The Economist

How the pandemic ends

Latin America's growth opportunity

Will there be a wage-price spiral?

More threats to free speech

OCTOBER 16TH-22ND 2021

The energy shock

The world this week

The world this week

Politics

Oct 16th 2021

Chile's president, Sebastián Piñera, declared a state of emergency for 15 days in two southern regions. The army will be deployed to help local police, who have struggled to contain violent attacks by indigenous groups seeking to reclaim ancestral lands. A demonstrator died during a protest led by indigenous groups in Santiago. Chile is in the process of drafting a new constitution, which may decentralise power and expand indigenous rights. A far-right presidential candidate campaigning on a law-and-order platform is polling well in a tight race ahead of the election on November 21st, in which Mr Piñera cannot stand.

In Bogotá, Colombia's capital, at least five American families connected to the United States embassy appear to have been afflicted with the Havana syndrome. The mystery illness, which causes ringing in the ears, fatigue and dizziness, first surfaced in Cuba in 2016.

Vaccination, then vacation

The American government said it would open up land and ferry crossings at its borders with Canada and Mexico in November, but only to travellers who are vaccinated against covid-19. From January this will also apply to truckers and students from Canada and Mexico, who had been exempted from the ban on crossings.

Texas's governor, Greg Abbott, banned employers, including private ones, from requiring their workers to be vaccinated against covid-19. That sets up a clash with the federal government, which is ordering large employers to do the opposite.

Poland set itself on a collision course with the rest of the European Union, after the country's constitutional court ruled that some of the EU's most important rules, including Article 1 of its main treaty, are incompatible with Poland's constitution. The EU seems sure to retaliate, perhaps by freezing the covid-19 recovery funds it was due to send to Poland.

Austria's chancellor, Sebastian Kurz, resigned. It had become clear that his coalition partners, the Greens, would bring down his government if he stayed on, because of a scandal swirling around him involving payments for favourable press coverage. Mr Kurz denies wrongdoing.

An election in the Czech Republic appeared to spell the downfall of Andrej Babis, the country's billionaire prime minister. An opposition alliance secured more seats. Mr Babis, who is also mired in scandal, remains prime minister for now.

Emmanuel Macron, the French president, launched a plan called "France 2030", which calls for €30bn ($35bn) to be spent on cutting carbon emissions and boosting industry. It includes a renewed commitment to nuclear power.

Police in Norway said that a Danish man who killed five people with a bow and arrow was a convert to Islam. The attack, in the town of Kongsberg, was the country's worst since 2011, when a far-right extremist murdered 77 people.

The EU proposed reducing or scrapping most of the border checks for goods crossing between mainland Britain and Northern Ireland that were imposed after Brexit and are causing headaches for business. More talks will be held.

"Many thousands of deaths" could have been avoided in Britain in the early stages of the covid-19 outbreak, according to a parliamentary report. It criticised the government's initial approach as "fatalism …seeking to manage, but not suppress, infection". Britain subsequently suffered an egregiously high death rate.

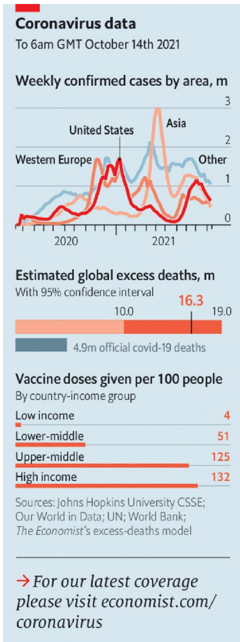
Several Asian countries announced plans to loosen pandemic-related border controls. Thailand and Singapore will start allowing fully vaccinated visitors from low-risk countries to enter without quarantine, Malaysia said it would allow its citizens to travel abroad again, and India will restart issuing tourist visas for all passengers. Sydney ended 107 days of lockdown.

The G20 held a meeting to discuss the economic situation in Afghanistan. The EU promised €700m ($810m) in emergency aid, in addition to the €300m it has already pledged. The leaders agreed to co-ordinate efforts with the Taliban, but stopped short of recognising the government. American officials met representatives from the Taliban in Qatar for their first talks since the jihadists seized power.

At least 50 people were killed in a bombing at a Shia mosque in Kunduz, the deadliest attack in Afghanistan since American forces withdrew at the end of August. Islamic State claimed responsibility.

The party of Muqtada al-Sadr, a cleric-cum-militia-boss, won the largest tally of parliamentary seats in Iraq's election, with over 70 out of 329. But other Shia parties claimed the vote was unfair. Since some have large private armies, haggling over who forms the next government could turn violent. Some of Mr Sadr's rivals are backed by Iran.

President Joe Biden considered imposing sanctions on parties to Ethiopia's civil war, which he was ready to discuss with Uhuru Kenyatta, his Kenyan counterpart. The fighting has plunged 400,000 people in Ethiopia's northern region of Tigray into famine. The Ethiopian army has started an offensive against rebel forces from Tigray on several fronts.



The Economist

The International Court of Justice ruled mostly in favour of Somalia in its dispute with Kenya over which country owns a patch of ocean that is thought to be rich in oil and natural gas. Kenya rejected the ruling.

China’s president, Xi Jinping, said that reunification with Taiwan “must be fulfilled” and should be achieved peacefully. But he said no one should underestimate China's “strong ability” to defend its territorial integrity, a hint that it may use force. His Taiwanese counterpart, Tsai Ing-wen, said the island would not bow to pressure from China.

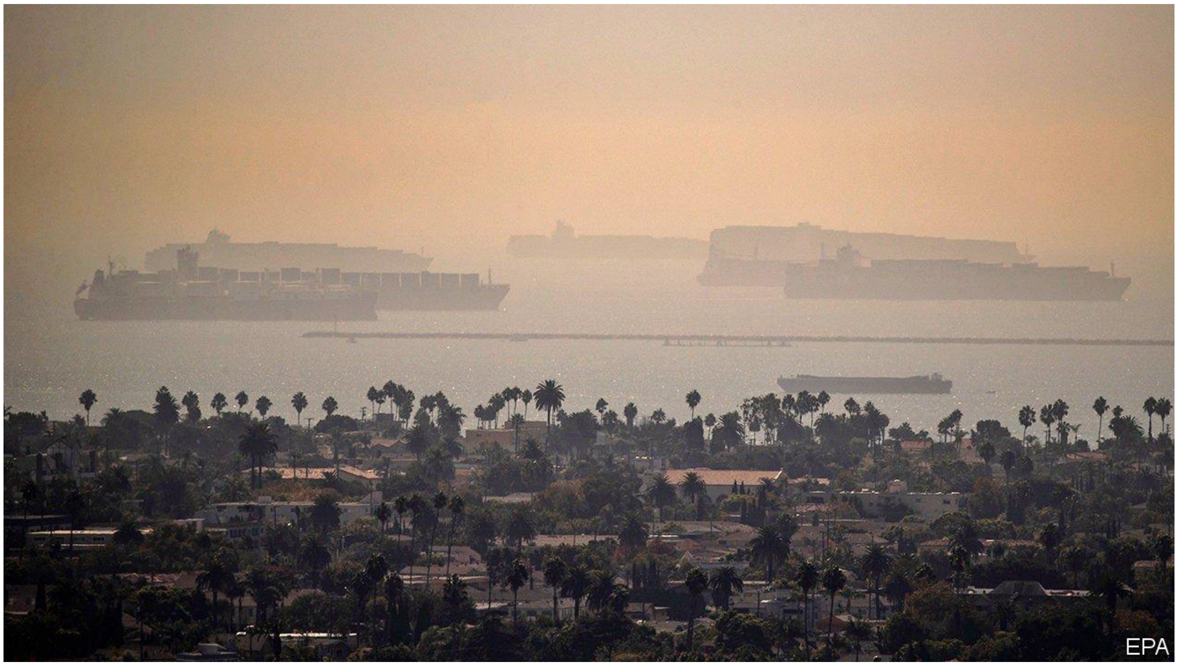
Tanks for the memory

The University of Hong Kong ordered the removal of a sculpture, called the Pillar of Shame, commemorating the crushing of the Tiananmen Square protests in 1989. It was erected 24 years ago.

The world this week

Business

Oct 16th 2021



America's annual inflation rate climbed again in September, to 5.4%, having dipped slightly in August. In its latest outlook on the world economy the IMF said that rising inflation reflected "pandemic-related supply-demand mismatches and higher commodity prices", and warned that central banks would need "to walk a fine line" between tackling inflation and supporting post-pandemic economic recovery.

All at sea

Battling a supply-chain crisis that has caused a backlog of imports, a factor contributing to inflationary pressures, Joe Biden announced that the port of Los Angeles would operate 24 hours a day. Along with the port of Long Beach (which is already open 24 hours) the complex is the biggest entry point in America for products from China and South-East Asia. Big retailers and logistics companies, such as Walmart, pledged also to work longer hours to keep goods flowing.

Apple's share price fell sharply amid speculation that it would have to curtail production of its new iPhone 13 during the coming months because of problems obtaining chips. Retailers in America and Europe have warned of shortages in a wide range of goods ahead of the Christmas shopping season.

Almost 4.3m Americans left their jobs in August, raising the "quit rate" to 2.9% of total employment. That was the highest rate since the data started to be measured in 2000. Most workers who jacked in their jobs were in the retail and restaurant industries, suggesting that they are confident of finding better-paid employment. America's unemployment rate fell to 4.8% in September, the lowest since March 2020, when the pandemic struck. But it was also the weakest month this year for job creation, with employers adding just 194,000 people to the payrolls.

The White House claimed that many organisations that have instigated a requirement that staff be vaccinated against covid-19have increased their vaccination rates by more than 20 percentage points, to 90%.

After years of negotiations under the auspices of the OECD, 136 countries agreed to introduce a global minimum corporate-tax rate of 15% and bring in new measures to force companies to pay more tax in the countries where they do business. Ireland, a low-tax haven for firms, overcame its hesitancy and signed up. Only four of the countries that entered the talks did not. To ease its passage through the American Congress, the pact imposes a two-year moratorium on new digital taxes, which affect Google and the like.

The IMF's executive board chose not to remove the fund's boss, Kristalina Georgieva, after an independent investigation determined that in her former role at the World Bank she pressed staff to boost China's ranking in the bank's influential Doing Business report. She denies the claims. China and Europe supported her keeping the job; America was reluctant. The World Bank is still investigating potential staff misconduct during the compiling of the report.

The American Congress passed a bill to raise America's federal debt ceiling, but only until December. The Treasury had warned that it would run out of money to repay government dues on October 18th. Senate Republicans dropped their opposition as the deadline approached, but are adamant that they will not vote for another extension.

A Chinese regulator imposed a 3.4bn yuan ($534m) fine on Meituan, an online shopping platform, for abusing its dominant position in the market. Meituan is one of the companies targeted by the government in its attempt to rein in big tech, but the penalty was less than had been feared and its share price soared.

Henry Kravis and George Roberts officially stepped down from their leadership roles at KKR, which they founded along with the late Jerome Kohlberg (he left in 1987). Messrs Kravis and Roberts were part of the breed of corporate raiders in the 1980s that symbolised a freewheeling approach to business, culminating in the private-equity firm’s $25bn buy-out of RJR Nabisco in 1989, immortalised in “Barbarians at the Gate”.

Google counter-sued Epic Games, a big games developer, for violating the rules of the Play Store, which sells smartphone apps. Epic’s original suit alleges that Google limits competition on smartphones running its Android operating system. A similar lawsuit against Apple was recently decided mostly, though not entirely, in Apple’s favour.

He boldly went

Captain Kirk at last made a voyage to the final frontier, even if many men (and women) have gone before him. William Shatner, the actor who played the iconic character in “Star Trek”, took a trip on the second flight of Jeff Bezos’s New Shepard capsule. At 90, he is the oldest-ever person to have made it to space.

The world this week

KAL's cartoon

Oct 16th 2021

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

• The first big energy shock of the green era

• It is tempting to blame foreigners for Europe's gas crisis

• Russian elections once again had a suspiciously neat result

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

Leaders

Getting to zero

The first big energy shock of the green era

There are grave problems with the transition to clean energy power

Oct 16th 2021

NEXT MONTH world leaders will gather at the COP26 summit, saying they mean to set a course for net global carbon emissions to reach zero by 2050. As they prepare to pledge their part in this 30-year endeavour, the first big energy scare of the green era is unfolding before their eyes. Since May the price of a basket of oil, coal and gas has soared by 95%. Britain, the host of the summit, has turned its coal-fired power stations back on, American petrol prices have hit $3 a gallon, blackouts have engulfed China and India, and Vladimir Putin has just reminded Europe that its supply of fuel relies on Russian goodwill.

The panic is a reminder that modern life needs abundant energy: without it, bills become unaffordable, homes freeze and businesses stall. The panic has also exposed deeper problems as the world shifts to a cleaner energy system, including inadequate investment in renewables and some transition fossil fuels, rising geopolitical risks and flimsy safety buffers in power markets.

Without rapid reforms there will be more energy crises and, perhaps, a popular revolt against climate policies.

The idea of such a shortage seemed ridiculous in 2020 when global demand dropped by 5%, the most since the second world war, triggering cost-cutting in the energy industry. But as the world economy has cranked back up, demand has surged even as stockpiles have run dangerously low. Oil inventories are only 94% of their usual level, European gas storage 86%, and Indian and Chinese coal below 50%.

Tight markets are vulnerable to shocks and the intermittent nature of some renewable power. The list of disruptions includes routine maintenance, accidents, too little wind in Europe, droughts that have cut Latin American hydropower output, and Asian floods that have impeded coal deliveries. The world may yet escape a severe energy recession: the glitches may be resolved and Russia and OPEC may grudgingly boost oil and gas production. At a minimum, however, the cost will be higher inflation and slower growth. And more such squeezes may be on the way.

That is because three problems loom large. First, energy investment is running at half the level needed to meet the ambition to reach net zero by 2050. Spending on renewables needs to rise. And the supply and demand of dirty fossil fuels needs to be wound down in tandem, without creating dangerous mismatches. Fossil fuels satisfy 83% of primary-energy demand and this needs to fall towards zero. At the same time the mix must shift from coal and oil to gas which has less than half the emissions of coal. But legal threats, investor pressure and fear of regulations have led investment in fossil fuels to slump by 40% since 2015.

Gas is the pressure point. Many countries, particularly in Asia, need it to be a bridge fuel in the 2020s and 2030s, shifting to it temporarily as they ditch coal but before renewables have ramped up. As well as using pipelines, most import liquefied natural gas (LNG). Too few projects are coming on stream. According to Bernstein, a research firm, the global shortfall in LNG capacity could rise from 2% of demand now to 14% by 2030.

The second problem is geopolitics, as rich democracies quit fossil-fuel production and supply shifts to autocracies with fewer scruples and lower costs, including the one run by Mr Putin. The share of oil output from OPEC plus Russia may rise from 46% today to 50% or more by 2030. Russia is the source of 41% of Europe's gas imports and its leverage will grow as it opens the Nord Stream 2 pipeline and develops markets in Asia. The ever-present risk is that it curtails supplies.

The last problem is the flawed design of energy markets. Deregulation since the 1990s has seen many countries shift from decrepit state-run energy industries to open systems in which electricity and gas prices are set by markets, supplied by competing vendors who add supply if prices spike. But these are struggling to cope with the new reality of fossil-fuel output declines, autocratic suppliers and a rising share of intermittent solar and wind power. Just as Lehman Brothers relied on overnight borrowing, so some energy firms guarantee households and businesses supplies that they buy in an unreliable spot market.

The danger is that the shock slows the pace of change. This week Li Keqiang, China's premier, said the energy transition must be "sound and well-paced", code for using coal for longer. Public opinion in the West, including America, supports clean energy, but could shift as high prices bite.

Governments need to respond by redesigning energy markets. Bigger safety buffers ought to absorb shortages and deal with the intermittency of renewable power. Energy suppliers should hold more reserves, just as banks carry capital. Governments can invite firms to bid for backup-energy-supply contracts. Most reserves will be in gas but eventually battery and hydrogen technologies could take over. More nuclear plants, the capture and storage of carbon dioxide, or both, are vital to supply a baseload of clean, reliable power.

A more diverse supply can weaken the grip of autocratic petrostates such as Russia. Today that means building up the LNG business. In time it will require more global trade in electricity so that distant windy or sunny countries with renewable power to spare can export it. Today only 4% of electricity in rich countries is traded across borders, compared with 24% of global gas and 46% of oil. Building subsea grids is part of the answer and converting clean energy into hydrogen and transporting it on ships could help, too.

All this will require capital spending on energy to more than double to $4trn-5trn a year. Yet from investors' perspective, policy is baffling. Many countries have net-zero pledges but no plan of how to get there and have yet to square with the public that bills and taxes need to rise. A movable feast of subsidies for renewables, and regulatory and legal hurdles make investing in fossil-fuel projects too risky. The ideal answer is a global carbon price that relentlessly lowers emissions, helps firms judge which projects would make money, and raises tax revenues to support the energy transition's losers. Yet pricing schemes cover only a fifth of all emissions. The message from the shock is that leaders at COP26 must move beyond pledges and tackle the fine print of how the transition will work. All the more so if they meet under light bulbs powered by coal. ■

For more coverage of climate change, register for The Climate Issue, our fortnightly newsletter, or visit our climate-change hub

Cheques and imbalance

Is the world economy entering a wage-price spiral?

