergen) on the first and seventh days of a four-week experiment. As a control, they did the same with some mice genetically engineered to lack the ability to produce amphiregulin when exposed to LasB.

They theorised that, in the absence of worms, the inflamed epithelial tissues in normal mice might instead identify the egg-white protein as an intruder. This is exactly what happened. When injected with a small amount of egg-white protein two and three weeks after the start of the experiment, the normal mice showed a strong allergic response to it. In contrast, the amphiregulin-free mice showed little.

These discoveries, fascinating in and of themselves, also pave the way for new approaches to treating infections in those with cystic fibrosis. Moreover, if one bug has thus evolved a way to milk the immune system, the chances are good that others have done so too. Thus alerted, researchers will be on the lookout for similar cases. ■

Animal behaviour

Buzz off!

Bats mimic bees, wasps and hornets to frighten owls

IN THE ANIMAL kingdom, mimics are a dime a dozen. Stick insects pretend to be twigs. Hawk-moth caterpillars resemble venomous snakes. Edible heliconid butterflies disguise themselves with the wing patterns of noxious ones, and noxious ones copy each other to make it easier for predators to learn what not to eat.

All these examples, though, are visual. Auditory mimicry is rarer. But, as he describes in *Current Biology*, Danilo Russo of the University of Naples Federico II thinks he has found a novel case of it. Some bats, he believes, mimic angry bees, wasps and hornets in order to scare away owls that might otherwise eat them.

Dr Russo first noticed the propensity of greater mouse-eared bats to buzz a few years ago, when he was collecting them in mist nets to study their ecology. The noise struck him as similar to the sound of hornets that inhabited the area of southern Italy he was working in. That led him to wonder whether bat buzzing was a form of mimicry which helped its practitioners to scare off would-be predators.

To test this idea, he and Leonardo Ancillotto, a colleague at Federico II, first recorded the buzzing that captured bats made when handled. Then, having donned suitable protective clothing, they embarked on the more dangerous task of recording the buzzing made, *en masse*, by

four different species of hymenoptera: European paper wasps; buff-tailed bumblebees; European hornets; and domestic honeybees. Computer analysis revealed that chiropteran and hymenopteran buzzes were, indeed, similar.

For the next part of their experiment Dr Russo and Dr Ancillotto recruited the services of 16 captive owls—eight barn and eight tawny. Both of these species are known to hunt bats.

The researchers put the owls, one at a time, in an enclosure equipped with branches for them to perch on, and also two boxes with holes in them. The boxes resembled the sorts of cavities in trees that owls would explore in the wild for food. They placed a loudspeaker alongside one of the boxes and, after the birds had settled in, broadcast through it five seconds of uninterrupted bat buzzing and a similar amount of insect buzzing three times in a row for each noise. As a control, they broadcast in like manner several non-buzzing sounds made by bats.

During the broadcasts (which occurred in random order) and for five minutes thereafter, they videoed the owls. The videos were then analysed, by an independent observer, without benefit of their soundtracks. The results were unequivocal. When they heard both the bat buzzings and the hornet buzzings the owls moved as far from the speakers as they could manage. In contrast, when the non-buzzing bat sounds were played, they crept closer.

Dr Russo and Dr Ancillotto believe this is the first reported case of a mammal using acoustic mimicry to scare away a predator. They strongly suspect, however, that it is not unique. Anecdotes suggest several birds and also small mammals, such as dormice—particularly species that dwell in trees and, like dormice, in rock cavities—make buzzing noises when their hidey-holes are disturbed. This has not yet been documented formally as acoustic mimicry. But, given the propensity for venomous buzzing insects to dwell in those sorts of places too, and also the fear that these insects generate in other species, human beings included, Dr Russo thinks this may well be what is going on. He therefore predicts that when these other buzzes are recorded and analysed the results will show that acoustic mimicry by vertebrates of stinging insects is far more widespread than currently realised. ■



Batty, but it works

Science and international politics

Frozen

THE VALLEY OF THE PASVIK, NORWAY

Russian and Western scientists no longer collaborate in the Arctic. That is bad for research into climate change

KNEE-DEEP in the rushing waters of a creek in the valley of the Pasvik river, Paul Aspholm of the Norwegian Institute of Bioeconomy Research is trying to prevent a lifetime's work from being washed away by politics. Wading into the frozen stream, he peers through a water visor and tots up how many mussels he can spot in an area recently exposed by thawing ice. He would normally compare these numbers with similar data gathered by Russian counterparts splashing likewise in rivers a few kilometres farther east. But all contact with them has stopped.

Dr Aspholm has spent 30 years studying the wildlife that inhabits the Arctic lands where Norway and Russia march. He has needed Russian scientists' assistance for almost everything he has done. Together, they have kept track of species ranging from the area's native brown bears to the invasive pink salmon that are driving out local trout and salmon, and which die in such numbers when they spawn that bacteria feeding on their corpses turn the rivers toxic and so kill other animals which live in or drink those waters. They had planned this autumn to start tracking the migration of elk along a narrow "super-highway" through the tundra, but the war has put paid to that.

Since the invasion of Ukraine in February, ties between Russian and Western scientists have frozen. Hundreds of long-standing partnerships like Dr Aspholm's have been put on indefinite hold and projects involving Russian researchers have either suspended their participation or been put on ice entirely.

This has thrown Arctic science into chaos. More than half the Arctic's coastline is Russian. Information from stations in Siberia and buoys in the Arctic Ocean provide irreplaceable data on climate change. Fieldwork in the Russian Arctic gives snapshots of how animals, plants and soils are responding to this change. The Arctic Council, an intergovernmental forum which promotes research in the area, has been on pause since early March.

In northern Norway, Dr Aspholm is making a leap of faith. Later this month he will take his team back to the Pasvik, which forms part of Norway's border with Russia, for a bird-counting expedition that has happened every year since 1995. "We will try and do it just like last time," he says, "and hope that the Russians show up at the

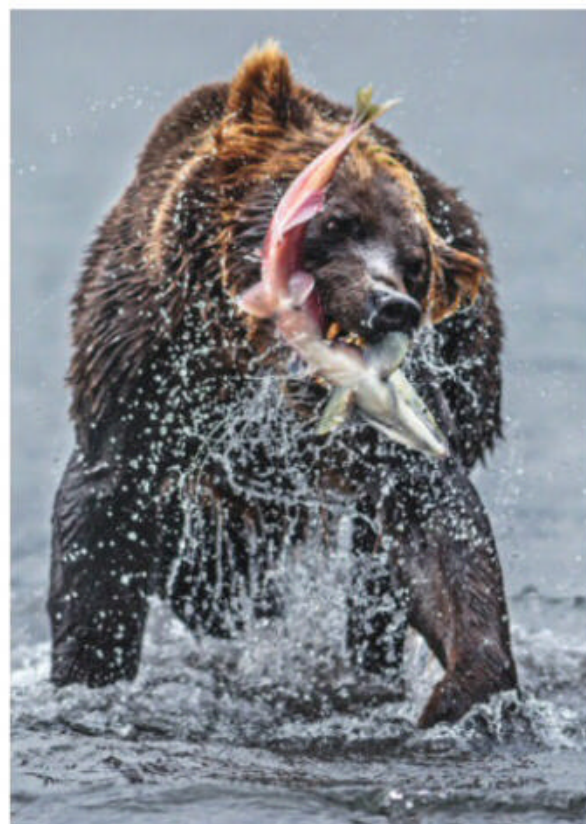
same time and do it the same way on their side." If the Russians do not appear, he worries, there is a good chance any data his team gather will be incomplete nonsense.

On its own, a gap in knowledge of the peregrinations of waders might not matter much. But such lacunae add up. And for data that feed into research on climate change, which the timings of bird migrations do, such losses are important.

Sanctions, says Dag Rune, rector of the Arctic University, in Tromsø, "will have devastating consequences for Arctic research, and the consequences for climate change are obvious. Projects in the Arctic", he observes, "are major operations that involve money, equipment, travel, and this is exactly the kind of research that is being most affected by sanctions."