Both wage growth and inflation are unusually high

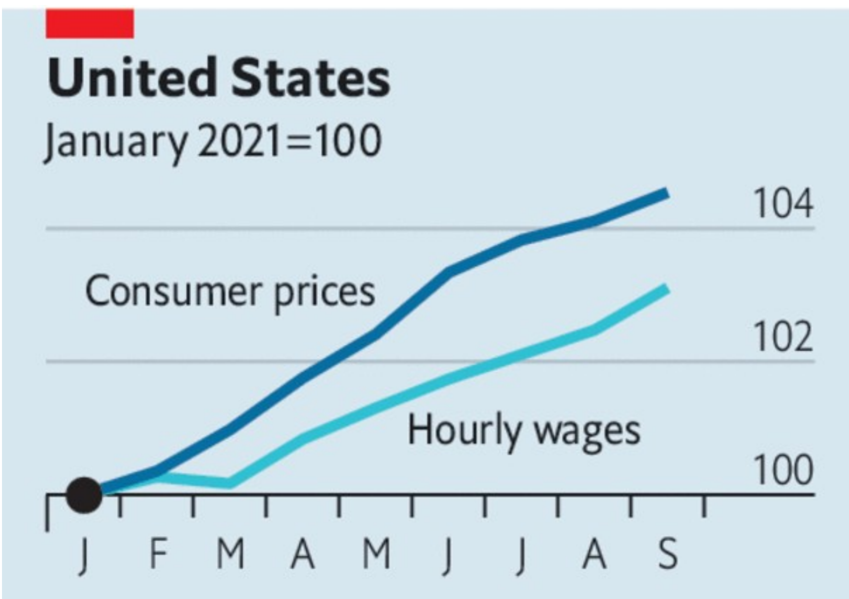
Oct 16th 2021

THE RICH world is used to wages and prices growing slowly. In the decade after the global financial crisis, inflation rarely exceeded central banks' targets, and wages seemed unable to grow much faster. The spending power of average hourly pay in Britain, Italy and Japan was about the same at the start of the pandemic as it had been in the mid-2000s. The fact that American wage growth averaged 2.9% from 2015 to 2019 while average inflation stayed below 2% seemed a rare triumph.

The recovery from the pandemic has brought about a startling change: prices and wages are both surging. American hourly pay rose by 4.6% in the year to September while consumer-price inflation of 5.4% is more than wiping out those gains. In Germany inflation has reached 4.1% and the main public-sector union is asking for a pay increase of 5%. Wages and prices have even picked up modestly in Japan.

The causes of higher prices are clear: rampant demand for goods has met bottlenecks in supply chains, and energy prices have soared. Wage growth is more mysterious. In most places employment is lower than it was before the pandemic. Yet workers seem unwilling or unable to take the abundant jobs that are on offer. The labour shortage may reflect how hard it is to move between professions and places as economies go through an unusual adjustment. Fear of the virus and the lingering effects of state support for household incomes could be keeping workers idle. The pandemic may even have led some people to put family and leisure above their careers.

A hazy understanding of what is driving wages up is making life harder for central banks. Most have argued that high inflation is temporary. But excessive wage growth could be the next factor to drive up prices, especially if workers demand higher pay in the expectation of future rises in the cost of living—an insurance that exacerbates the very thing it seeks to offset.



The Economist

To avoid enduring inflation, some combination of three things must happen. Firms could absorb higher wages in their margins rather than raising prices. Productivity growth could make higher increases in real-wages sustainable. Or idle workers could return to the labour force, dampening wage growth.

In the popular imagination workers' share of the economic pie has room to grow at the expense of profits. But recent research suggests that labour's share of the value created by firms has in fact been fairly stable in most rich countries during recent decades. We estimate that it has already risen by one percentage point on average in big rich countries during the pandemic. There may not be very much scope for further increases.

Higher productivity growth is a reasonable hope. Output per worker has risen in America since the start of the pandemic. The digitisation brought about by the pandemic should boost living standards, particularly if it reduces the need to live near expensive cities to get good jobs. The trouble is that time lags make it hard to base policy on productivity trends. They are hard to measure in real time and it takes about 18 months for central banks' decisions to fully feed through into the economy.

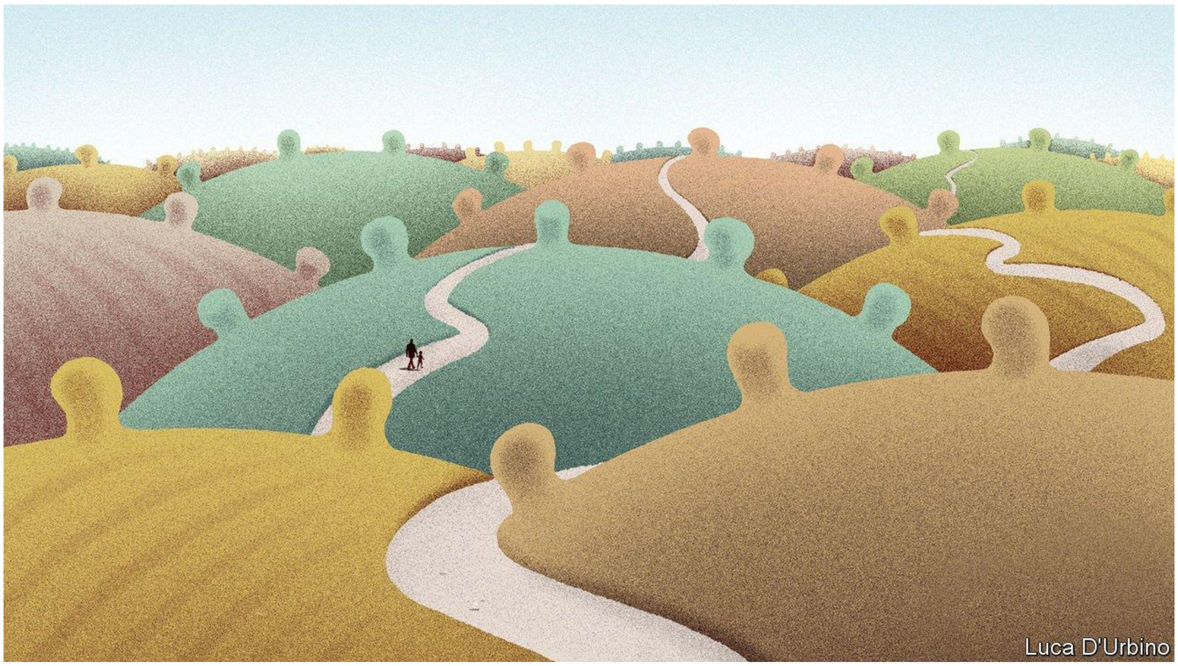
That means policymakers should focus on the labour supply. Its recovery has been disappointing so far. There is surprisingly little sign that the end of emergency programmes, such as America's extended unemployment insurance and Britain's furlough scheme, has increased the number of people looking for work. Perhaps, though, as bank accounts run dry and the pandemic abates, some slack will reappear in 2022, causing wage growth to slow. Even more than usual, monetary policymakers should keep their eyes fixed on jobs. ■

The coronavirus

Millions of lives depend on how the pandemic ends

The world can see the end of the covid-19 emergency, but some daunting tasks lie ahead

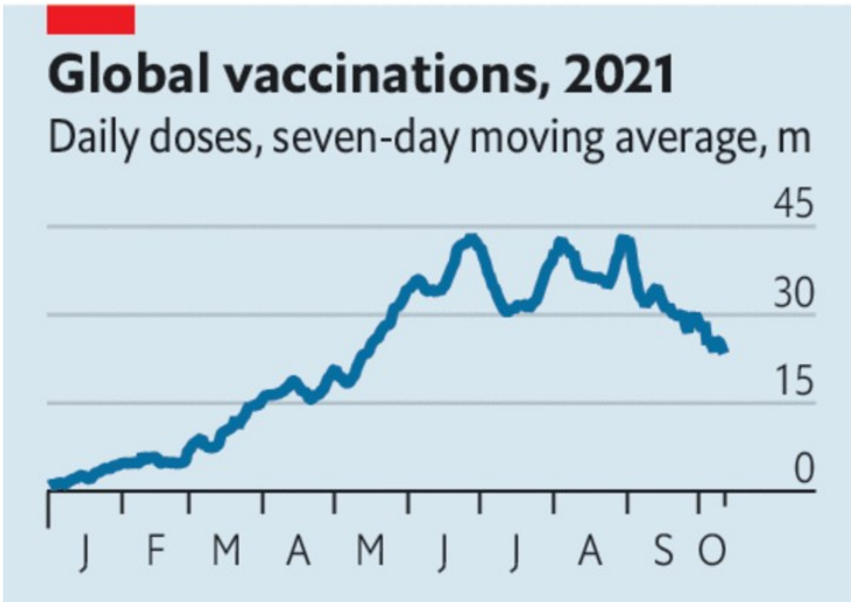
Oct 16th 2021



ALL PANDEMICS end eventually. Covid-19 has started down that path, but it will not be eradicated. Instead, it will gradually become endemic. In that state, circulating and mutating from year to year, the coronavirus will remain a threat to the elderly and infirm. But having settled down, it is highly unlikely to kill on the monstrous scale of the past 20 months. Covid will then be a familiar, manageable enemy, like the flu.

Although the destination is fixed, the route to endemicity is not. The difference between a well-planned journey and a chaotic one could be measured in millions of lives. The end of the pandemic is therefore a last chance for governments to show they have learned from the mistakes they made at its start.

As the pandemic fades, weekly recorded cases and deaths have been falling globally, including in America, since the end of August. Britain is one country where cases are high and rising, but it has had a lot of disease and has run a successful vaccination campaign. Because 93% of Britons have antibodies, roughly 250,000 cases a week are leading to hundreds of deaths instead of thousands. That is the path to endemicity.



The Economist

Nobody knows how many people around the world enjoy such protection, but you can hazard a very rough guess. About 3.8bn people have had at least one dose of the vaccine. *The Economist* estimates that during the pandemic excess deaths lie between 10m and 19m, with a central estimate of 16.2m. Working backwards, using assumptions about the share of fatal infections, this suggests that 1.4bn-3.6bn people have had the disease, amounting to 6-15 times the official count. There is an overlap, as many have been both vaccinated and infected.

The reservoir of people with immunity makes covid less dangerous. However, in bringing the pandemic to an end, the world is likely to face several tests.

One is the wave of winter infections in the northern hemisphere. Covid thrives when people spend their time indoors. If cases start to overwhelm hospitals, governments will need to intervene. One line of defence is treatments, including promising new antiviral drugs such as molnupiravir, which cuts rates of serious illness by half if administered early, but is still awaiting approval. Another is measures such as mask-wearing, shielding care homes and closing hotspots, including clubs and bars. The question is whether governments have learned to act promptly, but proportionately.

A second test is mutation. The genetic sampling of infections serves as an early warning if the Delta variant is displaced, yet poorer, unvaccinated parts of the world still go unmonitored. A new variant may require vaccines to be redesigned. That is far easier than starting from scratch, but it would require the production and approval of new jabs and perhaps jettisoning the stocks of old ones. It could trigger a replay of the fights over supply that marred the start of 2021.

The greatest test is how to protect the billion or more people without immunity. China's answer is to try to shut the virus out with harsh and costly quarantines and lockdowns. This allows time for vaccination and stockpiling medicines. The Communist Party has used the country's tiny number of cases as proof its system is better than democracy, so abandoning its zero-covid strategy is politically awkward. However, as places including New Zealand have accepted, the coronavirus is not going away. One day China will have to relent.

Ultimately, people will gain immunity either through infection or vaccination. Because vaccination is so much safer, governments must get as many needles into arms as possible. According to Airfinity, a data firm, 11.3bn doses should have been produced before the end of the year and 25bn by June 2022. If so, global supply will soon no longer be a constraint—how soon, depends on the demand for boosters. Not all vaccines are equally effective, but all of them are far better than being infected.

This approaching vaccine glut means that exporters should already be shipping doses wholesale. Instead many are holding back supplies for boosters and to vaccinate children, who very rarely die from covid. Doses are promised for next year, but they are needed now.

The last barriers to vaccination will be hesitancy and the capacity of local health care. The World Health Organisation has set a target of 40% of every country to be jabbed by the end of the year. A global vaccine summit set a target of 70% by September 2022. But different countries have different needs for vaccines depending on their demography, their ability to administer jabs, and the threat of covid compared with other diseases like malaria and measles. Blanket targets risk turning sensible priorities into failures.

It is a daunting to-do list. Will governments rise to the challenge? Therein lies the last test. As covid fades into the background, rich countries may start to lose interest in the coronavirus. The disease it causes risks becoming a poor-country killer, like so many of the rest. ■

Dig deeper

All our stories relating to the pandemic can be found on our coronavirus hub. You can also find trackers showing the global roll-out of vaccines, excess deaths by country and the virus's spread across Europe.

Reluctant regulators

Who should police the web?

Politicians should not offload the responsibility onto others

Oct 13th 2021

SHOULD VIDEO websites have to review content before they publish it? Where does the boundary lie between hate speech and incitement to violence? Is pornography created by artificial intelligence an invasion of privacy? These are all hard questions, but behind them lies an even more difficult one: who should provide the answers?

On the internet, such dilemmas are increasingly being resolved by private firms. Social networks are deciding what kinds of misinformation to ban. Web-hosting companies are taking down sites they deem harmful. Now financial firms are more actively restricting what people can buy.

The digital gatekeepers are doing a mixed job. But it is becoming clear that it ought not to be their job at all. The trade-offs around what can be said, done and bought online urgently need the input of elected representatives. So far governments have been better at complaining than at taking responsibility.

For an example of how private firms have become the digital police, consider the rules on internet pornography being introduced by Mastercard on October 15th. In a bid to weed out illegal material, the card firm is demanding that porn sites take steps that go beyond what the law requires, including reviewing footage before publication and checking the identity of those who upload or feature in it. Sites that think these sorts of rules too onerous are under no obligation to work with Mastercard. But Visa is also cracking down, and the two firms handle 90% of card payments outside China, meaning that they are becoming the industry's de facto regulators.

Liberals must strike a balance. Private firms should in general be free to deal with whom they like. Just as Facebook may legally ban people like Donald Trump from its network and Amazon Web Services can decline to host alt-right-friendly apps like Parler, Mastercard is free to drop particular porn sites. Yet the market power of these firms and their often like-minded rivals means that without their approval and support, individuals or businesses may face exclusion, even if they have broken no law. In edge-cases, private gatekeepers will err on the side of caution. What incentive is there for a social network to allow borderline hate-speech, or for a bank to deal with a legally tricky industry like cannabis?

The best remedy would be more competition, so that if Visa and Mastercard bar a porn site or Facebook cancels a controversial figure, consumers have alternatives. That will not happen soon: network effects are powerful in social media and crushing in the payments business.

In the meantime, private companies that find themselves acting as gatekeepers should be transparent about their rules, how they make them and what redress they offer. Under public pressure, social networks have taken steps in this direction. Facebook sends difficult decisions to an independent "oversight board"; Twitter this week published a set of principles for regulating online speech. Financial institutions are more opaque. Mastercard explained its new rules in a blog post. When OnlyFans, a site known for sexually explicit content, blamed banks for forcing a change in its content policy earlier this year, the banks in question made no comment.

Yet the bigger responsibility lies with governments. They are right to be wary of constraining speech. In much of the world leaders are only too ready to muzzle online debate (see International section). But carefully laying out a method for drawing lines around free expression and building in safeguards would help clarify where despots have overstepped the boundary.

What is more, in many areas the gatekeeping power wielded by private firms is really a consequence of government inaction. Keeping revenge-porn off the web or limiting children's access to viral content are areas where governments could act if they wanted to. Instead, the approach of many has been to do nothing and then feign shock when profit-maximising companies come up with answers that may not be in the interest of society.

Politicians are right to warn that some private companies have too much power online. But those firms have ended up with so much responsibility partly because politicians themselves have abdicated it. ■

Building back best

Latin America could become an alternative to China

But only if the protectionist policies of the region's politicians don't get in the way

Oct 14th 2021

LATIN AMERICA'S economies are punch-drunk from the pandemic. No other region suffered a bigger drop in GDP in 2020 or a higher death rate. Even before the coronavirus arrived, the larger Latin economies lagged behind emerging-world success stories in Asia and Europe. They were held back by poor governance, excessive dependence on commodities and protectionism. In the steepness of its barriers to trade, the region is second only to sub-Saharan Africa. From 1995 to 2015 its participation in global supply chains rose by just 0.1%; in the rest of the world supply-chain trade jumped by 19%.

But the Americas now have a chance to make progress. The capriciousness of Chinese regulators, the tangled state of global trade and the trend towards reshoring and nearshoring are prompting firms in the United States to reassess where they should build factories and invest their cash. With the right policies, Latin American countries could be attractive locations for new plants supplying the United States and each other. This is the best chance in decades to pursue a policy of regional economic integration.

Whether that actually takes place will depend in part on President Joe Biden. Already, Latin American governments are being courted to take part in Mr Biden's Build Back Better World partnership, an infrastructure-investment programme that is intended to counter China's Belt and Road Initiative. Yet, for all its good intentions, the Biden plan lacks ambition.

As well as promoting infrastructure-building, Mr Biden should urge his neighbours to lower trade barriers, harmonise provisions across the hundreds of trade agreements which already criss-cross the region and clear up onerous customs procedures. This could help persuade investors to take the plunge.

Nobody should underestimate how hard it will be to overcome Latin America's scepticism of markets. Big economies such as Brazil and Argentina have long been protectionist, coddling domestic firms behind high trade barriers. The results of past trade deals have sometimes been disappointing.

Policy mistakes continue. Left-wing leaders, such as Andrés Manuel López Obrador of Mexico, want less private capital in the economy, not more. Peru has recently elected a far-left leader, Pedro Castillo, who has been seeking to calm the market's apprehension about his economic policies, with only some success.

Partly as a result, Latin America has failed to transform itself economically as East Asia has done over the past generation. Since the North American Free Trade Agreement took effect in 1994, real income per person in Mexico, measured by purchasing power, has fallen further behind that in the United States.

However, you can find signs of openness. Uruguay is seeking new trade deals with China and, as part of a regional grouping, South Korea. In Ecuador Guillermo Lasso, the president and a former banker, is valiantly battling populism. Countries that have been open to trade, like Chile and Costa Rica, have outgrown their inward-looking Latin American peers.

Even Mexico holds out some hope. In recent years its exporters competed directly with China's in industries that China came to dominate. Now Mexicans have adapted. Whereas the country's overall growth has been disappointing, its manufacturers have shifted from low-value textiles into automotive, aerospace and semiconductor industries that will benefit from being close to the United States and far from China.

Mr Biden could help by pairing access to badly needed investment through Build Back Better with a drive for trade liberalisation. In September members of the Biden administration visited Colombia, Ecuador and Panama to gauge interest in the initiative, which could also boost Latin America's defences against climate change.

The alternative to integration is grim. Further economic stagnation in Latin America would leave governments struggling to cope with the rising costs of climate change. A lack of jobs and growth would rile their increasingly frustrated citizens, many of whom have taken to the streets in recent years.

Similarly, a further inward lurch in Latin America would not serve the security and commercial interests of the United States. At the very least it would be a missed opportunity to expand markets for the country's firms. Mr Biden has a chance to help create a more prosperous region. He should take it. ■

Letters

- **Letters to the editor: The London Stock Exchange, philanthropy, religion, urinating cows, Brazil, “like”**

The London Stock Exchange, philanthropy, religion, urinating cows, Brazil, “like”

Letters to the editor

A selection of correspondence

Oct 16th 2021

Luca D'Urbino

Letters are welcome via e-mail to letters@economist.com

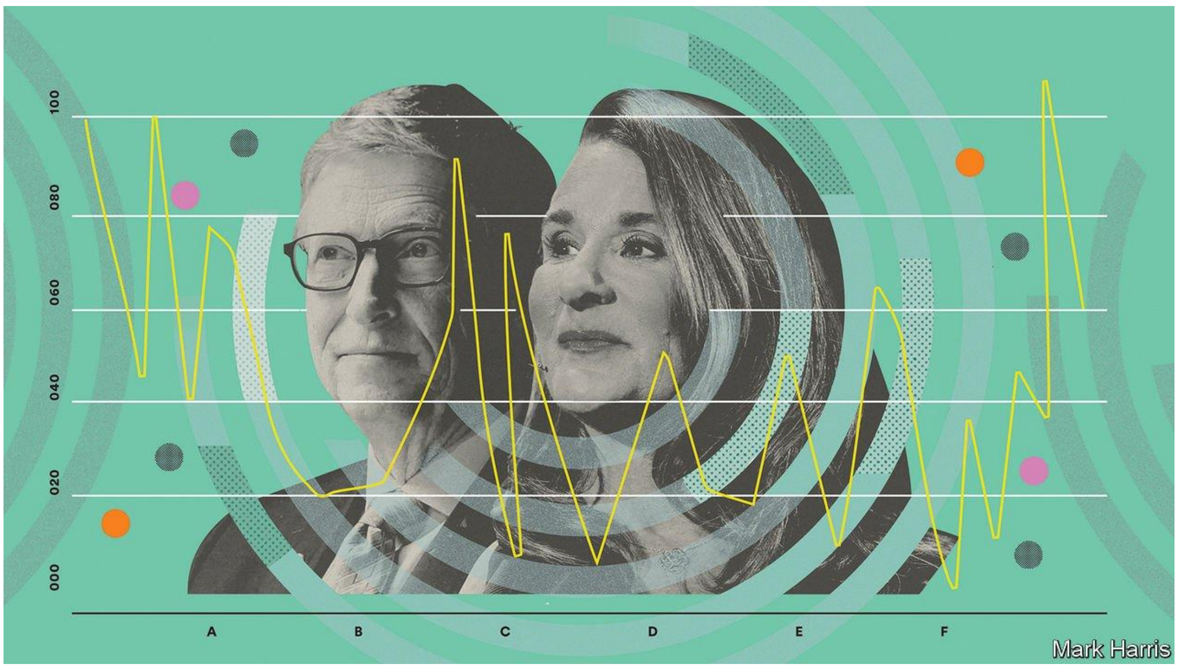
The London Stock Exchange

Your leader, “From Big Bang to a whimper” (October 2nd), and the accompanying briefing, “Britain’s sluggish stockmarket”, were correct in highlighting that the London Stock Exchange remains one of the world’s largest stockmarkets and is the biggest bourse in Europe. An increasing number of firms are choosing to list in London. This year has been our strongest market for initial public offerings for seven years, with tech or tech-enabled companies accounting for 43% of all capital raised.

We agree that Britain’s capital markets must continue to evolve and innovate, as they have done for the past 300 years, to serve investors in Britain and around the world. We should also not lose sight of the fact that public markets are an engine of growth, innovation and employment.

The LSE is a strong supporter of the reforms proposed by the British government and the regulator. I am confident there is real momentum to make changes that will ensure London remains the home to one of the world's strongest, most diverse and most international exchanges for decades to come.

JULIA HOGGETT
Chief executive
London Stock Exchange



Outputs v outcomes

I enjoyed your article on philanthropy ("Shifting foundations", September 18th). However, you made a fundamental category error in describing Bill Gates's approach to dispensing grants as a "hyper-efficient, outcomes-oriented" one. Following the established conventions of impact measurement, in this case the widely used Theory of Change Model, the examples you gave are of outputs, not outcomes. The former are widely criticised for being technocratic and failing to account for the real changes, negative as well as positive, brought about by philanthropy.

The case of malaria nets that you mentioned is a perfect example of the dangers of such an outputs approach. Although the "output" of the programme was considered a substantial success, counted by the number of nets distributed, the actual outcome was that on the ground the nets were repurposed for fishing rather than fighting off mosquitoes. By that measure the programme failed. In this context, Melinda French Gates's more holistic, and participatory, grant-making model is, in fact, likely to yield greater overall impact than a rationalistic, Silicon Valley approach.

ALEX NICHOLLS
Professor of social entrepreneurship
Said Business School
University of Oxford

Religious sense

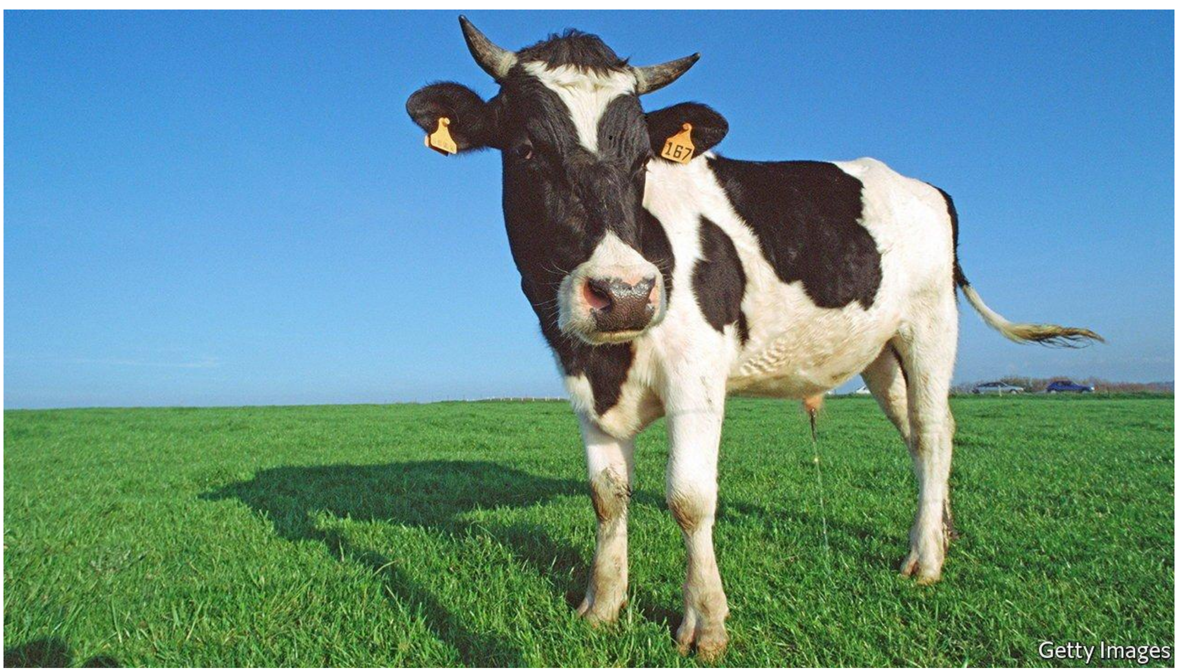
Noble suffering and mutual aid were two themes presented in your article on whether religious belief makes poverty more bearable ("Faith and fatalism", September 25th). There is another theory. The world is indifferent to us all. Individually and collectively we are informed by conditions and events on a daily basis that we do not matter and our existence is an accident. Religious belief offers an appealing lie of a beneficent force that cares about us if we do the “right” things. This gives meaning to life, giving us essential purpose and resolving existential despair.

ALEXANDER WILSON
Aurora, Colorado

Between Marx and Seneca you struck a cynical tone, suggesting that religion promises rewards in the next life without acknowledging the incredible contribution it can make to drawing the sting of poverty in the here and now. You don’t have to look far for the evidence. The official aid agency representing Catholics in England and Wales, CAFOD, is part of one of the largest aid networks in the world and is entirely dedicated to global poverty relief regardless of faith, gender or ethnicity.

Marx did not notice that true religion promises jam today as well as tomorrow.

GERARD CONROY
Reading, Berkshire



Where there’s muck

“How to toilet train your cow” (September 18th) presented a complicated solution to an unnecessary problem resulting from an increasingly out-of-date farm management system. Cows on my farm are at pasture throughout the year, even for calving. Their urine is immediately taken up as natural fertiliser and the dung quickly taken into the soil by dung beetles and stored as carbon. Housing cattle breaks the dung beetle life-cycle, has a heavy carbon footprint and starves the bats that eat the beetles. The neglected story of the humble dung beetle is just as entertaining as potty-training cows, and, as we approach COP26, more relevant.

TOM MORRISON
Member of the Pasture-for-Life Association
Hogshaw, Buckinghamshire

The last sentence of your article ended with “every little helps.” Surely you meant “every wee bit helps?”

KEITH SCHWARZ
Cupertino, California

Brazilian Navy

Brazil’s nuclear programme

You were right to quote an expert affirming that Brazil's nuclear-powered submarine programme is legitimate ("Underwater atoms", October 2nd). Brazil is possibly the only country in the world with a constitution that prohibits the use of nuclear energy for non-peaceful purposes. For 30 years we have had full transparency through the nuclear-monitoring mechanisms of the Brazilian-Argentine Agency for Accounting and Control of Nuclear Materials as well as the International Atomic Energy Agency. Brazil is a signatory to all the main international instruments on non-proliferation. And our determination to promote meaningful nuclear disarmament is also unwavering: we were the first country to sign the Treaty on the Prohibition of Nuclear Weapons.

Simply put, the nuclear-propulsion submarine that Brazil has been developing for four decades is a response to the country's need to look after its vast Atlantic coast. No more, no less.

FRED ARRUDA
Ambassador of Brazil
London

What's not to like?

An entire essay on my pet peeve: “like”, the filler word that multiplies like bacteria within an otherwise unblemished sentence. As Johnson said (September 18th), the person who uses “like” to excess is not “stupid or thoughtless”. The problem is that peppering his speech with the word makes him sound vapid when he’s not. If he manages to strip the word from what he’s saying, he comes across as smarter and more articulate without sounding pompous or nerdy. No teenager need ever worry that ditching “like” will make him uncool.

MARGARET MCGIRR
Greenwich, Connecticut

The use of “like” was familiar in 1959. To wit, Woody Herman’s announcement of the piece “’Like Some Blues, Man’, like”, eliciting laughter from the audience at the Monterey Jazz Festival of that year.

HANS SPROSS
Cologne

Calvin Trillin, an American humourist, once said that the best SAT analogy question for his teenage daughter would be “Like is to like, as like is to…?”

DAVID ABRAHAMSON
Professor emeritus
Northwestern University
Evanston, Illinois

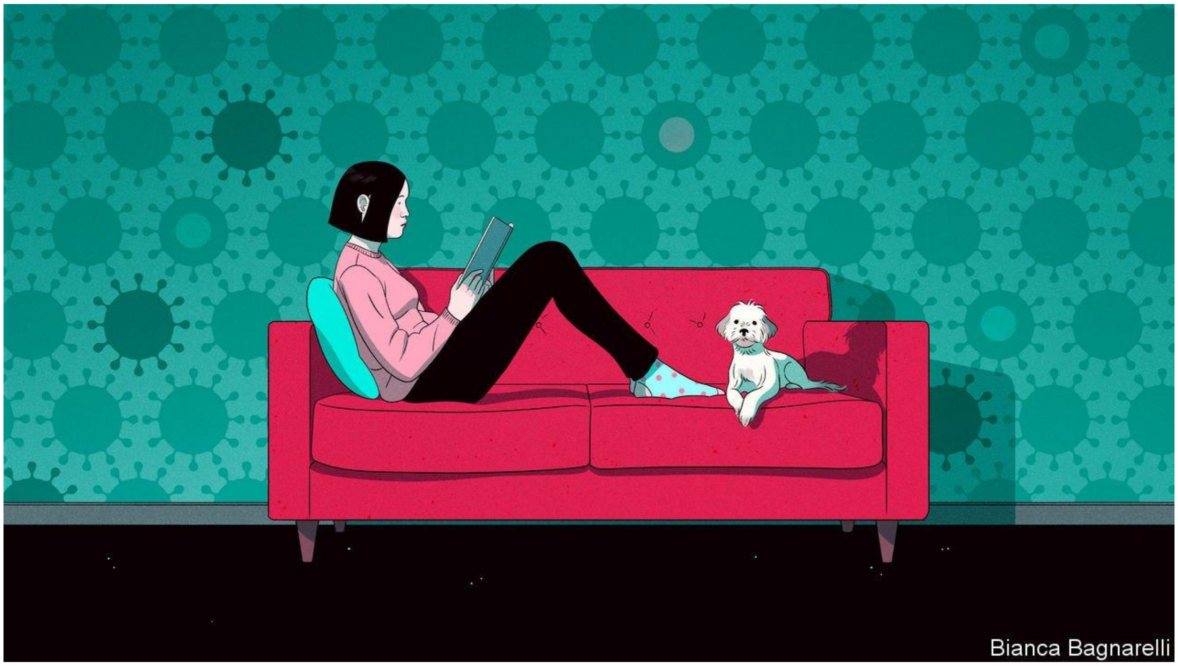
Briefing

What lies ahead

How the world learns to live with covid-19

From pandemic to epidemic

Oct 16th 2021



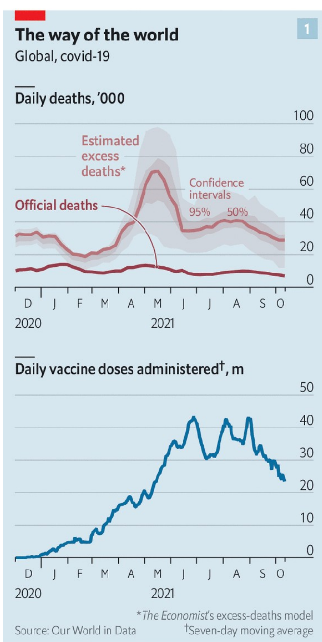
WINTER 2025 could, with luck, be normal. Health-care systems will come under strain, as always, from the spread of respiratory diseases that land people in hospital. Influenza will afflict the elderly. Respiratory syncytial virus will make some children gravely ill. And a newish seasonal disease will belong in the mix: covid-19. It will overwhelmingly sicken the old, even more than flu. But, outside hospitals, life will continue largely uninterrupted.

The world has experienced pandemics before. In the cholera outbreak of the 1830s nearly 3% of Parisians died from the disease in a single month. At the end of the 19th century around 1m people may have died from Russian flu, which some think was caused by a coronavirus. The Spanish flu that struck in 1918 killed around 50m in just a couple of years.

Covid-19 joins that list. The pandemic has probably killed 10m-19m people, with a central estimate of 16.3m, according to *The Economist*'s excess-death model. Covid is far from the deadliest disease humanity has faced. Many of those infected do not even know they have it. But it is new and it is everywhere. When it emerged the entire world was susceptible to it. That immunological naivety, combined with the nature of the virus itself, explains the speed of its spread and the awfulness of its impact.

But in the end, all pandemics burn out. Eventually, sufficient numbers of people develop immunity so viruses can no longer find new hosts at the rate they need to sustain their growth. And yet only one human disease, smallpox, has ever been completely eradicated. Others, such as influenza, measles and cholera, slowly became endemic, part of the landscape of disease around the world, checked but not eliminated by vaccines and medical treatments.

In that respect, covid is no different (see chart 1). What is novel about this pandemic is the speed at which science—in the form of both vaccines and treatments—is accelerating the disease's journey to endemicity. The question now is how quickly it will become endemic and what the world will look like as it does.



The Economist

Most governments accept that eradicating covid is impossible. The last large country in the world still pursuing a "zero covid" strategy is China. Yet eradication became impossible soon after the disease appeared, argues Maria

Van Kerkhove, an epidemiologist at the World Health Organisation, because too many countries failed to fight the virus as strongly as possible.

The extreme transmissibility of the Delta variant has rendered that goal even more obviously futile. Endlessly repeated lockdowns and severe quarantines are the only alternative. All societies find these intolerable. Ultimately that will be true even for China. Instead every country will have to work out how to live with the disease.

Endemicity means that a virus circulates at a steady rate. Infections sometimes rise or fall but transmission is generally constant, stable and predictable. The disease does not overwhelm nor does it disappear. Infections reach an equilibrium where the proportion of the population becoming susceptible is in balance with the likelihood of transmission. Vaccination can push that equilibrium point lower.

Humans have done exactly this to polio and measles, two devastating diseases which were endemic throughout the world in the 20th century but which have now been eliminated from much of the planet. The overwhelming incentive for the vaccination campaigns was that both viruses harmed and killed children, who are born with naive immune systems. Covid is unlikely to follow the same path, not only because it causes relatively little harm to youngsters, but also because vaccinated people can still contract the disease and pass it on, although cases are usually mild.

Contrast that endemicity with that of the common cold, which can be caused by any of around 200 vi ruses. Most children who contract it do not get seriously ill. Most adults, even older ones, who contract it do so with some immunity from the string of colds they endure over the course of their life, and so are able to fight it off. And so colds persist as endemic diseases at a relatively high level of infection.

Influenza is different yet again. It is one of the most dangerous endemic diseases, killing 290,000-650,000 people every year, most of them elderly. Vaccines exist, and are widely given every year to protect vulnerable people. But there is no prospect of wiping it out, in part because vaccination drives are not comprehensive, and in part because the virus itself mutates faster than vaccines can consistently keep up with.