Sander Veraverbeke, a climate scientist at the Vrije Universiteit in Amsterdam, is another whose work is threatened. He studies fires in the Arctic, and had been planning to resume fieldwork in northern Siberia after two years lost because of covid-19. Since he was last in Russia, Siberia has been ablaze. The past three years have seen record numbers of fires in the east of that vast expanse of land: not a good time, then, for there to be gaps in the data.

Some work can be done using satellites, or by studying comparable sites in Canada and Alaska. But this gets you only so far.



Problems in the land of the bear

Permafrost research, crucial for understanding where climate projections will end up, is likely to suffer in particular. Two-thirds of Russia is covered by permafrost, and this frozen ground locks up huge amounts of organic material. As it melts and that organic material decays, greenhouse gases in the form of methane and carbon dioxide are released into the atmosphere. Without good data on these emissions, understanding about their contribution to climate change will decline.

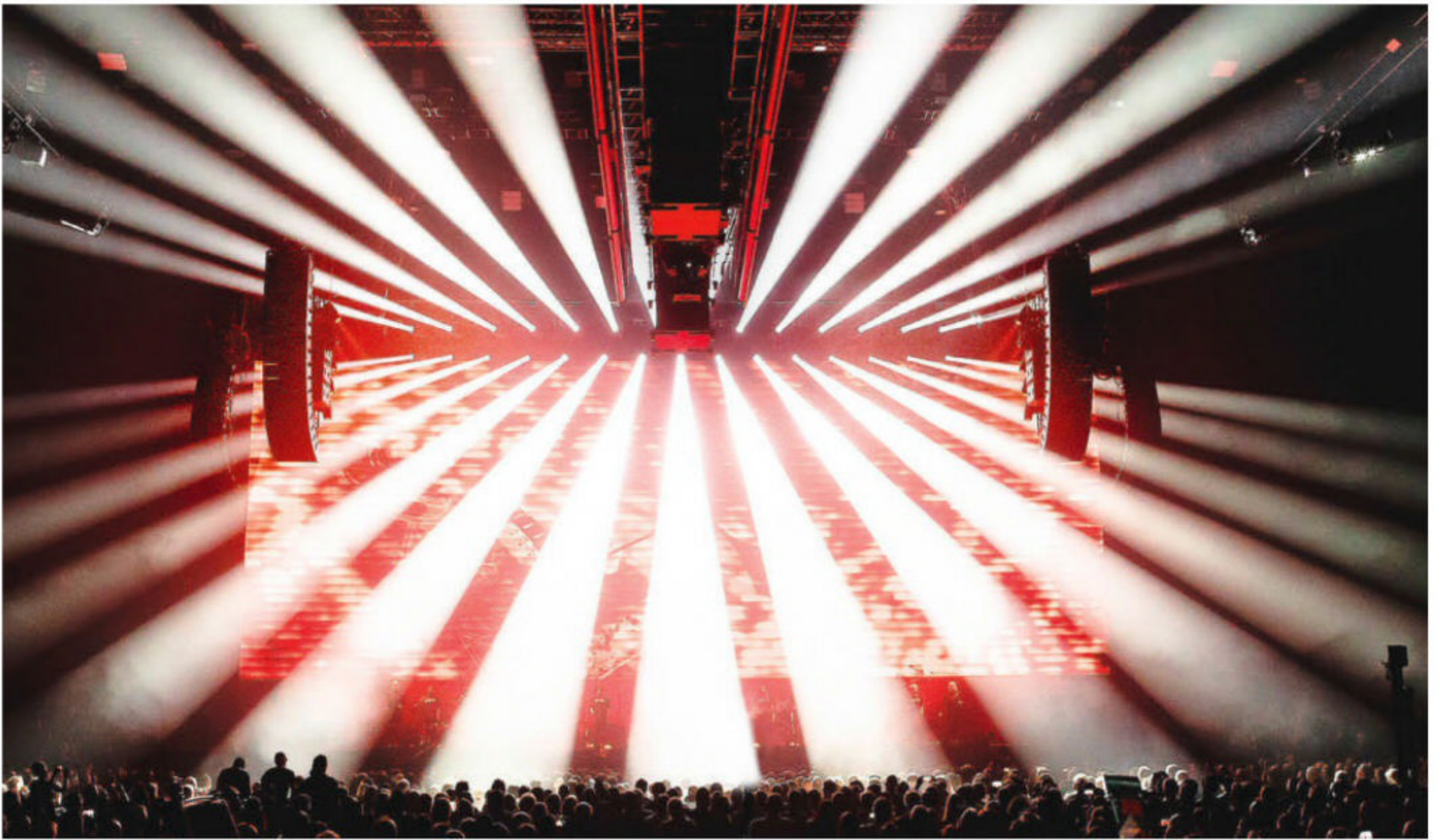
Something even more destructive than a further year of lost fieldwork, however, is the damage to networks that have been knitted painstakingly together since the cold war. Levels of formal communication between Western and Russian scientists have declined to a point far worse, even, than during the late 1970s and 1980s. Russian researchers have, for example, been "disinvited" from academic conferences, such as the Arctic science summit week held at the end of March, where scientists gather to present research, compile and assess data, and discuss research priorities.

Climates of opinion

Isolating Russia this way creates a dilemma. Losing Russian contributions to climate science in order to punish the place for invading Ukraine might be seen as cutting off noses to spite faces. "We are missing out on almost two-thirds of the Arctic now," explains Dr Veraverbeke. "We have a lot of good colleagues that we need to be in touch with and collaborate with to have an understanding of what is going on in Siberia. It is really impacting our understanding of one of the most dramatically changing areas on Earth."

Russian science will suffer too. Russian researchers rely on the West not just for collaboration, but also for the money that comes with it. Of Russia's top ten scientific collaborators, according to publication statistics from Nature Index, a database that tracks scientific output, only China has failed to impose post-invasion academic sanctions on Russia. There is thus a looming funding crisis for dozens of Russian research and data stations that were maintained by Western support.

Even if things start to normalise soon, it might be difficult to snap back to how it was. "It will not be easy," says Dag Olsen, at the Arctic University. "There is absolutely no trust." In March 200 of his Russian counterparts, including the rector of the Northern Arctic Federal University in Arkhangelsk, signed a letter supporting the invasion of Ukraine. In Pasvik valley, meanwhile, the only contact Dr Aspholm has had with the Russian scientists on the other side since the academic curtain fell was an email from a colleague in Karelia. "It was an opinion about mussel distribution," he laughs. "I am not able to reply." ■



The infrastructure of rock

Thank you for the music

LITITZ

A town in the Amish country of Pennsylvania is the unlikely capital of rock'n'roll

TO WALK AROUND Lititz on a perfect spring day is to see small-town America at its picture-postcard best. Pensioners stroll along the main street, looking in the windows of gift shops, stopping at the tea shops. With around 10,000 residents, the town in Pennsylvania's Amish country is so pristine that if you saw it in a film you might assume it was a set. You almost certainly wouldn't guess it was the rock'n'roll capital of the world.

Yet about a mile north of the town centre is an unremarkable industrial park in which the world's biggest pop and rock shows are made. The boxy buildings on the Rock Lititz campus house around 40 companies, which between them supply everything a touring artist requires. The firms that founded Rock Lititz, Clair Global and Tait Towers, take care of the two staples, amplification and set-building. Others fill in the gaps. One makes only the motors to drive the hoists that pull PA systems into the rafters of arenas; another makes only stage pyrotechnics. There are two huge rehearsal spaces in which the shows

can be assembled and road-tested.

Rock Lititz takes artists from the first glimmerings of an idea to the final production rehearsal. There is nothing quite like it anywhere else in the world. And it happened by accident.

In the 1960s two brothers from the town, Gene and Roy Clair, had a hobby supplying PA systems for local shows. In 1966 Frankie Valli and the Four Seasons played Franklin & Marshall College in nearby Lancaster, and the Clairs lent a hand. According to Clair Global's creation myth, the band members' wives noticed subsequent shows didn't sound as good, and the

brothers were brought on the road with their own bespoke system. "There you go," says Troy Clair, son of Gene and now the firm's CEO. "That was the beginning of a sound company travelling with the band."