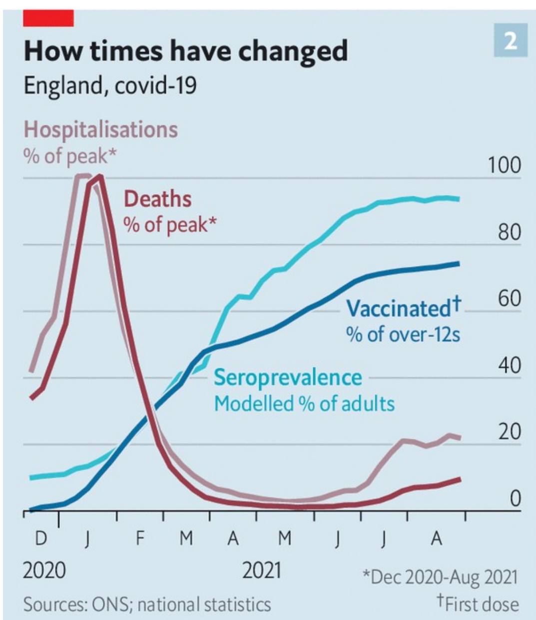
The harm from endemic covid may eventually fall somewhere between that of influenza and the other common coronaviruses. Trevor Bedford, a virologist at the Fred Hutchinson Cancer Research Centre in Seattle, has calculated that Delta reproduces twice as fast as H3N2, one of the most common flu strains. He also notes that, to date, SARS-CoV-2 has also evolved about five times faster than the flu virus (although that rate will slow as the disease becomes endemic and hence less prevalent). Dr Bedford believes that the burden of SARS-CoV-2 will come to resemble that of influenza in the next few years. Individual infections will be no greater threat, but covid's higher transmissibility will mean more cases and more deaths. America alone could, by his estimates, see 50,000-100,000 deaths a year from covid. Flu kills about 12,000-52,000 people in America every year, according to the Centres for Disease Control and Prevention.

Others think that instead covid will look more like the other common coronaviruses that circulate widely yet barely trouble health-care systems or society. David Heymann, an epidemiologist at the London School of Hygiene and Tropical Medicine, notes that the spread of SARS-CoV-2 is closer to that of the common coronaviruses than it is to that of the common influenzas. Unlike flu, its outbreaks are not driven by children. And whereas flu vaccines prevent at best 40-60% of infections bad enough to merit a visit to the doctor, and need to be tweaked every season in light of new variants, the jabs for covid are much better at preventing serious illness and death and thus far have required no updates. All this may mean that endemic SARS-CoV-2 will end up more like the other endemic coronaviruses than flu. Jabs may still be needed periodically for the most vulnerable but Dr Heymann thinks that even in bad covid seasons deaths may not get anywhere as high as those from influenza (using current flu vaccines).

Regardless of where endemic covid ends up, the world is not yet there. Hospitalisations and deaths are soaring in eastern Europe where vaccination campaigns have been poor. Large swathes of the populations of New Zealand and Australia, which have had low infection rates as a result of stringent lockdowns and slow vaccination roll-outs, are still immunologically naive. Countless people have yet to be reached by either virus or vaccine. When the virus arrives in parts of the world without immunity, the result will be spikes in disease and death.

Not yet out of the woods

In the medium term even highly vaccinated places will see flare ups. Britain, which ditched its precautions earlier than most other European countries, shows that covid can bear down on hospitals even in places with the benefit of high levels of vaccination (see chart 2). In September covid patients occupied 25-35% of its intensive-care beds. They tend to stay there for two to three weeks, leaving less room for post-operative care patients, who need a bed for only a couple of days. But in Britain, as in the rest of Europe, 80-90% of those hospitalised with covid are unvaccinated. The divide between vaccinated and unvaccinated is even starker when it comes to death. Covid is now a leading cause of death among unvaccinated Britons. In the first half of 2021 just 1% of all deaths in fully vaccinated people in Britain were because of covid. Among the unvaccinated, the disease caused 37% of deaths.



The Economist

Globally, these waves of infection will be dampened by the collective immunity that runs through and around the remaining pockets of the immunologically naive. Over time, these spikes will become ever rarer. And the world will stumble towards endemicity. What endemicity looks like and the speed with which countries get there will depend on three things: what proportion of a given population are immune to the virus and the quality and durability of that immunity; how the disease can be treated; and how the virus evolves.

Immunity is hard to measure. The immune system is complex and poorly understood. Both the quantity and quality of the antibodies it produces matter. "Up to six months after vaccination, the immune system is still in the process of optimising and perfecting its response," says Ali Ellebedy, an immunologist at the Washington University School of Medicine in Missouri. "Antibodies induced in the first two or three months are being slowly replaced by much better antibodies in terms of binding affinity to the spike. That's hard to see. Quantitatively there are fewer antibodies but qualitatively things are improving."

Nor are antibody levels a definitive marker of protection. "People get covid with very high antibody levels. It's not that there is an obvious cut-off where you can say 'This high, you are protected'," says Sarah Walker, an epidemiologist at Oxford University. But at a population level, a high prevalence of neutralising antibodies—which prevent a pathogen from infecting the body—means fewer infections.

Even without great insight into people's individual or collective immunological state, the broader picture is clear. As the virus has spread through populations, the immune systems of those who survive have been training themselves on its shape, preparing antibodies to fight off future infection. The protection vaccines afford against infection wanes in the months after people receive them, but the training they give the immune system to prevent serious disease and death stays strong.

Vaccines have offered about a third of humanity a shortcut to endemicity, bypassing sections of the path that would otherwise have been far more deadly. Some 3.8bn people have had at least one shot, and 2.8bn are fully vaccinated. Add them to those who have survived infection and it looks as if over half the world's population boasts some degree of immunity to covid.

Vaccines greatly reduce the risk of severe illness and death. They have saved hundreds of thousands of lives and let many health-care systems keep operating. Covid is the first pandemic for which the cyclical tussle between viral spread and evolution and developing immunity has been short-circuited so fast and on such a scale.

But the overwhelming majority of those who have acquired immunity in this less risky manner reside in wealthier countries. In poor places the majority have and will continue to do so via infection. The rate of vaccination, which surged through the first half of the year to reach some 43m doses administered per day in late June, had dropped to 30m doses per day by the end of September, although much of this decline is because of slowing vaccination in China. It is remarkable that humans have been able to administer vaccines faster than the virus is able to spread between people, but this now looks as though it is a phenomenon confined only to rich places.

At present, the world's collective level of immunity to covid is nowhere near that for other endemic respiratory diseases. That is because all humans are exposed to older endemic diseases repeatedly through their lives, particularly as children. Every exposure offers a new chance to train the immune system. Dr Ellebedy says it will take decades for humanity to reach a comparable level of immunity to covid. The coming years, then, will be characterised by a slow process of cyclical decline that runs in tandem with a broadening and deepening of immunity through infection.

To everything there is a season

Eventually, once immunity is widespread enough, cases of covid will fall into a seasonal pattern similar to other endemic respiratory diseases that have been circulating for a much longer time. Rachel Baker of Princeton University, who studies how viruses respond to environmental conditions, says that she expects within five or six years the patterns of covid infections will become seasonal, like those of other endemic coronaviruses, rather than being driven by immunological naivety.

The fact that covid will almost certainly become a disease that humanity can live with is thanks not only to vaccines but also to the rapidly advancing treatments. Remdesivir, an antiviral, can reduce hospital admissions by 87% in high-risk patients if it is given in the first stage of covid. But it needs to be administered intravenously in a hospital setting. Antibody therapies, another kind of drug, are highly effective but are usually given in the same way.

AstraZeneca’s antibody drug, AZD7442, which is under regulatory review in America, solves some of these problems because it can be in injected in places like doctors’ surgeries. It will probably be expensive so will not be used widely. But it offers a quick shot of covid-fighting antibodies so will provide extra protection to those at risk even after vaccination such as the immunocompromised. A hit of antibodies will also be useful as prophylaxis both for those at high risk of catching the virus (such as health workers) and those likely to become very ill (those with underlying conditions such as cancer or diabetes or the elderly residents of care homes).

Cheaper oral antiviral drugs which will further reduce the burden that covid places on humans, and on the hospitals that treat them, are also on the way. Most promising is molnupiravir, made by Merck and Ridgeback, both drugmakers. Taken within five days of symptoms’ onset it reduced the risk of hospitalisation or death by about 50% in patients with mild or moderate covid.

Merck expects to supply 10m courses of the drug by the end of 2021. Pricing will be tiered, and so it will be affordable across the planet. Results from trials of similar drugs from Pfizer, Roche and Atea Pharmaceuticals could add to the antiviral arsenal.

Antivirals such as molnupiravir do not cure covid-19. But they make it much less dangerous. One worry, however, is that the virus will evolve to resist a single line of antiviral therapy. Peter Horby, a professor of emerging infectious diseases at Oxford University, warns of the need to consider using combinations of antivirals from the outset. HIV antiviral drugs showed that resistance to single therapies arises quickly.

These drugs will make covid easier to live with but governments and public-health authorities will still need to ensure that any outbreaks do not overwhelm health-care systems. Each winter the circulation of influenza will add to the challenge. It may make sense to once again take steps to reduce the transmission of the disease. In the rich world very few occasions should require going into the office with a respiratory complaint, especially in winter. Annual boosters and flu shots will help keep vulnerable people out of hospital.

Over all this hangs the inevitability of the coronavirus's continued evolution, and the question of its impact. Any new variant that emerges is overwhelmingly likely to do so based on Delta, which has displaced virtually all the rest. If a new variant emerges which outcompetes Delta, it will eventually spread everywhere. The Beta variant, which is now being driven towards extinction, was better at defeating immunity than Delta is, but less good at spreading, and so receded.

A new variant that combined their traits would be a disaster. "Delta Plus", a subvariant that has so far not taken off, has picked up mutations of the sort which characterised Beta, but no evidence suggests yet that this is leading to its wider spread or vaccine evasion. But the possibility of a Delta variant with Beta characteristics, as well as the need to keep people out of hospital, will always be a reason for limiting the spread of the disease. “We’re ill-equipped to predict the timeline,” says Daniel Altmann, an immunologist at Imperial College London, since coronavirus evolution is by its nature unpredictable.

No matter what mutations SARS-CoV-2 picks up in future, endemic covid will not exist in a vacuum. Viruses compete with each other. A study carried out by Public Health England on data gathered between January and April 2020 found that people already infected with influenza were 58% less likely to test positive for covid later—probably because the two viruses were jockeying for dominance within the human body. For a few vulnerable people, though, it was possible to get infected with both at the same time. For them the risk of death was almost double that of being infected with SARS-CoV-2 alone.

Even as endemicity sets in, the world still has a long way to go. It is not using all the tools—vaccines in the arms of all the vulnerable, masks and ventilation—to get there as fast and safely as possible. Covid will eventually become endemic. But it will throw up many challenges in the months and years ahead. The road to the new normal could yet be very bumpy. ■

Dig deeper

All our stories relating to the pandemic can be found on our coronavirus hub. You can also find trackers showing the global roll-out of vaccines, excess deaths by country and the virus’s spread across Europe.

Asia

Seeing like a state

India’s high-tech governance risks leaving behind its poorest citizens

The government’s digital-first solutions are inaccessible to millions

Oct 16th 2021 | DELHI

ACQUIRING A DRIVER’S licence in Delhi, India’s capital, requires a single 20-minute visit packing in a computerised exam and a brisk, efficient road test. The applicant’s phone pings as she exits the centre: “Congratulations! Licence will arrive by post within 24 hours.” At 8.30am the following morning a courier delivers the sleek, chip-enabled new card.

Such tip-top government service can be found in other poor countries too, but only by paying a bribe. The secret in Delhi is a national biometric identification system called Aadhaar. Rolled out over the past decade, it now covers all but a small fraction of India’s 1.4bn people. Everyone assigned a unique 12-digit number, backed by fingerprint and retina scans, enjoys instant proof of identity and residence. No more need for smudged birth certificates, crumpled utility bills or rental agreements.

Given India's immense scale and complexity, and with its deep pool of highly skilled workers, its governments have increasingly turned to high-tech solutions for all sorts of problems. Generally these have eased burdens on both rulers and the governed, despite some expected glitches. Administrative infrastructure such as Aadhaar has propelled such conveniences as digital payments, internet shopping and online schooling. Yet precisely because of India's size and poverty, tens of millions still are left out—because they are poor, illiterate, disabled, lack electricity, do not possess a smartphone or cannot connect to a mobile or Wi-Fi network.

Consider Reena Devi, a mother of two small children in Bihar, India's poorest state. After her husband died last year, she should have been entitled to a widow's pension and jobs programmes, among other things. But when Vyom Anil, a researcher, and Jean Drèze, an economist, met Ms Devi by chance, they found that since she had misplaced her Aadhaar card she had also lost all access to benefits. With no phone, no registered postal address and no record of her birth date, Ms Devi was unable to retrieve her unique number. The two academics spent four frustrating months trying to get Ms Devi re-registered. Finally a kind official made an extra effort, found her file and produced a new card.

Ms Devi was lucky to get help. In a few tragic cases those who have lost access to subsidised food because they cannot link their old ration cards to new Aadhaar cards, or because fingerprint readers in remote towns do not work properly, have starved to death. More commonly, poor people simply make do without the aid. Recent surveys by Lokniti-CSDS, a polling group, show that four-fifths of Indian families use public food-supply schemes, of which 28% say they have been denied rations at some point owing to problems with Aadhaar. The biometric ID has helped curb theft and corruption, but less so than non-tech reforms to the food system.

There are gaping holes in other government schemes as well. India's covid-19 vaccination campaign, launched in January, quickly sagged, and not only because the government failed to order enough doses. Slots for shots could be booked only via CoWin, an online service. This proved easy for digitally literate people with at least some English. Most of those without such talents—the vast majority of Indians—had to wait until June, when the government quietly started admitting walk-ins. India is now close to giving its billionth jab—a notable achievement—but only a quarter of over-11s are fully vaccinated.

A social programme judged among India's most successful, a decades-old network of some 1.35m free, one-room preschools that also provide meals, known as *anganwadis*, has suffered high-tech disruption, too. In March its workers, nearly all women paid less than $150 a month, were instructed to use a new, government-supplied smartphone app. Failure to upload classroom data could result in suspension of wages and of food supplies, threatening a vital source of nutrition for India's poorest children.

The workers say the app is hard to use. It is only in English, which most do not understand, and takes up so much memory it crashes their cheap smartphones. Many do not even have a phone, or electricity or mobile reception in their villages. What was wrong with the old written ledgers they carefully kept for years, they ask? The change is that the government now wants more control and surveillance.

"In scheme after scheme we find that going digital has become a purpose of its own," says Mr Drèze, the economist. Like many critics of the government's technology push, Mr Drèze says he does not object to the principle. He points to a popular scheme in the southern state of Andhra Pradesh, phased out after Aadhaar, that had simply replaced old ration cards with smart cards. People liked them because they were simple and transferable.

The trouble comes when tech wizards in Bangalore forget that they live in what is still in parts a very poor country. This detachment is then compounded by politicians seeking quick, sexy solutions, who rush projects into action without proper study. Simpler approaches get ignored.

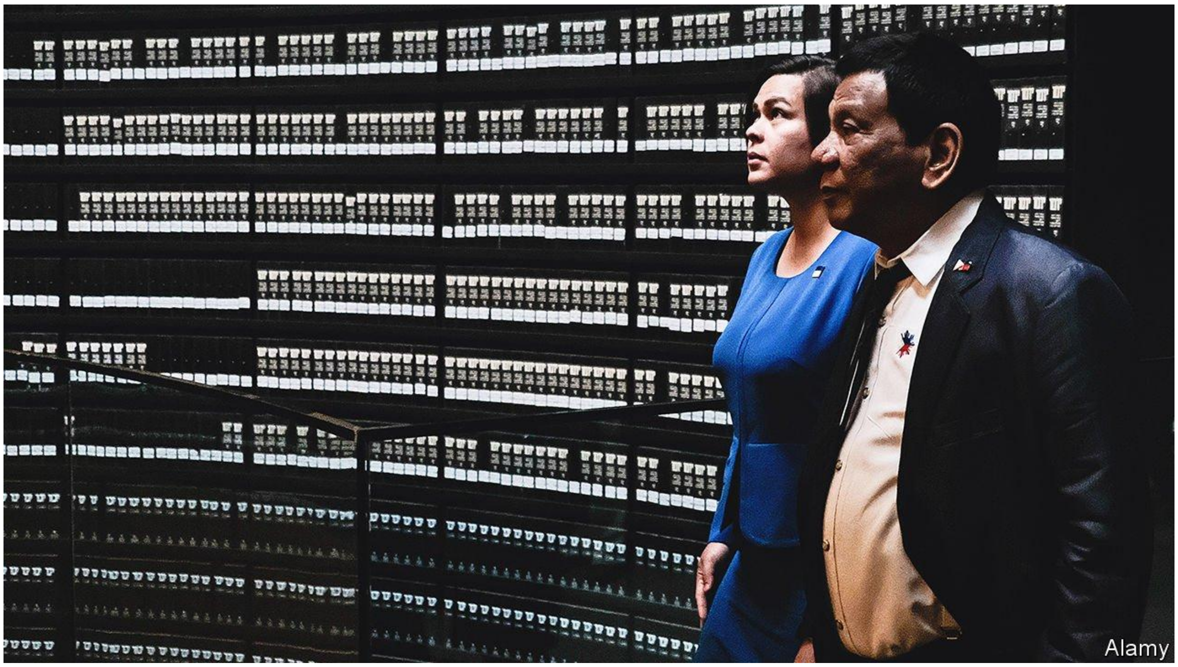
A recent randomised control trial by researchers at America's National Bureau of Economic Research, for instance, looked at how *anganwadis* could be improved by employing an extra half-time worker at what are typically single-teacher operations. The results were dramatic. Teachers spent more than twice as much time on the children's education and health, and on administration, too. Learning scores shot up. In *anganwadis* with an extra helper, severe stunting dropped a remarkable 42%. Yet whereas the government’s operating budget for *anganwadis*—meaning food and salaries—has stayed flat, its outlay on tech has soared. In its rush to become a modern, digital economy, India is leaving behind those who might benefit the most.■

Duterte II: the sequel

Rodrigo Duterte may pass on his job to his daughter

Sara Duterte, mayor of Davao City, has so far shown reluctance to run for president

Oct 16th 2021 | MANILA


Alamy

THE LIST of 97 politicians who registered to run for president of the Philippines by the deadline of October 8th was missing one crucial candidate: the front-runner. An opinion poll conducted last month found that 20% of respondents wanted Sara Duterte, the mayor of Davao City, to replace Rodrigo Duterte, her father and the current president, when the single six-year term allowed to him by the constitution comes to an end in June. There is plenty of precedent for such a succession. Mr Duterte's two immediate predecessors, Benigno Aquino and Gloria Arroyo, were themselves both presidential offspring.