A dozen years later an Australian called Michael Tait—who had been designing lighting and staging for Yes, a prog-rock band—came to Lititz following immigration difficulties in Britain, and set up Tait Towers. The town's reputation began to spread. But it was not until 2014, when the two companies established Rock Lititz, that it turned from a small hub into the fulcrum of rock.

Put another dime in the jukebox, baby

It is an extraordinary place: part manufacturing centre (Clair Global, for example, still makes its own PA systems, and sends teams on tour with artists), part R&D paradise and part logistics operation (a visit to Rock Lititz reveals just how many moving parts are required to put a show on the road). The attention to detail is staggering. Clair Global monitors all its tours so closely that on its screens you could see that in Tulsa, Oklahoma, the yellow ink in the singer Dua Lipa's printer was down to 17%.

Two decades ago Rock Lititz might not have thrived in the same way. When artists could make money from recorded music, there was less need to sell tickets to live events at premium prices. After the internet caused a crash in revenue from recordings, that changed. Then came the rise of ▶▶

→ Also in this section

78 Why regional foods endure

79 Emperors past and present

80 The quest for eternal life

80 A tricky new novel

82 Back Story: Tyranny and storytelling

▶ social media, which had two effects, according to Adam Davis, boss of Tait Towers. It showed there was a global demand for these big shows—and provided the ideal tool to market them.

“We’re making these moments that people will remember for ever,” Mr Davis says. He notes that promotion of these events happens largely through pictures on social media, so a dazzling production is “almost a marketing expense”, which allows for higher ticket prices. Tait Towers’ shows are designed to look as spectacular to the Instagrammer in the back row as to the punters at the front. Simple human vanity takes care of the rest. “I’ve spent \$1,000 to come to a sold-out event. Next thing I do is brag about the fact I was there, right? And so I’m going to send you this incredible picture of me being amazing.” Even if the music disappoints, Mr Davis says, the photos will look wonderful.

Amish country turned out to be the ideal location for businesses that are dependent on bespoke parts and custom manufacturing, in which the local Amish and Mennonite communities specialise. When other commercial outfits have struggled to make the items that big shows needed, say both Mr Clair and Mr Davis, adaptable Amish craftsmen have done so with ease. One of Tait Towers’ regular suppliers has been a Mennonite-run company that makes cattle grids: the precision in cutting metal is a transferable skill.

The Pennsylvania countryside has another unanticipated advantage: because it is more conducive to getting things done than distracting big cities, bands themselves have descended on it, too. When *The Economist* visited, a stadium act was in secret session in a giant rehearsal studio (originally built to test shows before the artists got involved). Musicians and crews stay at the on-site hotel. Lititz may be the only small town where you might see Justin Bieber or Ariana Grande popping out to buy a toothbrush—and bumping into an Amish craftsman on the way.

Covid-19 brought the live-music industry to a halt. Now business is back, and Rock Lititz is busier than ever. But rising demand—up 30% on pre-pandemic levels, estimate Mr Clair and Mr Davis—and varying coronavirus protocols have brought their own difficulties. Getting missing parts from one side of the world to the other overnight is harder than it was. There are shortages of all the things tours need, from trucks to screws. “Things as simple as a stock three-quarter-inch nut: the world is running out,” Mr Davis says.

But Rock Lititz rolls on. By the loading docks of Clair Global’s factory, the flight cases were piling up. When everything had been tested, they were shipped out to the annual Coachella festival in California. Rock just doesn’t happen without Lititz. ■

World in a dish

Made right for Iowa

NEWTON

Unsung regional foods can contain multitudes of memories

THE SANDWICH goes by several names, including “canteen”, “tavern” and, most descriptively, “loose meat”. First sold in Muscatine, Iowa, nearly a century ago, it is now popular across the state. Like a hamburger, a Maid-Rite—as the dish is known at Dan’s Sandwich Shop in Newton, Iowa—is made from ground beef. But instead of a patty flipped off a grill, diners get a scoop of loose, pebbly, well-done meat dug out of a cooking trough and dumped onto a bun, typically topped with mustard, ketchup and pickles.

Mike Brown, the restaurant’s proprietor since last year, proudly notes that he cuts the beef fresh every day, adding nothing, not even salt. (Before him Dan Holtcamp ran the place for half a century with his wife, Pam, and bequeathed it his name.) To non-Iowans, the sandwich can seem a perplexingly austere creation. It offers neither the compact, car-friendly convenience of a burger—the meat in a Maid-Rite, being loose, tends to spill out—nor the saucy comfort of a Sloppy Joe. But it says much about the charm and persistence of regional cuisine.

If a Maid-Rite were merely a disintegrating, suboptimal burger, Iowans would have long stopped eating them. They do not lack for choice; like most small American towns, Newton abounds in familiar burger-sliding franchises. Yet Mr Brown estimates that on most days, he cuts and cooks up to 150 pounds (68kg) of beef, enough for a few hundred sandwiches: not bad for a town of 15,000 people.

Asked why the Maid-Rite has not found

a wider market, Mr Brown says “the right person” hasn’t come along to champion it. That may not be the whole story; the sandwich is probably too bland and beefy for an increasingly multicultural America. But as a general comment on regional foods that are handed down through generations of locals, his rationale stands.

They are as much the product of savvy marketing, an affable restaurateur or chance—“the right person” in the right place and time—as of recipes or terroir. Meat, bread and cheese are not unique to Philadelphia, but the cheesesteak is. Someone experimented, people liked it, and a regional food was born. Other, less serendipitous dishes perish with their creators, not always because they are inferior.

If they endure, regional foods become artefacts of habit and memory. When out-of-towners sit down at Dan’s lunch counter and eat a Maid-Rite, as Barack Obama once did (pictured), they indulge in something new and exotic. They may find it delicious or unremarkable, but unless they return to rural Iowa, they may not eat another.

But a local who eats a Maid-Rite is not just eating beef on bread. He is ordering what he ate with his father after Little League games, what his mother brought home from work when she was too tired to cook, or what he longed for in the army. She is eating what she ate with her friends after school or on prom night. Regional food does not have to be superior or even comprehensible to outsiders to help devotees, wherever they are, deepen their connections to the past, and to themselves. ■



Imperial nostalgia

The sun never sets

Empires and emperors are a thing of the past—officially, at least

In the Shadow of the Gods. By Dominic Lieven. Viking; 528 pages; \$40. Allen Lane; £35.

FROM THE decorative sovereigns of Europe to the more potent ones of the Gulf, monarchs still abound in the 21st century. But none of them is a real emperor. That is to say, there is no modern ruler who wields personal authority over a huge, diverse range of polities, thanks to a distinctive, mysterious swirl of dynastic and spiritual credentials.

That is the observation, delivered with a near-audible sigh of regret, of a historian who has devoted a professional lifetime to one empire in particular, that of Russia under the Romanovs, and to imperial regimes in general. Dominic Lieven brings to his latest work a striking, informed empathy for the dilemmas of mighty sovereigns, from Britain's Queen-Empress Victoria to galloping lords of the steppes.

As his narrative whirls through the realms of Rome, India, the various Islamic caliphates (including the Ottoman one), the tsarist autocracy and colonial systems commanded from western Europe, he demonstrates an unmistakable soft spot not only for most of the empires of the past, but for their masters and mistresses too. Few readers will share that sentiment, but most will enjoy the journey.

Mr Lieven offers especially vivid portraits of some great empresses, from China's Wu Zetian (who ruled from 690 to 705AD) to Russia's Catherine the Great (1762-96), both of whom made shrewd use of their status as outsiders in male-dominated worlds. With verve, he describes the good-cop/bad-cop games played by imperial strategists: that mixture of light-touch suzerainty through local proxies, and occasional ruthlessness, which often let a handful of individuals hold sway over vast and scattered populations.

He presents empires as systems in which disparate cultures and technologies could co-exist creatively. He sees ethno-nationalism—the emergence of small and sharply defined states that slip the imperial bonds—as a destructive force. He is disarmingly frank about the personal history that colours this approach. His academic home is in Britain but he descends from Baltic-German nobles who served Russia; he grew up among Anglo-Irish folk in the twilight of British domination, and spends many months with his in-laws in Japan.



Wu Zetian in her pomp

The title promises a focus on imperial claims to divinely ordained legitimacy, or to the plain divinity asserted by the rulers of ancient Rome and nearly modern Japan. And Mr Lieven does say a lot about the unifying and legitimising role played by religion in various empires, from Buddhism and Confucianism in China to Russian Orthodoxy. He writes well about the stark, compelling simplicity of Islam, which galvanised a previously unremarkable group of middle Arabians to overwhelm more sophisticated places.

But religion is only one of his themes. He is no less fascinated by the disproportionate role in history played by the fighting horsemen who, as he recounts, held sway over the north Eurasian grasslands for about 2,500 years—until well into the second Christian millennium. As Mr Lieven notes, the dynastic realms that once extended from modern China can be divided into those dominated by the Han Chinese (the Song and Ming), and the much larger territories governed by the Mongol, Qing and Tang dynasties, whose origins can be traced to “the nomadic warrior

world of the Eurasian steppe”.

Both the Ottomans and (less obviously) the Russians, especially those of Moscow, could claim similar roots. Russians are taught at school that in 1480 their forebears threw off the yoke of their so-called Tatar-Mongol masters. This falsely conflates two peoples; it also understates the deep symbiotic link between the Slavic rulers of the Muscovy region and their overlords.

Having said that real empires are a thing of the past, Mr Lieven rather shyly makes the case that understanding them is still important. As he puts it, “most large countries in Asia remain more like empires than the European model of the ethno-national polity.” If the continent “catches the disease of European ethno-nationalism the planet might well not survive the resulting chaos.”

Modern India, he writes provocatively, is the product of the Mughal and British empires, which used divide-and-rule tactics, along with pomp and ceremony, to knit the subcontinent together. Having lost its anti-colonial legitimacy, Mr Lieven says, the Indian state is now succumbing to the plague of ethno-nationalism, and seems to be locked in an ever-more dangerous stand-off with Pakistan.

That analysis will be controversial in India. In any case, the argument for studying empires can be made more simply. Recall that since 2017 American strategy has avowedly been based on great-power competition, which means vying with Russia and China. Officially, neither is now an empire in the sense of being ruled by a sovereign. Vladimir Putin and Xi Jinping are depicted as emperors in cartoons, but both emerged from an ideology that in theory abhorred inherited privilege.

What matters most, though, is not what they are, but what they think they are. Regardless of their differences from the old imperial despots, both men see themselves as heirs, in important ways, to the monarchic realms of yesteryear. Mr Putin has drawn on tsarist history to make his case for subordinating Ukraine. He has encouraged his bureaucrats to study the work of Ivan Ilyin, who saw royal imperialism, not liberal democracy, as the way to hold Russia and its dominions together. For his part, Mr Xi has led an energetic effort to rehabilitate the Qing dynasty, which ruled from 1644 to 1912, and has persecuted historians who take a different line.

In a sense, Russia and China have followed similar paths: first a communist revolution, which led to a rejection of almost all the religious and ideological trappings of the regimes that went before; eventually, a gradual reclaiming of the imperial heritage. The era of crowned despots who personify the divine will may be over, but the age of self-conscious imperial calculus is not. ■

Eternal life

Who wants to live for ever?

A drastic extension of human lifespans may be closer than you think

The Price of Immortality. By Peter Ward. Melville House; 288 pages; \$28.99 and £20

ETERNAL LIFE, in heaven or through reincarnation on Earth, is promised by many faiths. For a simple reason: it eases the fear of death. The idea of living for ever has other devotees, too. It is now pursued by a motley crew of fringe scientists, cultish groups and tech billionaires, united by a conviction that a way to make humans immortal will eventually be found. Meanwhile they pin their hopes on experimental, often fraudulent therapies that promise rejuvenation.

In “The Price of Immortality”, Peter Ward, a journalist who has written for *The Economist*, delves into the origins of these beliefs and the science of purported cures for ageing. He spends time with groups such as the Church of Perpetual Life in Florida, where congregants discuss food supplements and cryonics (the freezing of bodies at death in the hope that they can be revived later).

America’s “immortalists”, he discovers, are inspired by the dreams of futurists such as the science-fiction writer Isaac Asimov. Another influence is Nikolai Fedorov, a 19th-century Russian philosopher who thought all living beings could, one day, be resurrected using traces of them floating around in the cosmos—a vision

that brings to mind modern DNA cloning. “Longevity escape velocity” is one of the immortalists’ central tenets. This notion holds that if science manages to extend the human lifespan by 20 or 30 years—to around 110 or 120—it will then rise exponentially as new techniques are developed in time to keep the wizened going longer and longer. The hypothesis was floated in 2004 by Aubrey de Grey, a British scientist prominent in the field of age-reversal, whose work caught the attention of Silicon Valley moguls.

This is not all pure fantasy. Gene and stem-cell therapies and other types of regenerative medicine can tackle some of the ways in which ageing causes natural deterioration—though these methods are yet to be turned into proven and safe treatments. That may not take long, though. Tech magnates such as Sergey Brin and Larry Page, the co-founders of Google, and Jeff Bezos of Amazon have been pouring money into longevity research. Some of the startups conducting it have billions of dollars at their disposal and are poaching leading scientists. As an investor tells Mr Ward, the goal is extending healthy lifespans, not freezing decrepit bodies that might “wake up in 200 years from now and commit suicide if they can”.

Some immortalists back an even more radical aim: doing away with the body and resurrecting a dead person’s mind in a robot or through some form of digital alternative reality. The theory is that this could be accomplished using scans of brain tissue, or by applying artificial intelligence to reconstruct a personality from “mind-files”—vast amounts of digital data accrued during the subject’s life. Tech titans are bankrolling this moonshot, too. Digital immortalists, like adherents of cryonics, accept that the chances of success are slim; but they are willing to put in the work and money anyway.

Mr Ward combines thorough reporting and lucid scientific explanations in a fluent and balanced account of a diverse movement. From the tragicomedies of cryonics’ early years, to tales of scam artists and reckless zealots, he is a vivid storyteller. And he ponders a world in which people do indeed live a lot longer. Even if old age is made healthier, drastic new kinds of inequality—and political strife—could result. If scientists succeed in making death optional, concludes Mr Ward, resolving such issues will be a prerequisite for a “world worthy of a longer stay”. ■



Tricksy fiction

Her story, and his

Trust. By Hernan Diaz. Riverhead Books; 416 pages; \$28. Picador; £16.99

WHO WAS Mildred Bevel? According to Andrew Bevel, a “legendary” Wall Street tycoon, his late wife was gentle, frail and kind, with a taste for pretty music and the “innocent wisdom” of a child. But in a thinly veiled novel about her life, published soon after her death in the mid-1930s, she shimmers as a brilliant loner and astute philanthropist who dies of madness in a Swiss sanatorium.

Who gets to tell Mildred’s story now that she is not around to tell it for herself? How accurate are any of the stories people tell about themselves and others anyway? These questions animate “Trust”, Hernan Diaz’s clever puzzle of a new novel.

As he demonstrated in 2017 with “In the Distance”, a debut which chronicled the rough and tumble of 19th-century America through the eyes of a young Swede with no English, Mr Diaz is not afraid to disorientate readers. In “Trust” he creates a kind of narrative *matryoshka* doll, nesting what may be the truth about Mildred within obfuscating layers of story.