Ms Duterte instead registered her candidacy for another term as Davao City's mayor, insisting that was the post she wanted. Yet she has a way back into the presidential race. Senator Ronald dela Rosa, a former chief of the Philippine National Police (PNP) who led Mr Duterte's bloody war on drugs, registered his candidacy at the last minute. The rules allow him to give up his place for another person until November 15th.

Ms Duterte herself has so far sent mixed messages. She first showed interest in running for president, then reluctance. Her father, for his part, indicated first that he was against her running, then that he was for it, then that she would definitely run, and then, after she caught covid-19 on October 9th, that she definitely would not.

All that posturing—including Mr dela Rosa's candidacy—may be false coyness, part of a rigmarole meant to disguise the Dutertes' ambition to prolong their hold on power. The idea would be to give the appearance that Ms Duterte is running only in response to persistent public demand. Mr Duterte used similar tactics himself when he ran for president six years ago, entering the race late and replacing a placeholder on the register of candidates.

The independent Commission on Elections will probably remove most of the 97 candidates from the register on the grounds that they are simply making a nuisance of themselves. But the latest survey indicated that several could be serious challengers to Ms Duterte. Her nearest rival is Ferdinand "Bongbong" Marcos, an ex-senator and the only son of Ferdinand Marcos, a corrupt and despotic former president. He was the choice of 15% of respondents. Another 13% said they would prefer Isko Moreno, the mayor of Manila. As a boy, Mr Moreno rummaged though rubbish for food, but grew up to be a film actor and eventually to run his home town. Senator Manny Pacquiao, a world-champion boxer, was the choice of 12%. Mr Pacquiao is backed by one of the two rival factions of the governing party, PDP-Laban. The other faction backs Mr dela Rosa.

Leni Robredo, the vice-president, who in effect is also the leader of the opposition, was the choice of less than a tenth of the respondents. Another also-ran was Senator Panfilo Lacson, another former chief of police. For a spell, Mr Lacson was a fugitive from justice, wanted on murder charges that have since been dropped. The survey was conducted before Mr dela Rosa emerged as a candidate.

Mr Duterte, for his part, says his plan after his term ends is to retire to Davao City and prepare a defence against the International Criminal Court (ICC), which is investigating whether his war on drugs amounts to a crime against humanity. If Ms Duterte were to become president, she would be in a position to perform an enormous service for her father, Mr dela Rosa and sections of the PNP by shielding them from the investigation. Among the other candidates, only Mr Marcos has declared that he would protect the drug warriors from international courts. The rest have indicated various degrees of openness to the ICC investigation. They are likely to split the pro-investigation vote. Yet Mr Marcos and Ms Duterte or Mr dela Rosa, whichever runs, may end up dividing those voters who are opposed to the investigation.

Such political currents make the outcome of the election in May uncertain. But Ms Duterte's popularity gives her a better chance of winning than Mr dela Rosa. He, as well as Mr Duterte, would no doubt be happy if she leaves Davao City behind and follows her father's trail to Manila.■

Tin-pot dynasty

Turkmenistan's horse-loving dictator is grooming his son

Gurbanguly Berdymukhamedov wins elections with 98% of the vote and ruthlessly suppresses dissent

Oct 14th 2021 | ALMATY


Reuters

NORTH KOREA is not the only supposed success story in Asia's fight against covid-19. In the middle of the continent, on the eastern shores of the Caspian Sea, Turkmenistan too has seemingly managed to go the past two years without a single recorded infection. Under President Gurbanguly Berdymukhamedov (pictured) its lucky citizens have been living in an "Era of Might and Happiness". What is more, their president entertains them too, roaring around in racing cars, scoring bullseyes on the rifle range and catching whoppers on fishing expeditions. The economy is said to have grown some 6% last year. The country's 6m people are prospering.

That, at any rate, is the official picture. The reality is quite different. Wage arrears are rife. The black-market value of the manat, the country's currency, is a seventh of the official rate. Even the usually upbeat president has fretted about Turkmenistan's swelling debt, though its precise scale is kept secret.

The Asian Development Bank reckons GDP grew a modest 1.6% in 2020 as energy prices slumped and Chinese demand for natural gas fell. Gas accounts for 90% of Turkmenistan's exports; China for 80% of its trade.

Exports have bounced back with the recent surge in demand for natural gas, but an inflexible contract with China has prevented Turkmenistan from reaping the full rewards of skyrocketing prices. The Taliban's takeover of neighbouring Afghanistan has made even more unlikely already stalled plans to build a pipeline to carry gas to new markets in South Asia. The militants say they want the pipeline to go ahead, but few foreign backers are keen.

Though the government's propagandists try their best to present the country as a land of plenty, Turkmenistanis are all too aware of the real state of the economy. State television shows shops with overflowing shelves, but "in reality people go at 4-5am to queue at state food shops," says Farid Tukhbatullin, who heads the Turkmen Initiative for Human Rights (TIHR), an advocacy group based in Vienna. Most citizens dare not complain "because they fear the person next to them could be an informer", he says.

People who do question the official line are harassed by security men. Soltan Achilova, a 72-year-old journalist in Ashgabat, the capital, who earlier this year publicly criticised the government for shortages of flour and cooking oil, which are subsidised, has faced threats, attacks and arrest as a result of her reports to Chronicles of Turkmenistan, TIHR's news website.

Last year a young man named Nurgeldi Halykov was jailed after sharing with Turkmen.news, an independent news outlet based in the Netherlands, a photo on Instagram that drew attention to a visiting delegation from the UN's World Health Organisation. Officials continued to deny covid was present even after the British ambassador caught it last year. "Turkmenistan never fails," the editor of Turkmen.news, Ruslan Myatiev, notes wryly. Social-media networks and news websites are blocked. Police surveil mobile phones for software that can circumvent such censorship. Turkmenistanis cannot even access Zoom.

Such heavy-handed repression has kept Mr Berdymukhamedov, who styles himself *Arkadag* ("The Protector"), in power since 2007, nearly half of

Turkmenistan's existence as an independent state. Yet the absence of credible information also causes wild rumours to circulate, such as when the president, whose health is said to be failing, disappeared from public view in 2019. Many Turkmenistanis believed he was dead.

Earlier this year Mr Berdymukhamedov appointed his 40-year-old son, Serdar, as deputy prime minister answerable only to the president. Two months later the younger Berdymukhamedov was made head of the country's horse association. The local Akhal-Teke horses and Alabai dogs play an important role in the president's personality cult. Photographs aired this summer showing Serdar astride a thoroughbred, a gift from his father, again fuelled speculation among Turkmenistanis about a coming succession. A dynasty appears to be in the offing.■

No more Mr Rice Guy

A rush to farm organically has plunged Sri Lanka's economy into crisis

The ruling Rajapaksas have strong ideas and expect everyone to adopt them

Oct 16th 2021 | COLOMBO

STARING GLUMLY at his paddy field in the depths of rural Sri Lanka, B. R. Weeraratne sighs. The regular incursions of greedy elephants have been bad enough. But the government's outright ban on agrochemicals will, he fears, slash his yields of *nadu* and *samba*, two of the most popular varieties of rice. Though the 56-year-old likes the idea of organic farming in principle, he thinks "the soil, the plants and the farmers all need time to learn it." It should be phased in. Otherwise farmers like him may be flung into destitution.

But Gotabaya Rajapaksa, Sri Lanka's president, is adamant. The former army officer was elected in 2019 largely on his reputation for ruthless dynamism. In 2009, as secretary of defence under his brother Mahinda, then the president, he brutally ended a long civil war against Tamil rebels. As urban-development secretary he "beautified" cities by kicking thousands of people out of slums. As president he has taken a military approach to tackling covid-19 by bringing in the army alongside medical staff. More than 70% of over-11s have been double-jabbed.

Mr Rajapaksa's military approach to turning Sri Lanka into the world's first fully organic producer of food overnight looks less encouraging. For sure, his manifesto ("Vistas of Prosperity and Splendour") did promise a revolution in fertiliser use. But it was to have taken ten years. So it was a shock to Mr Weeraratne when a total ban was announced earlier this year. No more agrochemical imports are to be allowed after stocks run out. The Planters' Association predicts a drop in tea production and export revenue by around 25% in the next six months and thereafter by nearly a half. Sri Lanka is the world's fourth-largest grower of tea, exporting $1.24bn of the stuff last year, or 1.5% of GDP.

More than 90% of Sri Lanka's farmers use chemical fertiliser and 85% of them expect crop losses in the coming season, according to Verité Research, a local think-tank; nearly two-thirds broadly back Mr Rajapaksa's policy but 80% of those say they need at least a year to adjust.

Meanwhile people still need to eat. Inflation is hovering near 6% and food prices are up more than 11%. Rising global commodity prices, declining foreign reserves and ceilings on domestic retail prices have been causing shortages of essentials such as sugar and milk powder. On August 31st the president declared a state of emergency and appointed an army officer to regulate the market, among other things by confiscating stockpiles.

As foodstuffs began to run out, on September 29th he lifted the ceiling on the price of rice, which promptly jumped 17-32%, depending on the variety. Price controls on milk powder, sugar, wheat flour and domestic cooking gas were lifted on October 8th. The government has also, at last, allowed some more imports. Yet its preferred solution for shrinking a trade deficit that has grown to 42% of GDP has been to curb imports, such as fertiliser.

Foreign reserves, at just $2.6bn or enough for six weeks of imports, are shrinking. Between now and July the government must pay $7bn to service its foreign debts. With short-term liabilities so far outweighing reserves, notes Deshal de Mel, an economist at Verité, and Sri Lanka's credit rating cut to junk by the main agencies, borrowing in global capital markets is all but impossible. Basil Rajapaksa, the finance minister (another brother of the president), admits the situation is bleak. Covid, he says, has contributed to a loss of $8.6bn in revenue. Earnings from tourism, usually $3bn-4bn a year, have collapsed. Remittances from Sri Lankans abroad have fallen 35% compared with a year ago.

Most independent economists reckon that an IMF-backed restructuring programme is the least bad way out. But the government would find it hard to accept conditions that undermine the country's much-vaunted sovereignty—and above all would squeeze voters such as Mr Weeraratne, who are already disenchanted. Like the country's crops, the Rajapaksas are, to put it mildly, in need of a pick-me-up.■

Banyan

South Korea's ruling party bets on an anti-establishment figure

Lee Jae-myung, its candidate for president, presents himself as a man of the people

Oct 16th 2021

LAST WEEK the campaign for Lee Jae-myung, who on October 10th was nominated as the ruling Minjoo party's candidate for president of South Korea, published a striking pair of old photographs. One shows a floppy-haired boy in his early teens in an ill-fitting, oversized factory-worker's uniform. In the other, a boy of similar age wears a well-cut blue jacket with a pressed white collar and slim red bow tie, his hair neatly trimmed.

The first picture is of Mr Lee; the second, of Yoon Seok-youl, his most likely conservative opponent in the presidential election in March. The question the pictures ask is clear. Who should run the country—the self-made man of the people, or the pampered son of a professor?

Railing against privilege is hardly an original political strategy. In South Korea, it may seem like an especially tired pitch for a wannabe president.

After all, the country has been governed for four years by the left-wing administration of President Moon Jae-in, who was swept into office on a tide of outrage against a corrupt conservative establishment.

Yet the 56-year-old Mr Lee has successfully tapped into the political mood. Voters are dissatisfied with the current government's failure to make good on promises to rein in spiralling housing costs and revive the pandemic-racked economy. The opposition, hobbled by a series of embarrassing gaffes including Mr Yoon's alleged ties to shamans, one of whom is an anal acupuncturist, has failed to capitalise on the dissatisfaction. Mr Lee, who promises to tackle his predecessor's unfulfilled pledges in his own way, is currently ahead in polls despite representing the incumbent party.

Mr Lee, who has few supporters in the party establishment, has risen to prominence over the past decade by championing unorthodox welfare policies. These have been popular with voters in South Korea, which suffers from persistent youth unemployment, expensive housing and high rates of relative poverty among the old, yet spends only 12.2% of GDP on social benefits, a little more than half the rich-country average.

During two four-year terms as mayor of Seongnam, a city of some 1m people in Gyeonggi province near Seoul, the capital, Mr Lee introduced unconditional payments for young people, billed as "youth basic income", free postnatal care for mothers and free school uniforms, while also improving the debt-ridden city's finances through budget cuts and better tax collection. When he was elected governor of Gyeonggi, South Korea's most populous province, in 2018, he took many of those policies to its 13.5m inhabitants. If elected president, he promises to introduce a nationwide universal basic income, expand credit for the poor and build more public housing.

Critics question the financial viability of his platform, particularly the national basic income. Yet the pandemic has bolstered support for more generous welfare policies in the country, and Mr Lee has a reputation for efficacy. His background, of which he likes to remind voters on a near-daily basis, has also helped. Born into a family of poor farmers in Andong, South Korea's conservative heartland, as the fifth of seven children, he left school when he was 12 years old to work in a factory, where his arm was caught in a press, permanently damaging it. He put himself through night school and won a scholarship to study law. Like many other Minjoo politicians, including Mr Moon, he spent years as a human-rights lawyer and campaigner for left-wing causes before formally entering politics.

His knack for political stunts has boosted his image, too. After being elected mayor of Seongnam, he moved his office from the ninth to the second floor to be closer to the "people at the bottom", as he recalls in his autobiography. This spring he compelled all foreign residents in the province to get tested for covid-19, sticking to the plan despite accusations that it was xenophobic and discriminated against migrants. Voters loved it.

Mr Lee is no shoo-in. Several former associates have been arrested in recent weeks in connection with a sprawling corruption scandal over property investments in Seongnam whose origins date back to his tenure as mayor. The fallout nearly cost him his victory in the primary. Mr Lee has denied all allegations that he was involved and has promised to co-operate with an upcoming parliamentary audit. The opposition will be praying that the working-class hero turns out to be part of the corrupt establishment after all.

China

Protracted war

How long can China’s zero-covid policy last?

Unlike Australia, New Zealand and Singapore, it seems determined to keep it up

Oct 16th 2021 | BEIJING AND HONG KONG

FROM THE outside, it resembles an army base, an expanse the size of 45 football pitches filled with rows of austere, grey, three-storey buildings. The facility (pictured) on the outskirts of the southern city of Guangzhou is China’s first purpose-built quarantine centre for people arriving from abroad. Soon guests will begin moving in to its more than 5,000 rooms. For at least two weeks, whether fully vaccinated or not, they will live in isolation, their food brought to them by robots.

Since the early days of the covid-19 pandemic, China’s aim has been to eliminate the coronavirus entirely from within the mainland’s borders. Hong Kong and Macau have similar strategies. But even as the handful of other countries with “zero-covid” policies, including Australia, New Zealand and Singapore, move to relax them, China is holding out.

The point of Guangzhou’s $260m facility is to make it even harder for the virus to enter the country, by keeping people quarantined away from densely populated areas. People flying into the city from outside the mainland will be whisked there directly, instead of to normal hotels, for at least two weeks of confinement and frequent testing. Even the medical staff may not leave the premises. After working there for four weeks, they must do a week of quarantine and then, after returning home, spend another two weeks in isolation.

Chinese officials describe the complex as the latest example of "China speed": it took just three months to build. Another dedicated quarantine centre (unlike Guangzhou's, not built from scratch) is also due to open soon in the nearby city of Dongguan. It will have 2,000 beds. Officials have ordered cities elsewhere to follow suit. In September, at a training session for medical staff in Guangzhou's facility, an official tried to fire them up with a well-known term used by Mao Zedong to describe a relentless, long-lasting campaign to wear down the enemy with guerrilla attacks. It would be a "protracted war" against the virus, he said. "It can only end when the disease is no longer around."

China's zero-covid policy involves keeping most foreigners out, meticulous quarantines, huge manpower, track-and-trace apps, intense lockdowns in areas where the virus is found and frequent mass testing. A recent traveller to China from New York describes having to submit photographs of her pre-departure covid test to the Chinese consulate-general to prevent any fakery. Two pictures, taken by a nurse, were of blood being drawn from her arm and a swab up her nose. Another, by clinic staff, showed her at the entrance, holding her passport and a test certificate.

Such efforts have achieved impressive results, given the size of the country and the porousness, in normal times, of its land borders with some of its 14 neighbours. By October 10th China's official tally of covid-related deaths stood at 4,636. Only three had occurred since April last year. Some provinces have seen no fatalities at all, including Jiangsu on the coast. It has a population of more than 80m, nearly as big as that of Germany where the official death toll is 94,000. To the Chinese authorities, a big outbreak is one involving dozens or, rarely, hundreds of cases: barely a blip in the statistics of most other countries.

If the world were to face a similar outbreak again, knowing what it does now, many countries would choose China's approach. But eventually they would face the same question: when to relax those measures? As the rest of the world begins to get used to covid as an endemic disease—always present but contained at a level that people consider acceptable—how long will China keep up its enormous campaign to crush it altogether?

It is an important question, of concern not only to China's 1.4bn people, but worldwide. Consider just one side-effect of China's zero-covid approach: the inability of world leaders to meet China's president, Xi Jinping, face-to-face. Mr Xi has not received foreign visitors or travelled abroad since January 2020. He is unlikely to attend a meeting of the G20 in Rome at the end of October, or a subsequent UN climate-change conference in Glasgow. At a time of potentially dangerous tensions with America, he has yet to hold a formal summit with President Joe Biden. On October 6th China agreed to such a meeting later this year, but only by video link.

Mr Xi's hard choice

Several factors will affect China's decisions about when and how to change its policy. They include the way the virus mutates, the effectiveness of its vaccines (China does not allow the use of foreign ones), risks to the economy and the public mood. The Communist Party has hailed its success in crushing the coronavirus as evidence of the superiority of China's political system. Accepting that the virus is endemic would involve a big change of tune.

The Delta variant, now dominant globally, is making China's policy a lot harder to implement. It spreads two to three times more easily than the original strain, which was first detected in the central Chinese city of Wuhan. But such problems may be offset by a high rate of vaccination. By September 15th, the latest date for which data are available, 71% of Chinese had received two jabs and another 10% had received their first (see chart 1). By comparison, 56% of Americans and 64% of EU residents had got two shots by October 11th.

The Economist

However, China is unlikely to relax its policy soon. The imminent opening of Guangzhou's high-tech quarantine centre hints at this. The National Health Commission has recommended that workers at airports, borders and quarantine sites be given priority for booster shots. Such people are most likely to be exposed to infections brought from abroad. If the zero-covid policy were about to be abandoned, those most in need of booster jabs would be vulnerable people such as the elderly, who would be infected locally.

By September 15th China had given two jabs to nearly three-quarters of people over 60. But even if it succeeds in vaccinating almost all of them, as some countries in Europe have achieved, hospitalisations will still increase after the country starts opening up. By how much will depend on the jabs. China has approved seven vaccines, all of them produced by Chinese firms. The two most widely used are made by Sinovac, a private company, and Sinopharm, which is state-owned. Both have been endorsed by the World Health Organisation. They are based on a traditional kind of vaccine technology, using an inactivated form of the SARS-CoV-2 virus.

Like the West's vaccines, China's work well at preventing serious illness but less so at stopping covid's spread. It is hard to compare them more precisely. Few studies have tried doing so among comparable groups of people, at the same time and in the same place. There are not enough infections in China to enable effective vaccine-testing. So most data have been gathered elsewhere. Most trials have involved exposure to non-Delta variants. A study of 61m vaccinated people in Brazil, conducted when most infections there were caused by the Gamma type, found that Sinovac's vaccine was 75% effective against hospitalisation, and AstraZeneca's 90%. In Chile, Uruguay and Indonesia Sinovac's jab has been used in national vaccination campaigns. It has proved 85-95% effective in these against hospitalisation and death. Like the Western vaccines, it works less well among the elderly.

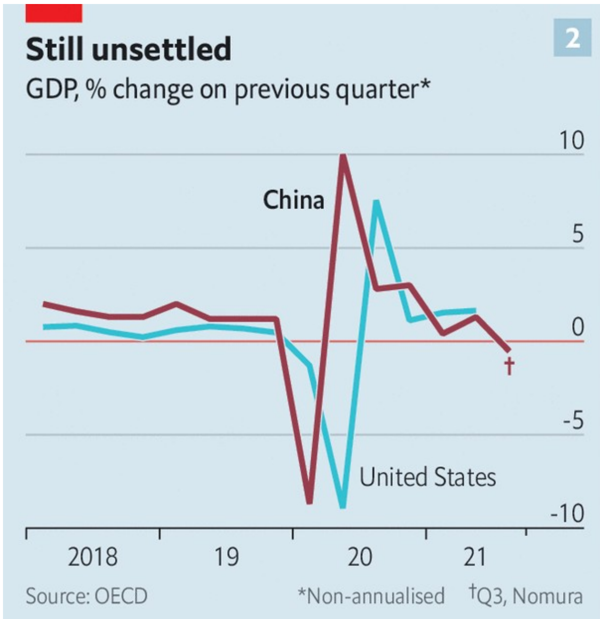
There are fewer data relating to Sinopharm's shots. But they, too, seem less effective than some of the vaccines used in the West. In Bahrain people vaccinated with Sinopharm had higher rates of infection, hospitalisation and death than those who had received Pfizer's or AstraZeneca's jab—especially if they were aged over 50 at the time when Delta became dominant.

China could try to strengthen its defences by allowing the use of Western vaccines. But it is determined to rely on home-grown solutions. One reason is clearly political: the party wants to be seen as the sole enabler of China's salvation from the virus. For a while, state media suggested that the West's vaccines were shoddy. An application in China for approval of Pfizer's vaccine, made in partnership with BioNTech using an advanced technology known as mRNA, has made little progress. Two million doses of it that were meant for China have been sent to Taiwan instead.

It is possible that China will develop better vaccines. Its army has been working with two private Chinese firms on an mRNA type. But it may not work well. China is a latecomer to the technology. An mRNA vaccine made by CureVac, a German company with long experience in the field, proved only 47% effective in trials. It may be a long time before China feels confident enough in its vaccines to consider scrapping the zero-covid policy.

Might economic malaise force China's hand? The country's repeated skirmishes in recent months with Delta-related outbreaks have prompted sudden and severe lockdowns. Combined with a longer-running campaign against property speculation, these may have sent the economy into a "double-dip" contraction, according to Ting Lu of Nomura, a bank. He thinks China's GDP shrank by 0.2% in the three months from July to

September (compared with the previous quarter), following a spectacular first dip when the pandemic struck (see chart 2).



The Economist

Other recent data also look gloomy. During China's national-day holiday from October 1st to 7th, people took about 58m trips a day across the country, official data show. That was about a third less than in 2019 and also 7.5% less than they took last year. By contrast, during this year's five-day public holiday in May, the number of trips exceeded pre-pandemic levels.

But although China's fight against covid has hurt services, its exports have been strong. Indeed China's periodic, pointillist lockdowns have been less disruptive to its factories and trade than the more sweeping restrictions imposed in manufacturing rivals like Vietnam. China has benefited from covid-related shifts in buying patterns in foreign countries, where people stuck at home have been splurging on goods such as electronics and exercise gear. China makes such things aplenty.

How would the economy have fared if the Delta variant had spread more widely? China's weak retail spending is in part due to covid-related controls. But it is also caused by fear of the virus, which would only deepen if China were to lower its guard. Chinese people are right to worry. Huge social stigma surrounds anyone who gets the virus and thereby triggers a lockdown. Such a person also faces legal sanctions. And the health-care system is weak. The number of intensive-care beds per 100,000 people in China—about 3.6—is much closer to the level of India than to that of rich countries. In overseas markets, Chinese shares have suffered heavy sell-offs in recent weeks, wiping more than $1trn off the value of some of the country's biggest tech firms. But this has reflected anxiety about new regulatory moves, not about China's economic prospects under an indefinite zero-covid regime.

Foreign businesspeople in China certainly grumble. One reason is that the government is reluctant to grant visas to spouses or children. An American who runs two businesses in China had a baby in America during the pandemic. He cannot return even though he and his wife have a visa. The total population of non-mainlanders in Beijing and Shanghai fell from about 316,000 a decade ago to just 226,800 last year, census data show. Those who remain are often treated with suspicion by strangers, who view them as potential virus-carriers. A campaign encouraging people to report foreign "spies" does not help.

But despite such gloom, foreign direct investment in China amounted to nearly $114bn in the first eight months of 2021, more than one-quarter higher than in the same period of 2019. Less than one-tenth of European firms are thinking of diverting investment away from the country, the European Chamber of Commerce in China reports. In 2015 about one-sixth were.

Some Chinese experts have aired suggestions that, when vaccination rates are high enough and death rates low, China should abandon zero-covid. In a recent on-camera interview with a Chinese magazine, China's most senior disease-control official, Gao Fu, said the country may reach a vaccination rate of 85% by early next year. At that point, Mr Gao asked: "Why don't we open up?" He also said China should study Mao's protracted-war idea in the fight against the virus. But he suggested this would involve living with it.

Mr Gao, however, is not a member of the ruling Politburo, whose members may have considerations unrelated to epidemiology. One is that there appears to be strong public support for the zero-covid approach. In June online commentators excoriated one of China's most respected scientists, Zhang Wenhong, for suggesting that the country should relax the policy next year. Official media appeared to echo such criticism by publishing the views of a former health minister (whose background is in finance) expressing "astonishment" at the idea of easing controls. In August a teacher was detained for 15 days after suggesting that Yangzhou relax its lockdown. He, too, was vilified on the internet.

People applaud the lengths to which the government goes to keep the virus out and stop it from spreading. Some wealthier Chinese may resent the difficulty they now face going abroad on holiday, or even getting a passport (the police have become much more reluctant to issue them). But many people have little sympathy with their travails. Travelling internally can involve much hassle. At motorway checkpoints on the edge of Beijing cars often have to join lengthy queues so that police can scan the ID cards of people entering the city, check their health apps and record other details. But if there is anger over such bothersome procedures, people swallow it.

As for the enforcers, many of them have a stake in the status quo, too. During the pandemic, grassroots Communist Party committees have been re-energised. Their chiefs, once sidelined by rapid social and economic change, have gained new authority to mobilise people and deploy resources to control covid. They will not readily return to their often-marginalised pre-pandemic state, nor does the party want them to. It hopes that its street-level workers will play a bigger role in maintaining order in urban neighbourhoods, using skills honed during the pandemic.

The party may see other political benefits from keeping the zero-covid policy. It faces a series of big public events that it will not want overshadowed by outbreaks that raise embarrassing questions at home about its vaunted ability to defeat the virus. In February Beijing will host the Winter Olympics; the annual session of China's rubber-stamp parliament, the National People's Congress, will be held in March; and late in the year the party will convene a five-yearly congress which Mr Xi (bathed in glory, he surely hopes, for his victory over covid) will use as a launching pad for five more years, at least, in office.

A human-rights storm is already brewing around the winter games. Activists and politicians in the West have called for boycotts in protest against China's human-rights abuses in the far-western region of Xinjiang and its repression in Hong Kong. On September 29th, however, the International Olympic Committee announced China's decision that, to keep the virus in check, no spectators will be allowed from outside the country—the same restriction that applied to this year's summer games in Tokyo. This will much reduce the risk of foreign visitors marring the events with protests. As for possible boycotts by Western leaders, China may avoid that problem by not inviting them.

Again, many Chinese applaud. As China's leaders consider possible harm that may be caused in the long term by clinging to their zero-covid policy, the rise of nationalism at home is not among their concerns. The party has deliberately fed it with West-blaming and West-scorning rhetoric, suggesting that the only morally correct approach is to eliminate the virus entirely. Many Chinese, encouraged by state media, believe the West has been peddling falsehoods about the origins of the virus in order to make their country look bad. Such sentiments have made the poisonous atmosphere surrounding China's relations with the West, evident well before the pandemic, even more toxic.

When China does eventually declare that the virus need not be eliminated, its reopening to the world will not necessarily be greeted with joy by many of its citizens. They see a West that has rejected China during the pandemic, not the other way round. Their bitterness will be long-lasting, and not about the zero-covid policy. ■

Dig deeper

All our stories relating to the pandemic can be found on our coronavirus hub. You can also find trackers showing the global roll-out of vaccines, excess deaths by country and the virus's spread across Europe.

Chaguan

How Xi Jinping's China differs from Mao's

A crackdown on superstition is about control, not smashing tradition

Oct 14th 2021

FOR SEVERAL big reasons it is misleading, even morally indecent, when commentators assert that China is embarking on a new Cultural Revolution. It is true that the Communist Party is today more visible and assertive than at any time since Mao Zedong's death in 1976. After Xi Jinping became China's leader in 2012, he unblushingly re-emphasised the party's authority over everything from the machinery of state and the armed forces to the judiciary, universities and news media.

It is also true that the rich and famous are under harsher scrutiny than they have known for decades. Tycoons and film stars have received painful reminders that they enjoy their success at the party's pleasure. Some have lost fortunes or seen careers ended for defying China's leaders, or for provoking public opinion with displays of swaggering privilege. Others have hastened to donate money and time to patriotic causes. New rules ban effeminate actors from television and curb how many hours youngsters spend on video games. State power is now invested in one man, Mr Xi, in a way not seen since the Mao era. Whether issuing textbooks in Xi Jinping Thought to six-year-old children or using smartphone apps to ensure that officials study Mr Xi's wisdom, the leader's sternly paternal presence is felt in every corner of life.

Yet this is not a return of the Cultural Revolution. Most simply, between 1966 and 1976 Mao and his inner circle unleashed such horrors on China that it dishonours their victims to take that decade's name in vain. Scholars outside China, drawing on often-secret official reports from the 1980s, estimate that 1.6m died, with the lives of many millions more ruined. Much attention has been paid to the youngest Red Guards: Mao-revering students or youths who persecuted everyone from ex-landlords to intellectuals and artists, religious believers and, not least, officials accused of being reactionary. But more casualties died in fighting between rival, adult Red Guard factions or with army units. The violence at times resembled a civil war, set in motion after Mao came to doubt the loyalty and revolutionary fervour of the ruling establishment. In contrast, Mr Xi and his inner circle are iron-fisted party-builders, not friends to rebels. They have purged internal rivals, dissenters and the corrupt. The party is now attacking what it deems the excesses of capitalism. The goal is stability and conformity, with all China marching in lockstep towards national greatness.

Those are large reasons to avoid miscasting Mr Xi as a second Mao. But there are myriad smaller ones, too. By way of a case study, consider an ongoing campaign against "superstitious" ways of mourning the dead, specifically by burning imitation banknotes and paper models of goods that loved-ones might need in the afterlife. In addition to funeral offerings, goods are burned for the dead at various annual holidays. One coming soon is *Hanyi Jie*, or the Winter Clothing Festival, when paper replicas of warm clothes may be seen burning on city pavements or in village courtyards. In August nationwide debate was sparked by news reports that Shanxi, a northern province, had drafted rules banning the making or selling of funeral supplies, such as paper models of people, horses and houses; or imitation money. This was not the first such online uproar. Other provinces, cities and counties have tried to stop or restrict the burning of paper offerings several times. Officials call the practice superstitious, a source of air pollution, a fire hazard and extravagant, scolding citizens to spend money on caring for the old, not when burying them.

China's best-known paper funeral-goods come from one place. Mibeizhuang, an unlovely village in Hebei province 120km south of Beijing, was famed for silk flowers as far back the Qing dynasty. Locals boast that wreaths at Mao's funeral came from Mibeizhuang. The village became a nationwide hub for funeral-goods when market reforms began in the 1980s. When Chaguan visited on a recent weekday, shopkeepers had bundles of paper suits and fur-collared coats ready for *Hanyi Jie*. A group of four men, funeral organisers from Wu'an, a rural town 400km to the south-west, loaded a small truck with cardboard models of trees covered in gold coins, food-stuffed fridges, televisions and pink, colonnaded mansions. A set of such models sells for less than 50 yuan ($7.76).

For centuries in China, honouring the dead lay at the heart of codes of virtuous behaviour. In imperial times, children studied models of filial piety including Dong Yong, a man so poor that he sold himself into servitude to bury his father properly. During the Cultural Revolution, ancestral and clan temples were ransacked, while family altars in Chinese homes were smashed by Red Guards or hidden for safety by their owners. When victims of Maoist violence were burned or buried without ceremony, the lack of proper rites was an extra stab of agony for grieving families.

The party will not admit it, but Mao traumatised China

Today, once-cherished customs have a markedly weaker grip. Asked whether customers believe that burned funeral-goods reach relatives in the afterlife, traders in Mibeizhuang are incredulous. "What day and age is this? It is just a tradition," says one. A third-generation seller of paper offerings scoffs: "I don't even believe in it. Spending money on this stuff is like throwing it away."

The traders have watched injunctions against their industry tightening for years, especially in cities. They are cynical, saying that officials who oppose burning funeral-goods will sneak home to burn paper models for their own parents. But they are resigned to the possibility that their trade may end one day. "We set off firecrackers for thousands of years. Now it is not allowed and has stopped," explains one, calling modern-day Chinese "obedient".

It is hard to start new rows about feudal superstition, precisely because the Cultural Revolution tore up so many roots that tied Chinese to the past. Today's China is bossy, socially conservative and relentlessly controlling. Its rise as an authoritarian giant is disruptive enough without mistaking it for Maoist fanaticism.■

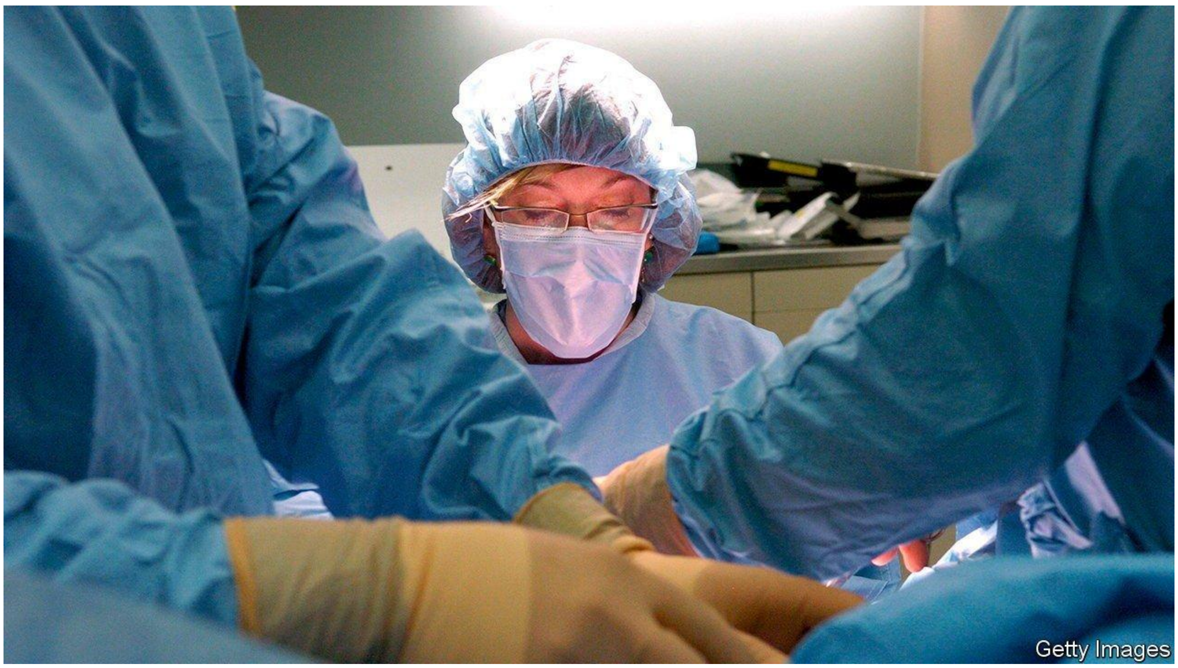
United States

Anatomy of a scandal

Opinion on the use of puberty blockers in America is turning

Even members of the World Professional Association for Transgender Health have some concerns

Oct 16th 2021 | WASHINGTON, DC



WORRIES ABOUT the use of puberty blockers, which are prescribed to some children to prevent the development of secondary sex characteristics (like breasts and facial hair) have been mounting in much of the rich world. Some countries have scaled back their use. Not America. Doctors who work in transgender clinics routinely claim that prescribing such drugs is conservative, because their effects are largely reversible, and compassionate, because they save children with gender dysphoria (the feeling of being in the wrong body) from enormous distress.