He begins with a novel within the novel about a childless couple who live contentedly amid obscene wealth—“the obvious Dutch oil paintings, the constellations of French chandeliers, the Chinese vases mushrooming in every corner”—until the ▶▶



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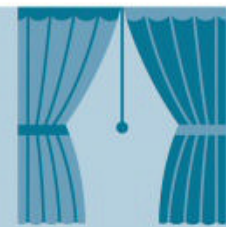
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Back Story The editor in the Kremlin



Tyranny is the enemy of storytelling, as two profiles in courage demonstrate

“LET’S MAKE a thriller,” Alexei Navalny tells Daniel Roher, and the Canadian film-maker tries to oblige. “Navalny” has many of the genre’s key elements—a hero, villains, skulduggery—but runs into an obstacle. “Tango with Putin”, a documentary by Vera Krichevskaya about Dozhd (also known as TV Rain), a gutsy Russian news channel, faces the same problem. It lies not in the directors’ craft, still less in the merits of their subjects, but something deeper: the throttling of narrative in a dictatorship.

His eyes are a reproach. Piercingly blue, they peer from the screen as Mr Navalny exhorts his compatriots not to give up. Mr Roher filmed the Russian opposition leader as he recovered from a poisoning in Siberia in 2020 (old footage shows Yulia, his indomitable wife, struggling to get into his hospital room, lest his assailants finish the job). Recuperating in Germany, the patient links up with Christo Grozev, whom he describes as a “very kind Bulgarian nerd”; the investigator uses data from the dark web to track down the failed assassins.

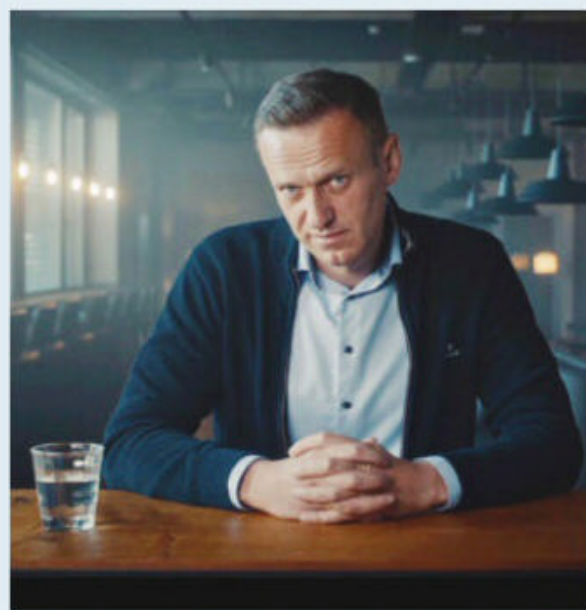
Mr Navalny is a social-media maestro—barred from campaigning in other ways, he has had to be—and some viewers may already know of the phone calls he made to the goons who allegedly tried to kill him. The sequence is still gripping. One falls for his impersonation of a Kremlin official and spills the details of the botched hit, including the smearing of Novichok in Mr Navalny’s underwear. “He’s a dead man,” the team pityingly conclude of the unwitting informant.

If “Navalny” elucidates the workings, and incompetence, of Vladimir Putin’s death squad, the source of its subject’s amazing courage remains something of a mystery. By contrast, “Tango with Putin” (also called “F@ck This Job”) shows how

bravery can be nurtured by circumstance.

When Natalia Sindeeva launched Dozhd in 2010, she envisaged an upbeat lifestyle channel, not a crusading news outlet. By her own account, she previously had more interest in partying than in politics: the news imbued her with principles, rather than the other way round, beginning with a bombing at a Moscow airport in 2011. A four-way split screen—a repeated device in Ms Krichevskaya’s film—contrasts Dozhd’s coverage of the aftermath with the tranquillising pap being aired by state-controlled channels.

Another motif is Dozhd’s journalists calling in from the back of police vans. As the repression worsens, reporting becomes riskier, from the rigged Russian elections and protests of 2011-12, to the crisis in Ukraine and eruption of war in the Donbas region in 2013-14. The channel becomes a beacon of integrity less by design than by observing elementary journalistic principles. To be good, in this telling, is simply to obey your conscience. (Mr Navalny turns up in this film, too, giving advice on lighting for an interview.)



These documentaries chart different genealogies of heroism, seemingly innate in Mr Navalny’s case, accidental in Ms Sindeeva’s. Yet their outlines overlap. Both dramas are powered by exceptional, against-the-odds defiance of a crushing system. Ultimately, in both, that system bends and flattens the story arc.

Totalitarianism, noted George Orwell, forces storytellers to falsify facts and feelings. In a tyranny, he concluded, literature is doomed. In Mr Putin’s Russia, censorship is tightening anew. The squeeze is not just on the stories Russians can watch and read. It extends to the stories they can live—and thus, the tyrant hopes, even imagine.

In these films, the authoritarian ratchet is inexorable. Dozhd endures harrumphs from the Kremlin, then cyber-attacks, boycotts by cable providers, eviction from its studio, harassment and police raids. For his part, Mr Navalny is assaulted and imprisoned before being poisoned. “I’m not scared of anything,” he says when, in a classic act of Russian valour, he flies back from Germany to Moscow. “And I ask you not to be scared either.” This is the climax of “Navalny”.

Russia’s rulers have other ideas. Like most despots, they are philistines as well as brutes. But they understand the rudiments of narrative. They know a drama needs a denouement—in which the hero vanquishes the villain, or goes down in a blaze of glory—and see to it that there won’t be one. In the film, Mr Roher speculates that Mr Navalny may now be murdered; instead he is detained on arrival at the airport, then dispatched to a penal colony. Dozhd, meanwhile, is driven off the air. Their stories flatline in the bureaucratic vice of the police state. It is hard to make a thriller when someone else is writing the ending.

▶ wife’s grip on reality starts to slip, “the mind becoming the flesh for its own teeth”. This detached, third-person yarn, reminiscent of the work of Henry James, is followed by a somewhat bombastic autobiography-in-progress by Bevel. He touts the patriotism of his enormous success, maintaining that “self-interest, if properly directed, need not be divorced from the common good”. Then there is a memoir from a writer called Ida Partenza who helped Bevel sculpt his legacy in print. Finally come some unpublished pages, seemingly by Mildred herself.

The title is a nod to Bevel’s wealth. But it also evokes the fragile feeling that is frequently missing from relationships, including between storytellers and audiences. As Bevel gamely admits, self-interest nudges people to “bend and align reality” to accord with needs or desires.

“Trust” dramatises the way such truth-bending often accompanies tales of wealth. “What I’ve made, I’ve made on my own,” says Bevel, who inherited a fortune. The novel also highlights the way history’s dominant storytellers—mostly white and male—have tended to sideline the narra-

tives of others, such as women. As Partenza writes of her affinity with Mildred: “We both were young women trying to grow in narrow crevices, hoping to break and expand them in the process.”

Mr Diaz shifts elegantly between styles, but saves the most engaging voices for the novel’s second half. Partenza’s memories of being cowed by Bevel’s money and authority, and her nostalgia for her “overbearing and dysfunctional” father, inject depth, momentum and clarity. The only shame is Mr Diaz’s pat ending, which gives too much of the game away. ■



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**"REAL-LIFE,
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Chartered Banker