That may be beginning to change. Last week Abigail Shrier, a writer, published interviews in "Common Sense With Bari Weiss", a newsletter, with two transgender health-care professionals who suggested that some doctors were irresponsible in the way they treated children. The women, both trans, are on the board of the World Professional Association for

Transgender Health (WPATH), which endorses the use of blockers early in puberty in some cases. Though blockers are often described as operating like a pause button, most children prescribed them go on to cross-sex hormones. This combination can have irreversible consequences, including sterility and the inability to orgasm.

This was the chief concern expressed by Marci Bowers, a vaginoplasty surgeon who is due to become the president of WPATH in 2022. Dr Bowers built her career operating on adults, but she has also operated on teens: in 2018 she performed a "penile inversion" on Jazz Jennings, a 17-year-old who had been put on blockers aged 11. But Dr Bowers told Ms Shrier she was "not a fan" of putting children on blockers early in puberty. She worried, she said, "about their reproductive rights later. I worry about their sexual health later and ability to find intimacy."

In 2018 Lisa Littman, a researcher, was hounded and lost her job as a consultant after coining the term "rapid onset gender dysphoria" (ROGD) to describe the social contagion of trans-identification among teens, mostly girls. Dr Bowers appeared to acknowledge the existence of "this ROGD thing" as she called it. "I think there probably are people who are influenced. There is a little bit of 'Yeah, that's so cool. Yeah, I kind of want to do that too.'" In some cases, she said, girls with eating disorders were being diagnosed with gender dysphoria, "then they see you for one visit, and then they recommend testosterone."

Erica Anderson, a clinical psychologist at the University of California San Francisco's Child and Adolescent Gender Centre told Ms Shrier that because of "sloppy health-care work"—"rushing people through the medicalisation" and an "abject failure" to properly evaluate patients' mental health—she expected more young people to regret transitioning. Her clinic had seen twice as many females as males for two years running, she said.

It is exceedingly rare for health-care professionals in America to criticise—or even question—the practices that have become prevalent in the medical treatment of gender-dysphoric youth. Professional bodies, including the American Association of Paediatrics, have endorsed "gender-affirmative" care, a model that accepts patients' self-diagnosis that they are trans, and the use of blockers. Anyone who publicly dissents tends to be castigated.

Will the airing of these views change the way trans-identifying children are treated? Laura Edwards-Leeper, a psychologist who helped found America's first transgender clinic for children in Boston in 2007, has claimed (including to this newspaper) that too few teens undergo crucial mental-health assessments before starting treatment. She says Dr Bowers's comments, especially about the effects of blockers on sexual function, have "shaken up" many in the field. Yet she notes some doctors are responding by talking about how they might control or slow treatment, without mentioning the role mental-health professionals should play in all this. That they are discussing the risks at all nonetheless constitutes progress.■

One policy accounts for a lot of the decarbonisation in Joe Biden's climate plans

As Democrats trim the legislation, they should focus on keeping it

Oct 12th 2021 | INDIANAPOLIS

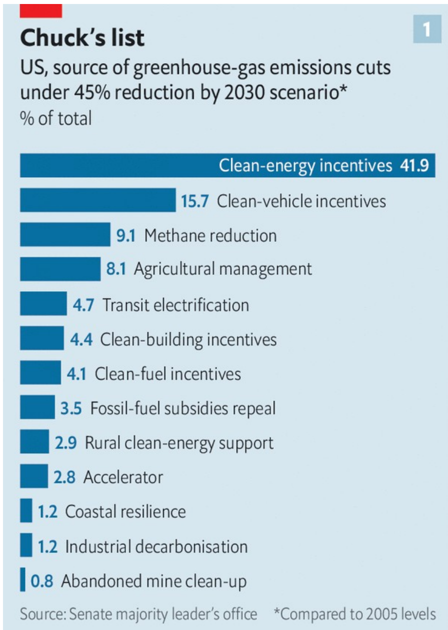

Getty Images

TAKE A ROAD trip to Indianapolis, home to a certain two-and-a-half-mile race track, and you will find yourself in good company. A survey carried out before the pandemic found that about 85% of local commuters drive to work, alone. Standing on a bridge over 38th Street, which runs by the state fairground, you cannot escape the roar of six lanes of petrol-fired traffic below—and, reports a local, this is quiet compared with the noise on pre-virus days. Getting Americans to kick their addiction to fossil fuels will require many of these drivers to find another way of getting to work, and to move on from the flaming hydrocarbons celebrated each May at the city's famous oval.

Joe Biden hopes to use what looks like a narrow window of Democratic control of Congress to encourage this transition. The last time lawmakers came close to writing climate legislation on anything like this scale was in 2009, when the Waxman-Markey bill, which would have established a trading system for greenhouse-gas emissions, was passed by the House. Since then, a Democratic White House has tried to nudge America to reduce emissions, by issuing new regulations, and a Republican White House has tried to undo them. That record illustrates what a delicate political operation this is.

Yet despite having a much weaker grip on Congress than Barack Obama had in the first year of his presidency, Mr Biden and his legislative allies have put forward a sweeping set of proposals for decarbonising America's economy. These would promote everything from clean energy on the grid and electric vehicles on the road, to union jobs making green technologies and measures for left-behind communities.

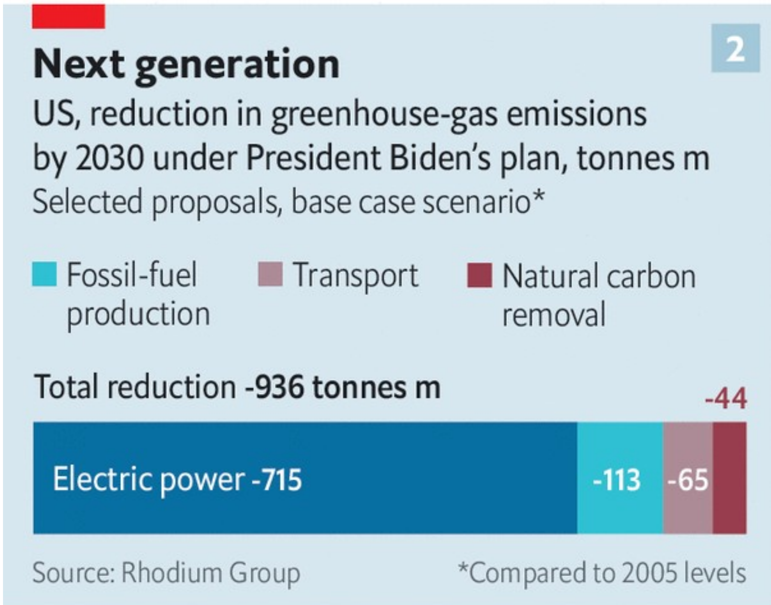
Were this wish list passed in its entirety, which is unlikely, it would give a boost to Mr Biden's pledge to reduce America's emissions by roughly half from their 2005 level by 2030. A chart released by the office of Chuck Schumer, the Senate's majority leader, suggests that implementing all of these provisions could reduce America's emissions by 45% below 2005 levels by 2030, thus achieving almost all of Mr Biden's goal of cutting them by roughly half in that period (see chart 1). Passing a law, even a less expansive one, would allow Mr Biden to travel to the UN climate summit in Glasgow in November representing a country that is making progress towards internationally agreed goals, rather than asking for the patience of poorer, less technologically sophisticated countries while America sorts itself out.



The Economist

Some of the Democratic proposals are in an infrastructure bill with bipartisan support that spends $1trn over ten years. But most are in a budget bill disbursing $3.5trn (also over ten years) that, on account of Senate rules, can only pass through a partisan parliamentary manoeuvre known as reconciliation. This requires the assent of all 50 Democratic senators. The likeliest outcome is a compromise between Democratic progressives and moderates that yokes together the agreed infrastructure bill with a much slimmer version of the $3.5trn proposal. Yet it is possible that neither bill will become law.

This raises two questions. First, how good can a salami-sliced version of Mr Biden's agenda, the result of a negotiation between 270 Democratic members of Congress each angling for their constituents' interests, really be for the climate? Second, how bad would it be for America's decarbonisation efforts if both bills fail?



The Economist

Happily even reconciliation-lite could bring meaningful progress, if key bits of the current proposals survive the negotiations. Paul Bledsoe of the Progressive Policy Institute, a think-tank, is confident a deal "likely a bit under $2trn" will happen this month. Only a fraction of that spending will be on climate, because the bill also contains proposals to make the social safety-net more generous. The Rhodium Group, an analysis firm, reckons that just six proposals would cut emissions by nearly 1bn tonnes in 2030 compared with no new policies (see chart 2), about a sixth of America's total net emissions per year. That is roughly equivalent to the annual emissions from all cars and pickup trucks on American roads, or the emissions of Florida and Texas combined. The six include proposals related to "natural carbon removal" (from forests and soil), fossil fuels (making it more expensive to emit methane) and transport (a generous credit for buyers of electric cars).

Carrots beat sticks

The big prize, though, is the power sector. Two proposals for decarbonising the grid account for the lion's share of likely emissions reductions: a new Clean Electricity Performance Programme (CEPP) and more mundane reforms to the tax credits received by clean energy. The CEPP has been touted by Mr Biden's cabinet officials and leading progressives as a linchpin of the climate effort. It is loosely based on the mandatory clean-electricity standards imposed by over two dozen states which have successfully boosted adoption of low-carbon energy.

The CEPP is flawed in a couple of ways, though. Because it has to be primarily a fiscal measure in order to squeeze through the reconciliation process, it does not involve mandatory regulation—unlike those successful state energy standards. Rather, it uses (biggish) subsidies and (rather punier) penalty fees to try to nudge utilities to build more clean energy. It is politically vulnerable because it is unfriendly to natural gas and coal (unless they have expensive add-on kit to capture and store related emissions). That has incurred the hostility of Senator Joe Manchin, a Democrat who represents coal-rich West Virginia, without whose approval the bill will fail. Some influential utility companies with coal assets, including Ohio-based American Electric Power, do not like it either.

Despite the attention paid to it, CEPP is actually less potent as a greenhouse-gas slayer than those boring tax credits, which are less controversial because they do not overtly penalise coal or gas. Two energy veterans, one at a top renewables lobbying outfit and the other at a fossil-heavy utility, agree that the tax credits would sharply boost investment in low-carbon technologies. That is because they improve the current set-up by replacing stop-go uncertainty with a predictable long-term tax regime, and make tax breaks "refundable" rather than needing to be offset against tax liabilities, meaning even utilities that do not have such tax liabilities can enjoy them as freely as cash in the bank.

Thus the CEPP is overshadowing the real star proposal. The tax credits have "a huge impact potentially", reckons Rhodium, accounting for over one-quarter of the greenhouse-gas emissions reductions in the legislation, at a cost of roughly $150bn over ten years. A former administrator of the Environmental Protection Agency (EPA) puts it bluntly: "Take the wind and solar tax credits at ten years if you had to choose—and let everything else go."

What if Democrats fail, the negotiations fall apart and Mr Biden is left empty handed? That would be embarrassing. And it could make it difficult to pursue ambitious federal climate policies through Congress for years, just as the failure of Waxman-Markey in 2009 haunted lawmakers. However it would not mean America can do nothing at all about climate change.

First of all, as Mr Biden's officials have already made clear, they stand ready to use regulations to push ahead on decarbonisation efforts, just as the Obama administration did. Last month the EPA issued rules cracking-down on emissions of hydrofluorocarbons, an especially powerful greenhouse gas. The administration also has plans for loan guarantees for energy innovations and for speeding-up approvals for offshore wind farms. Yet this is tinkering compared with the federal law being discussed, especially as new regulations are likely to encounter legal challenges.

Even if the federal government fails again, states and cities have climate policies too. Drawing on analysis funded by Bloomberg Philanthropies, Leon Clarke of the University of Maryland calculates that decentralised policies emulating the current best efforts of states like California could achieve roughly one-quarter of Mr Biden's objective. But this is a bad deal: such efforts would fall a long way short of the federal proposal in reducing emissions, and what reductions they achieve would be more expensive than if done at the federal level. Still, it is not nothing. Last month, Illinois passed the country's boldest climate-change law. Democratic states such as New York and California have green policies, but Republican states such as Texas and Indiana have big wind industries too.

Although Mr Clarke says Congress has to act if America is to achieve Mr Biden's targets, he believes that progress will continue even if Congress falters, because there is now a deeper sense of ownership of climate policy among local and state governments. "The Trump years really changed the way that subnationals in the US view climate action," he says. "They can't rely on the federal government."

Change is happening in surprising places. Take that flyover in Indianapolis. The city's officials have made it into a bike path that will be connected to 55 miles of commuter-friendly trails traversing the city. The city has allocated $100m for building a bus-rapid transit system, which is a cheap and efficient substitute for underground rail, with more such rapid bus lines on the cards. Bloated 38th Street will undergo a "lane diet" with car and lorry traffic yielding two lanes to the buses. Come back in a few years and the view from the bridge should be a bit quieter. ■

For more coverage of climate change, register for The Climate Issue, our fortnightly newsletter, or visit our climate-change hub. To read more about Joe Biden's presidency, visit this hub

Left march

Military bases swung hard away from Republicans in 2020

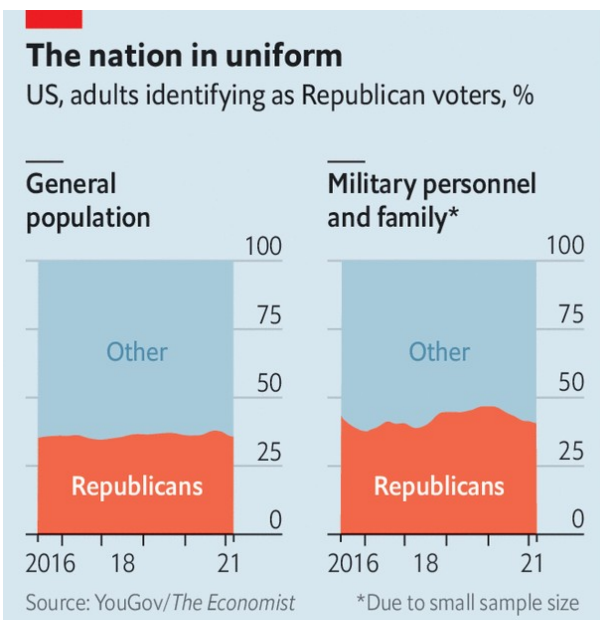
By our calculations they moved towards Democrats by eight points, compared with a nationwide swing of just two

Oct 14th 2021 | NEW YORK

ALLEGATIONS OF FRAUD can seldom be stood up by mere insinuation of fishiness. But with scant evidence, one Republican Party poll-watcher in Detroit fell back on that in 2020. In a notarised statement presented by the Trump campaign, the onlooker noted that most of the military ballots he "saw were straight ticket Democrat or simply had Joe Biden's name filled in on them". "I had always been told that military personnel tended to be more conservative, so this stuck out to me as the day went on," he added. Although military voters and their families do tilt conservative (see chart), there is little evidence that they are a Republican constituency. In fact, analysis by *The Economist* suggests that Mr Trump performed far worse in 2020 across precincts that map onto military bases than he did four years earlier.

The political leanings of service members are difficult to measure. The Department of Defence–reluctant to poll active duty soldiers about their commander-in-chief and his party—rarely approves external political surveys. And while today's soldiers are encouraged to exercise their right to vote, for some, including a number of America's most distinguished generals, non-partisanship has precluded boots in the ballot box. General George C. Marshall once wrote, "I have never voted, my father was a Democrat, my mother was a Republican, and I am an Episcopalian."

"There's a broader narrative that the military is monolithically conservative or Republican, and that just really isn't the case, or at least is not any more", says Danielle Lupton, a scholar of civil-military relations at Colgate University in New York. Enlisted soldiers are drawn from, and thus generally reflective of, the American public, although they have greater racial diversity (a constituency that leans Democratic) and far more men (who tend Republican). As voting patterns shift nationwide, so too do they shift among the armed forces.



The Economist

The Economist's analysis of precincts that map closely onto military bases found a median swing of nearly eight points towards Joe Biden, compared with a nationwide shift of a little over two points in the same direction. On average, Mr Trump still won these precincts, though his margin shrank by nearly half. Patrick Air Force Base—located on Florida's Atlantic coast and since renamed Patrick Space Force Base—supported Mr Trump by a 17-point margin in 2016. By 2020, his lead there shrank to 11 points. This method is inexact: two-thirds of enlisted service members who vote send in absentee ballots and military bases are often sprawling compounds where spouses, civilian contractors and other support staff reside and vote.

But so too is this finding borne out in the limited available polling of active military personnel. Shortly before the election of 2020, the *Military Times* and the Institute for Veterans and Military Families (IVMF) at Syracuse University augured an even more extreme swing. Whereas in October 2016 their joint poll showed Mr Trump outpacing Mrs Clinton by 20 points, four years later Mr Biden was ahead of the incumbent by four points. "In 2020, one of the interesting developments was that Trump himself...tried to drive a wedge...and claim populist style that it was the rank and file who liked him, not the senior brass," noted Peter Feaver, a professor of political science at Duke University.