Economic data

	Gross domestic product			Consumer prices		Unemployment rate		Current-account balance		Budget balance		Interest rates		Currency units			
	% change on year ago latest	quarter*	2022†	% change on year ago latest	2022†	%		% of GDP, 2022†	% of GDP, 2022†	10-yr gov't bonds latest,%	change on year ago, bp	per \$ May 11th	% change on year ago				
United States	3.6	Q1	-1.4	3.0	8.3	Apr	7.2	3.6	Apr	-3.9		-6.6	2.9	127	-		
China	4.8	Q1	5.3	5.0	2.1	Apr	2.2	5.8	Mar [§]	2.3		-6.2	2.6	\$\$	-30.0	6.73	-4.5
Japan	0.4	Q4	4.6	2.8	1.2	Mar	1.7	2.6	Mar	1.1		-5.9	nil		-8.0	130	-16.7
Britain	6.6	Q4	5.2	3.9	7.0	Mar	6.7	3.8	Jan ^{††}	-1.9		-5.3	1.9		111	0.81	-12.3
Canada	3.3	Q4	6.7	3.8	6.7	Mar	5.7	5.2	Apr	1.2		-3.6	3.0		146	1.29	-6.2
Euro area	5.0	Q1	0.8	3.2	7.5	Apr	5.2	6.8	Mar	2.4		-4.1	1.0		112	0.95	-13.7
Austria	5.5	Q4	-2.0	2.6	7.2	Apr	6.5	4.2	Mar	-1.3		-4.4	1.5		138	0.95	-13.7
Belgium	4.6	Q1	1.2	2.8	8.3	Apr	8.6	5.6	Mar	-0.8		-4.9	1.6		142	0.95	-13.7
France	5.3	Q1	-0.2	3.2	4.8	Apr	4.1	7.4	Mar	-1.3		-5.5	1.6		146	0.95	-13.7
Germany	3.7	Q1	0.8	1.6	7.4	Apr	6.8	2.9	Mar	5.9		-2.9	1.0		112	0.95	-13.7
Greece	7.4	Q4	1.7	3.5	10.2	Apr	5.8	12.9	Mar	-5.2		-5.1	3.5		243	0.95	-13.7
Italy	5.8	Q1	-0.7	3.0	6.2	Apr	6.3	8.3	Mar	2.3		-5.7	2.9		195	0.95	-13.7
Netherlands	6.5	Q4	4.1	2.5	9.6	Apr	9.6	3.3	Mar	5.9		-3.0	1.2		125	0.95	-13.7
Spain	5.5	Q4	1.3	5.4	8.4	Apr	4.5	13.5	Mar	1.4		-5.7	2.1		168	0.95	-13.7
Czech Republic	3.7	Q4	2.8	2.7	14.2	Apr	9.5	2.4	Mar [‡]	-1.6		-4.8	5.2		341	24.0	-12.4
Denmark	6.8	Q4	12.5	2.1	6.7	Apr	6.9	2.5	Mar	8.2		1.0	1.4		123	7.05	-13.3
Norway	5.4	Q4	0.3	3.3	5.4	Apr	3.6	3.1	Feb ^{††}	9.2		2.6	1.4		76.0	9.69	-14.7
Poland	8.0	Q4	6.6	4.2	12.3	Apr	9.0	5.3	Apr [§]	-1.4		-4.4	7.0		512	4.42	-15.4
Russia	5.0	Q4	na	-10.0	16.7	Mar	18.0	4.1	Mar [§]	5.6		-4.5	10.4		319	66.9	10.9
Sweden	3.5	Q1	-1.6	2.8	6.0	Mar	4.1	8.2	Mar [§]	3.4		-0.4	1.9		148	10.0	-16.9
Switzerland	3.7	Q4	1.1	2.6	2.5	Apr	2.1	2.2	Apr	6.1		0.5	0.9		106	0.99	-9.1
Turkey	9.1	Q4	6.2	3.0	70.0	Apr	50.5	11.4	Mar [§]	-3.8		-3.7	23.5		610	15.3	-45.8
Australia	4.2	Q4	14.4	3.2	5.1	Q1	4.3	4.0	Mar	2.0		-3.0	3.5		189	1.43	-10.5
Hong Kong	4.8	Q4	0.8	0.9	1.8	Mar	4.2	5.0	Mar ^{††}	0.1		-6.8	2.9		178	7.85	-1.0
India	5.4	Q4	26.6	7.2	7.0	Mar	6.0	7.8	Apr	-1.4		-6.4	7.2		121	77.2	-5.0
Indonesia	5.0	Q1	na	5.2	3.5	Apr	4.2	5.8	Q1 [§]	0.3		-4.8	7.4		97.0	14,558	-2.5
Malaysia	3.6	Q4	na	4.0	2.2	Mar	2.9	4.1	Mar [§]	3.2		-6.2	4.4		126	4.38	-5.9
Pakistan	6.0	2021 ^{**}	na	2.7	13.4	Apr	13.0	6.3	2021	-5.3		-7.0	12.9	†††	337	190	-19.9
Philippines	8.3	Q1	7.8	6.0	4.9	Apr	4.6	6.4	Q1 [§]	-3.0		-7.7	6.2		218	52.3	-8.5
Singapore	3.4	Q1	1.4	3.6	5.4	Mar	4.5	2.2	Q1	17.5		-0.9	2.8		126	1.39	-4.3
South Korea	3.1	Q1	3.0	2.7	4.8	Apr	3.2	3.0	Apr [§]	2.2		-3.0	3.3		113	1,275	-12.2
Taiwan	3.1	Q1	6.4	4.5	3.4	Apr	3.8	3.7	Mar	13.1		-1.2	1.4		96.0	29.7	-5.9
Thailand	1.9	Q4	7.5	2.9	4.6	Apr	5.0	1.5	Dec [§]	0.1		-4.8	3.2		158	34.6	-10.2
Argentina	8.6	Q4	6.3	4.2	55.1	Mar	60.1	7.0	Q4 [§]	0.8		-4.3	na		na	117	-19.8
Brazil	1.6	Q4	2.2	0.8	12.1	Apr	10.2	11.1	Mar ^{§††}	-0.5		-7.1	12.7		343	5.12	2.3
Chile	12.0	Q4	7.5	3.2	10.5	Apr	7.9	7.8	Mar ^{§††}	-2.7		-4.5	6.9		338	859	-18.4
Colombia	10.7	Q4	18.2	4.2	9.2	Apr	9.8	12.1	Mar [§]	-3.6		-4.8	11.1		370	4,083	-9.4
Mexico	1.6	Q1	3.6	1.9	7.7	Apr	7.4	3.5	Mar	-0.9		-3.5	8.9		209	20.3	-2.1
Peru	3.2	Q4	-12.9	3.1	8.0	Apr	6.5	7.9	Mar [§]	-3.1		-2.6	8.2		328	3.77	-1.1
Egypt	9.8	Q3	na	5.1	13.1	Apr	9.7	7.4	Q4 [§]	-6.3		-7.0	na		na	18.4	-14.7
Israel	11.1	Q4	17.8	4.1	3.5	Mar	3.8	3.8	Mar	3.4		-2.7	2.6		128	3.44	-4.4
Saudi Arabia	3.2	2021	na	6.7	2.0	Mar	2.3	6.9	Q4	14.9		10.1	na		na	3.75	nil
South Africa	1.7	Q4	4.7	2.1	6.1	Mar	5.8	35.3	Q4 [§]	-1.1		-6.1	10.1		110	16.1	-12.8

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

Markets

In local currency	Index	% change on:	
		one week	Dec 31st 2021
United States S&P 500	3,935.2	-8.5	-17.4
United States NAScomp	11,364.2	-12.3	-27.4
China Shanghai Comp	3,058.7	0.4	-16.0
China Shenzhen Comp	1,918.5	2.1	-24.2
Japan Nikkei 225	26,213.6	-2.3	-9.0
Japan Topix	1,851.2	-2.5	-7.1
Britain FTSE 100	7,347.7	-1.9	-0.5
Canada S&P TSX	19,837.3	-6.4	-6.5
Euro area EURO STOXX 50	3,647.9	-2.1	-15.1
France CAC 40	6,269.7	-2.0	-12.3
Germany DAX*	13,828.6	-1.0	-12.9
Italy FTSE/MIB	23,724.2	-0.7	-13.2
Netherlands AEX	682.7	-2.3	-14.4
Spain IBEX 35	8,312.6	-2.2	-4.6
Poland WIG	53,899.7	-4.9	-22.2
Russia RTS, \$ terms	1,123.9	0.9	-29.6
Switzerland SMI	11,553.7	-2.7	-10.3
Turkey BIST	2,453.9	1.0	32.1
Australia All Ord.	7,304.4	-3.4	-6.1
Hong Kong Hang Seng	19,824.6	-5.0	-15.3
India BSE	54,088.4	-2.8	-7.2
Indonesia IDX	6,816.2	-5.7	3.6
Malaysia KLSE	1,555.9	-2.8	-0.7

	index	% change on:	
		one week	Dec 31st 2021
Pakistan KSE	42,863.2	-5.3	-3.9
Singapore STI	3,226.1	-3.7	3.3
South Korea KOSPI	2,592.3	-3.2	-12.9
Taiwan TWI	16,006.3	-3.4	-12.1
Thailand SET	1,613.3	-2.4	-2.7
Argentina MERV	85,762.8	-4.1	2.7
Brazil BVSP	104,396.9	-3.6	-0.4
Mexico IPC	49,278.2	-4.2	-7.5
Egypt EGX 30	10,855.9	-1.7	-8.8
Israel TA-125	1,965.9	-2.8	-5.2
Saudi Arabia Tadawul	13,379.1	-2.6	18.1
South Africa JSE AS	68,416.4	-2.8	-7.2
World, dev'd MSCI	2,652.6	-7.4	-17.9
Emerging markets MSCI	1,011.2	-4.9	-17.9

US corporate bonds, spread over Treasuries

Basis points	Dec 31st 2021	
	latest	
Investment grade	162	120
High-yield	451	332

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

Commodities

The Economist commodity-price index	% change on				
	2015=100	May 3rd	May 10th*	month	year
Dollar Index					
All Items	187.6	177.4	-7.9	-11.7	
Food	161.5	159.7	-2.8	9.8	
Industrials					
All	211.9	193.9	-11.5	-23.2	
Non-food agriculturals	190.5	185.5	3.1	3.6	
Metals	218.3	196.4	-14.9	-28.4	
Sterling Index					
All items	228.9	219.9	-2.5	1.4	
Euro Index					
All items	197.4	186.6	-5.0	1.9	
Gold					
\$ per oz	1,876.4	1,846.0	-6.6	0.9	
Brent					
\$ per barrel	105.2	102.5	-2.1	49.3	

Sources: Bloomberg; CME Group; Cotlook; Refinitiv Datastream; Fastmarkets; FT; ICCO; ICO; ISO; Live Rice Index; LME; NZ Wool Services; Thompson Lloyd & Ewart; Urner Barry; WSJ. *Provisional.

For more countries and additional data, visit [Economist.com/indicators](https://www.economist.com/indicators)

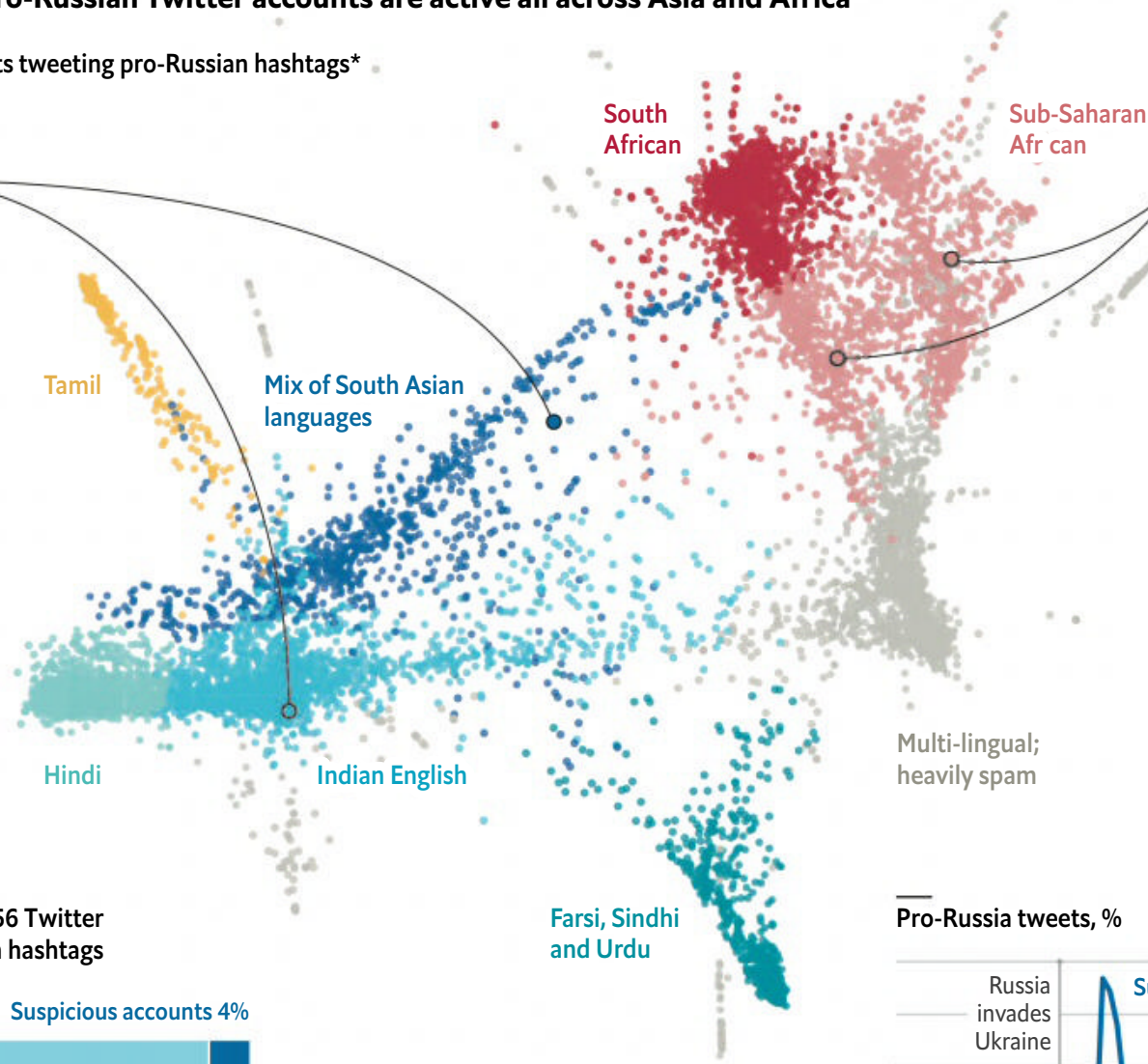
→ Distinct clusters of pro-Russian Twitter accounts are active all across Asia and Africa

Similarity diagram of accounts tweeting pro-Russian hashtags*
March 7th-9th 2022

Dissimilar accounts are further apart

"Why didn't #NATO listen to warnings? Why didn't they have dialogue with #Russia when #Putin proposed solutions?"

"Reports: #Ukrainians holding #Indians as hostage & human shields in #Kharkiv & #Kyiv. It's a treacherous conspiracy to derail #India #Russian brotherhood"

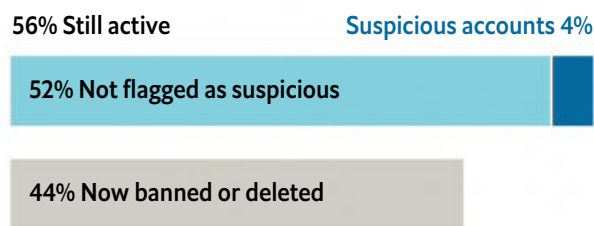


Similar accounts are closer together

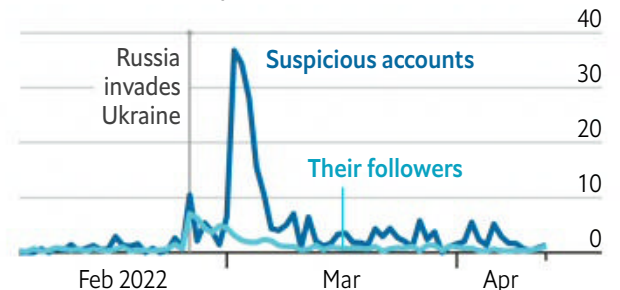
"NATO has killed about 1,603,500 in Libya, Iraq, Afghanistan and Syria, and nobody was shocked until now that Russia killed barely 200 Ukrainian soldiers"

"The world's greatest imperialists, genocidal and colonialists came together, formed NATO and said 'we are good people'... This is the EU and UN hypocrisy"

Estimated breakdown of 7,756 Twitter accounts sharing pro-Russian hashtags



Pro-Russia tweets, %



*Five or more mentions of #IStandWithPutin or #IStandWithRussia. The diagram only depicts distances. Left/right and top/bottom positions are arbitrary Sources: CASM Technology; Twitter; Google Translate; The Economist

Under the radar

Russia is swaying Twitter users outside the West to its side

UKRAINE AND Russia are fighting mainly in eastern Ukraine, but they are courting allies around the globe. Ukraine needs other countries to abide by Western sanctions. That means winning hearts and minds in places like India and Turkey.

To Western ears, Russia's portrayal of Ukraine's leaders as Nazis sounds absurd. But just as Ukraine's military strength surprised the Kremlin, the effectiveness of Russian propaganda might also be underestimated. An analysis of recent Twitter posts suggests that Russia's online information operations may be focused outside the West—and already bearing fruit.

To measure the impact of Russia's online influencers, we studied 7,756 Twitter accounts identified by CASM Technology, a British analytics firm. All used the #IStandWithPutin or #IStandWithRussia hashtags

at least five times in the war's first 12 days.

CASM has divided these accounts into clusters (see diagram above). Each dot represents one user. Accounts that sent similar messages appear close together, whereas those that behaved differently are far apart. For example, accounts in South Africa often emphasised anti-colonial solidarity, whereas many in South Asia focused on Russia's diplomatic support for India.

Such groupings leave a key question unanswered. How many of these users genuinely back Russia, and how many are bots or paid trolls? To find out, we collected 3.7m tweets by these users and their followers, and produced versions in English using Google Translate. We then read 2,211 of these posts; classified them as supporting Russia, Ukraine or neither; and used these data to train an algorithm, which applied these labels to all remaining tweets.

Next, we tried to work out which users could be acting on behalf of the Kremlin. Nearly half of the accounts were no longer accessible, because they were deleted, made private or banned by Twitter. Of the remainder, an estimated 7% churned out pro-Russian tweets in a suspicious manner. Some were created early in the war;

others rarely mentioned Russia before early March. Many acted in concert by posting identical messages. Unlike automated bots, most of these accounts varied the wording and emphasis of their content. This supports many analysts' hunch that real people are being paid for such posts, either by Russia or by its proxies.

The suspicious accounts succeeded in injecting these views into online conversation. On average, their pro-Russian messages were retweeted 61 times. Moreover, they seem to be winning converts. After suspicious accounts posted pro-Russian content, the share of their followers' tweets favouring Russia also tended to rise. In contrast, the suspicious accounts' activity did not change in response to posts by their followers or by users they followed.

Because this activity is concentrated in Asian and African online networks, it is largely invisible to Western Twitterati. But if countries like South Africa help Russia weather the sanctions, #IStandWithPutin may be partly responsible. ■

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Starstruck

Ron Galella, the original paparazzo, died on April 30th. He was 91

SOME PHOTOGRAPHERS use studios, and assistants to help with the lighting. Ron Galella had a method, a method he believed in so deeply it amounted to a creed: learn to crash events, find out where the kitchen is (useful for sneaking in), never check your coat, shoot fast and always hold the camera in front of your chest. If you hold it up and look through the lens, you don't see the eyes. What you need is eye contact. Eye-to-eye, person to person, he liked to say, that's how you get the real McCoy.

He wasn't always so confident. He grew up in the North Bronx, with an accent as thick as provolone. From his father, an immigrant from Italy who made coffins and piano cases and never really learned to speak English, he learned to be tight with money. His American-born mother longed for the glamour she saw in the movies, and named her son after a film star. Both chippy in their own way, his parents fought all the time. His main comfort was a pet rabbit, until his father cooked it in a stew.

It was the air force that gave him his first break, during the Korean war, when he signed up for photography lessons while learning about camera repair. Soon he was shooting visiting celebrities for the base newspaper. After he was discharged in 1955 the GI Bill helped him through art school in California. He began photographing actors at premieres and parties in his spare time to make extra money.

He was lucky with timing. In 1960 Federico Fellini's "La Dolce Vita" introduced the world to a photographer named Paparazzo. The filming of "Cleopatra" in Rome shortly afterwards fuelled demand for celebrity snaps as its two stars, Elizabeth Taylor and Richard Burton, embarked on an adulterous affair that scandalised the Vatican and made headlines across the Atlantic. The young camera repairer, fresh out of the air force, quickly learned that his part-time gig could become a lifelong career.

He became adept at catching stars with their guard down: Greta

Garbo coming out of her apartment, face hidden in a handkerchief; John Lennon and Mick Jagger sharing a smoke; Mick Jagger again, Bob Dylan and Bruce Springsteen sharing a mic; Gina Lollobrigida coming profile-to-profile with Michelangelo's David. He bribed a watchman to lock him in a ratty Thameside warehouse one weekend so he could spy on Taylor and Burton squabbling over breakfast aboard their yacht, *Kalizma*, after they put up gauze curtains around the deck to ensure their privacy. What made him famous wasn't his photographs, but the subjects he photographed. Andy Warhol, who saw him in the same way he saw himself, as a lonely outsider craving to be let in, called it "being in the right place at the wrong time".

Some didn't mind being caught at the wrong time or having their privacy invaded. It gave them exposure and meant they were on the up. But many did. Elaine, a famed New York restaurateur, tried to hit him with a dustbin lid. Sean Penn spat at him. Marlon Brando punched him in the jaw, knocking five of his teeth out.

There was no one he pursued like he pursued Jackie Kennedy. She was mysterious, elusive—and gloriously photogenic. He hid behind the coat-check when she went to a restaurant and followed her to her seat when she was at the theatre, he boasted in "Smash His Camera", a documentary. Almost every day he lurked outside her apartment building at 1040 Fifth Avenue, and once even followed her to a Greek island where, dressed up as a sailor, he took pictures of her on holiday. He dated her maid to pump her for information, until she got the sack. Asked about the Jackie fixation, he said he was unattached at the time and saw her as his golden girl, his girlfriend (in a way). When he did eventually marry, it was to a woman whose voice reminded him of Jackie's.

In all the years he shot Kennedy, he always said his best streak came in early October 1971. On October 4th he snapped her watching her daughter playing tennis in Central Park. The next day she went shopping at Bonwit Teller. On October 6th he caught her at the corner of 85th Street and Fifth Avenue and later at the New York Public Library. On October 7th he'd just finished some portfolio shots for a model when he saw her coming out of the side entrance of her building. It was late in the afternoon, with a blue sky and a light breeze. Perfect soft Manhattan light, he called it. As she turned onto Madison Avenue, he hopped in a cab. At the honk of a horn she suddenly looked up, and he got what he would always call his Mona Lisa shot, "Windswept Jackie", with her hair blowing across her face and just the beginnings of a smile.

The smiling didn't last, of course. As soon as she recognised him, she hid behind her sunglasses. Two months later she sued him. *Life* magazine ran a cover story with the headline, "Jackie and the Jackie-Watcher". He was ruining her life, she told the court. She had no peace, no peace of mind, she said. She was always under surveillance, imprisoned in her own house. The judge agreed, and ordered that he respect a no-go zone around the former First Lady and her children. When he broke the embargo repeatedly, the court threatened him with jail.

His pictures, and the way he got them, spawned an industry that came to see celebrities as prey to be hounded. His photographs are now in the Museum of Modern Art. "Windswept Jackie" is his most popular, and most expensive, print. The trial made him famous—and rich enough to build a mansion in New Jersey with a photo gallery covering one entire floor, a basement archive for the 3m pictures taken over half a century and a cemetery in the garden for the pet rabbits he still loved from childhood.

If before the trial he was regarded as a gadfly, afterwards many saw him as a pest. When it ended he received an anonymous letter: "You are a rat...I pray that you get paid back for the misery you are causing a woman who has gone through hell, a hell caused by another maniac like you. You are stupid, monstrous and slimy. You should be deported to an island to rot." When Kennedy died, he headed one last time to 1040 Fifth Avenue. He took no pictures that day; just paid his respects. ■

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