The *Military Times*-IVMF polling before the election showed Mr Trump lost ground among both enlisted soldiers and the officer corps, the latter of whom had historically voted disproportionately Republican. Looking ahead to 2024, for Republicans to regain what was lost of the military vote, Mr Feaver speculates the best thing would be "for Trump to shuffle off stage". ■

Money talks

A prominent academic resigns after benefactors try to exert influence over her curriculum

Universities need to get better at resisting academic pressure from donors

Oct 11th 2021 | NEW YORK

WHEN BEVERLY GAGE announced that she was stepping down from her role as director of a prominent programme at Yale University, she received an influx of support. Colleagues from other institutions tweeted their approval and fellow Yale professors wrote statements of solidarity. Her complaint—that conservative donors had tried to wield undue oversight over her curriculum—resonated with other academics, and highlights a different concern over free speech at universities, one that does not involve lefty students trying to cancel speakers (or each other).

Since 2017, Ms Gage had led the Brady-Johnson Grand Strategy Programme, a prestigious one-year course in statecraft and politics. No complaints were offered by the programme's two biggest donors: Nicholas Brady, who served as Treasury Secretary under Ronald Reagan and George H.W. Bush, and Charles Johnson, a businessman who frequently gives to Republican causes. Initially, says John Gaddis, who helped found the programme, he had the sense that neither man wanted a say in what was taught, but "somehow that changed". Ms Gage retained Grand Strategy's core tenets: students still read Thucydides and Machiavelli, and discussed war and foreign policy. But, in line with a broader movement across humanities disciplines, she supplemented the curriculum with lessons on social justice.

Soon after last year's presidential election, Bryan Garsten, who taught in the programme, wrote an article in the *New York Times* that called Donald Trump a "demagogue". Mr Brady complained about the article to Ms Gage and sent her a passage from his original donor agreement that called for an advisory committee to help select course teachers and speakers. Yale administrators began the process of creating the board.

The board's precise duties remain contested. Mr Gaddis, who has seen the contract, believes that it was not "meant to pronounce on issues of curriculum. All it was meant to do was help us recruit people who were willing to spend vast amounts of time on the Acela going back and forth" (the Acela being the train running from Washington to Boston through New Haven, where Yale is located). Ms Gage said that Yale should not have agreed to the original terms, nor should the university have interpreted the terms as they did. "These kinds of advisory boards are problematic in their own right," argues Ms Gage. "There are real questions about why a board of outsiders would, in this case, be advising about the conduct of a class."

Ms Gage requested the members come from diverse backgrounds, including their age, race, gender and intellectual viewpoint. Mr Johnson wanted a more conservative-leaning board, and in March, Ms Gage learned that the university planned to go ahead with his choices, which included Henry Kissinger. Although Ms Gage accepted the existence of the board, she objected to the inclusion of Mr Kissinger and resigned, effective this December. When that decision was made public, Peter Salovey, Yale's president, said he was "genuinely sorry that she did experience more unsolicited input from donors than faculty members should reasonably be expected to accept."

This dispute highlights a problem many universities face: they must appeal to increasingly liberal student bodies and professors as well as the more conservative old boys' club that provides them with money. Administrators and donors often negotiate the terms of gifts under institution-specific regulations. The funds generally come in two forms: "expendables", which are one-off payments designed to be exhausted, or "endowed gifts," which, like the gift that established the Grand Strategy programme, last in perpetuity. But a university's priorities may shift, and academic goals may diverge from causes donors think they are supporting. "Sometimes the benefactor doesn't understand that the influence they have has limitations," says Audrey Kintzi, who serves on the Ethics Committee of the Association of Fundraising Professionals.

Donors often have the upper hand in negotiations. Tufts University accepted $15m from the Sackler family and its company, Purdue Pharma, over the course of several decades under terms that permitted Purdue to collaborate on campus research and appoint a member to a steering committee for the Pain Research, Education and Policy programme. Charles and David Koch funded a variety of conservative-leaning courses and institutes in higher education and inserted some clauses that allow them seats on selection committees that choose professors. The University of Illinois at Urbana-Champaign rescinded a job offer for a professor after his public criticism of Israel's behaviour in the 2014 Gaza conflict prompted donors' threats to withdraw their gifts.

This summer, the University of North Carolina at Chapel Hill did not vote on a tenure recommendation for Nikole Hannah-Jones—a journalist who was appointed to an endowed chair in journalism—despite a strong endorsement from the relevant university committee. Among those opposing her appointment was Walter Hussman, a donor who had pledged $25m to the school and who objected to the tenor of her journalism.

Accepting money from any donor can expose a university to criticism, but there is a difference between accepting funds and allowing a benefactor a say in the academic undertaking. The donors, Ms Gage says, grew dissatisfied. She worries that the freedoms of academics are too often overlooked in conversations between universities and donors. For universities, that matters immensely: not only are millions of dollars at stake, but their reputations for integrity too. ■

Lexington

Dave Chappelle for gender realism

A Hollywood A-lister shows how hollow—and marginal—the arguments of the woke left are

Oct 14th 2021

HOW DOES a millionaire celebrity comedian with a boatload of awards retain his subversive edge? The great Richard Pryor solved the problem in the 1970s and 1980s by ever more extravagantly—and hilariously—going off the rails. "I say, 'God, thank you for not burning my dick,'" he deadpanned on Sunset Boulevard, after having set himself on fire while free-basing cocaine. For Eddie Murphy, a follower of Pryor's who has drifted into schmaltz and Shrek, the solution has proved more elusive.

Dave Chappelle is luckier than his two heroes. Having pocketed a reported $50m for six shows on Netflix, the 48-year-old stand-up is even bigger than they were at their peaks. And Mr Chappelle, who lives with his wife and children on a farm in deepest Ohio, shows no appetite for Pryor-level debauch or for voicing cartoon donkeys. No problem. The subversion bar has been reset so low by the censorious left that his irreverent, observational comedy has never seemed more topical or edgy. Thus the furore stirred by his jokes about transgender politics in the last of those shows, entitled “The Closer”, which was released last week.

Even many of his critics concede that the lead-in to Mr Chappelle’s long transgender riff is pretty funny. Because of his past jibes at the community, Mr Chappelle claims, in mock fear, a conspiratorial well-wisher warned him, “they after you”. “One ‘they’ or many ‘theys’?” he hissed back. But whatever the critics thought of his craft, they adjudged his act “transphobic” and to be condemned. As evidence, many cited his defence of J.K. Rowling’s insistence on the biological reality that trans identity and sex are different. (No wonder, he deadpans, that women are annoyed that Caitlyn Jenner won “woman of the year her first year as a woman, never even had a period…”) “The phobic jokes keep coming,” sighed the *Guardian*. “He needs new ideas,” huffed *Vulture*.

Mr Chappelle is of course foul-mouthed and shocking. He delivers an anti-Semitic one-liner in his show, chuckles as his audience gasps, then repeats it slowly, three times. Transgressing public mores, to deliver laughs, or social insight, or just to make people squirm and wonder why, has been the dominant tradition in stand-up ever since Pryor put a match to institutional racism, too. This reflects a singularly American set of conditions: high levels of social tension, a dominant place in popular culture for the most persecuted group and strongly protected free speech. Mr Chappelle, who, like Pryor and Mr Murphy is African-American and a master of many forms of comedy, calls stand-up his favourite form and an “American phenomenon”.

Because of its connection with social justice, most standup comedians, especially black ones, are of the left. But, again, the phenomenon must be edgy to be funny. So no whites are excluded from Pryor’s or Mr Chappelle’s racially loaded critiques, including the sympathetic left-wingers laughing wanly in their audiences. And that dramatic tension, between performer and fans, has increased in recent years as the activist left has increasingly presumed to police speech. A declaration in 2014 by Chris Rock, another top black comedian, that he could no longer perform for college crowds because they had become “way too conservative…[in] their willingness not to offend anybody,” was a signal cultural moment. For Mr Chappelle, who was in the process of relaunching his career around that time, it was also inspiring.

He does not seem transphobic, in fact. If his comedy has a moral theme it is that everyone is flawed and everyone should be accepted. Its force lies in showing how quickly that truth is lost when group politics takes hold. Mr Chappelle has spent much of his career railing against racial injustice. Pointing out the equally manifest reality that women lose out when sex is redefined as a state of mind is consistent with that record.

Even when justice is served—as in the advance of gay rights—his subversive mind ponders why such progress is not general. "Why is it easier for Bruce Jenner to change his gender than it is for Cassius Clay to change his name?" he asks. "Empathy is not gay. Empathy is not black. Empathy is bisexual. It must go both ways."

This is not exactly rigorous. Muhammad Ali's name change predated Ms Jenner's by 50 years; and there are plenty of non-whites banging the transgender rights drum. But Mr Chappelle is a comedian, not an essayist, and his emphasis upon anti-black discrimination is a dramatic device as well as a political choice. It maintains, rather improbably, his claim to underdog status. And that can be a source of empathy, as well as credibility, as he shows in movingly describing his friendship with a minor comedian, a trans woman called Daphne Dorman.

"I don't need you to understand me, I just need you to believe… I'm having a human experience," she once schooled him. He was stunned; then slowly responded. "I believe you … because it takes one to know one." Group politics, zero-sum and exclusionary, is dehumanising; his profane, moral comedy is a corrective.

And the leftist Pharisees who disagree with that should reflect on Ms Dorman. When Mr Chappelle was lambasted as a trans phobe after his previous Netflix show, she tweeted that he was nothing of the kind and her friend. She was hounded in turn; then jumped to her death off a towerblock. Can that story—so vindicating of Mr Chappelle and damning of his accusers—be true? Her grieving family confirmed it this week. So who is the victim now?

Chapeau, Chappelle

Not Mr Chappelle, at least. Besides torching the pieties of the identitarian left, he has also shown how marginal it is. His gender-realist views are far more in step with public opinion than his critics'. And if the unpopularity of their views is rarely off-putting to the Twitterati, good luck to them taking on an African-American superstar. This week Mr Chappelle, surrounded by a throng of adoring A-listers, was given a standing ovation at the Hollywood Bowl. "If this is what being cancelled is like," he chuckled. "I love it." ■

The Americas

Post-pandemic pick up

Latin America’s economies have an opportunity to grow

It would help if governments overcame their protectionist instincts

Oct 16th 2021

RUA 25 DE MARçO in São Paulo is the biggest shopping area in Latin America. Before the pandemic, an average of 400,000 people a day went there looking for makeup, electronics, household items and more. Most of the goods were imported from Asia. Despite an easing of pandemic restrictions and increasing vaccination rates, the crowds have not returned. Around a fifth of shops have closed permanently. Edmilson Lucas, who runs a shop there, says it is hard to obtain supplies, with the value of the Brazilian real down by a fifth since the start of the pandemic, to $0.18. It is even harder to sell his goods, considering that 14% of the population is unemployed. “I don’t know how much longer I can keep the doors open,” he says.

Laments like these can be heard across Latin America. No region has suffered more as a result of the pandemic. More than 2.1m people in Latin America and the Caribbean have died of covid-19; the death rate in the region is easily the highest in the world, according to *The Economist*'s excess-mortality tracker. The economic toll has also been crushing. Output dropped by 7% in 2020, the steepest decline of any region. And although a surge in commodity prices early in 2021 is likely to have boosted growth this year to a respectable rate of more than 6%, GDP will remain below its pre-pandemic level at the end of 2021. The IMF forecasts that growth in 2022 will be lower in Latin America than in any other part of the world.

The economic pain of the recent past stings the more because of the disappointing years which preceded it. The opening decades of the new millennium were good ones for emerging markets. In the 2000s more than 80% of them enjoyed faster growth in output per person than the United States, up from 34% in the 1980s. Hopes swelled for Latin America. By 2005 Mexico's trade with Canada and the United States was up by 118% compared with 1993, as a consequence of joining the North American Free Trade Agreement (NAFTA), which took effect in 1994. Optimists reckoned still better times lay ahead. But as the long commodity boom drew to a close in the 2010s, economic fortunes turned.

A sense that a moment has been missed now hangs over the Americas. GDP per person in East Asia, at purchasing-power parity (PPP), stood at just 12% of the level in Latin America in 1980, but has since risen to 71%. High levels of inequality persist across the region. Democracies look almost uniformly less healthy than they did a decade ago.

Debt loads have risen above 100% of GDP in Argentina, Belize and Jamaica. In Brazil, rising interest rates are adding to the government's cost of borrowing, pushing it uncomfortably close to a crisis like the one that caused a deep recession between 2014 and 2016. Exacerbating the region's difficulties are the growing costs of climate change. Latin America and the Caribbean have taken a battering from extreme weather of late, including hurricanes and long droughts.

Take a chance

These risks create the impression of a region running short of time. And yet, as the world emerges from the worst of the pandemic, a moment of opportunity has arrived. The period of rapid growth across emerging markets which unfolded from the late 1990s to the mid-2010s was associated with a surge in world trade, which rose as a share of GDP from below 40% in the 1980s to 61% in 2008. This was helped by the spread of global supply chains, whose share of world trade leapt by ten percentage points between the 1980s and 2008, to just over 50%. This boosted average productivity and increased incomes. Employment growth is also higher in places where a larger share of people work at firms which both import and export.

Latin America largely sat out the surge in supply-chain trade, which rose by 0.1% from 1995 to 2015, compared with 19% across the rest of the world. Parts of the region in which firms were more linked into global supply chains, such as Mexico, suffered from intense competition from China, thanks to the close overlap in export competencies between the two countries. Had Chinese export capacity remained constant from 1995 to 2005, global demand for Mexican exports would have been 2% to 4% higher, according to Gordon Hanson of Harvard University and Raymond Robertson of Texas A&M University.

As long as we're together

The region may now get another chance. Increased political uncertainty in China has many firms in the United States rethinking their dependence on Chinese factories, while global shipping bottlenecks demonstrate the virtues of more evenly distributed trade. Geographic proximity generally translates into economic integration; indeed, it is surprising that interwoven supply chains across the Americas are not already in place. Both the quantity of trade and diffusion of technology decline with distance, economists reckon. Regional development may thus have a compounding effect, in which faster growth among neighbours leads to still more trade and higher incomes.

But to unlock these potential benefits, Latin America will need to confront problems which have impeded deeper integration in the past. The failure fully to exploit supply-chain opportunities has several causes. Problems are partly logistical. In Colombia and Brazil, the costs of shipping a standard container from the factory door to its destination are among the highest in the world (though other parts of the region, such as Panama and Chile, do better). Shoddy transport links raise costs and travel times.

Within the region, trade with countries which share a land border primarily takes place over land, rather than via sea or air, yet road infrastructure is often of low quality. About 70% of roads in Latin America and the Caribbean are unpaved, compared with less than 50% in South Asia and under 30% in East Asia. Rail is no better; of the 20 countries in the world with the worst rail infrastructure, ten are in Latin America—including Brazil, Colombia and Peru. With the exception of Panama, which has prospered as a logistics hub, Latin American economies are weakly linked into major sea shipping routes, and often have substandard ports.

The effects of poor infrastructure are multiplied, however, by bad trade policy. The growth miracles of East Asia were supported by policies which prioritise the development of export industries. Latin American governments, in contrast, have tended to prioritise the displacement of imports with domestic production, using trade barriers to shield producers at home.

Latin American governments are enthusiastic negotiators of trade agreements: nearly 450 bilateral deals have been signed since 1973. But more than 370 are intra-regional, and do not involve deep integration with richer countries which supply technology and high-value inputs, and which are avid consumers of advanced manufactures. In terms of overall trade restrictiveness, with respect to both tariff and non-tariff trade barriers, Latin America is the second most inaccessible region of the world, pipped only by sub-Saharan Africa, according to the World Bank.

Thus although the region has a big manufacturing industry, its growth has been disappointing. Nearly half a million Brazilians worked in the country's automotive sector in 2014. But the trade restrictions which protect the industry shut it off from foreign suppliers—denying Brazilian producers access to their know-how and technology—and coddling inefficient firms. Brazil exports its cars to members of Mercosur, a free-trade agreement which also includes Argentina, Paraguay and Uruguay, but does not source parts from outside the region, nor has it had much success selling cars on global markets.

The Americas are not monolithically protectionist. Mexico, in addition to its participation in NAFTA (and its successor agreement from 2020, known as the United States-Mexico-Canada Agreement), is a member of the Comprehensive and Progressive Agreement for Trans-Pacific Partnership (CPTPP). Peru is as well; Chile has agreed to but not yet ratified the deal, partly because of protests against it in 2019.

The difference in trade orientation shows. Over the two decades prior to the pandemic, Chile and Peru persistently outgrew the United States' economy, and fared substantially better than more closed economies like Brazil's. Costa Rica and the Dominican Republic have benefited from their membership in a free-trade agreement with the United States. Yet for some sceptics of the export-oriented model, Mexico looms as a cautionary tale. From 1999 to 2019, income per person on a PPP basis grew more slowly than in the United States and Brazil. Manufacturing labour costs in Mexico have now been overtaken by those in China.

Get to know you better

Yet even as Mexico lost market share to China, its manufacturers have transformed: relying less on low-value industries, such as textiles, and participating more in electronics, automotive and aerospace manufacture. CPTPP membership might have generated more tangible benefits—though it is still early days—had it not been for the interruption of the pandemic. Even in the more reflexively protectionist milieu of South America's Atlantic-facing economies, there were hints of a willingness to open up before covid-19 struck. Mercosur, for instance, concluded a deal with the European Union in 2019, though ratification was subsequently delayed over EU worries about Jair Bolsonaro, Brazil's populist president, and rampant deforestation in the Amazon. Uruguay is pursuing a deal within Mercosur with South Korea (and one outside it, with China).

Whether this momentum can be sustained in the more trying post-pandemic atmosphere is unclear. Mercosur's cohesiveness is being tested: Argentina has withdrawn from further negotiations between the bloc and other economies. The election of leftist politicians around the Americas, such as Pedro Castillo in Peru, may give investors pause.

Some multinational firms are curtailing investments in Chile ahead of presidential elections in November. Gabriel Boric, who favours higher taxes on top incomes, is currently leading the polls (within the margin of error). In Mexico President Andrés Manuel López Obrador, who is tightening state control over the energy sector, recently said that lawmakers must decide whether "they are in favour of the people or private businesses".

But the benefits of greater openness could be high in coming years. President Joe Biden seems ready to make deals. He is keen to address the "root causes" of migration across the United States' southern border, and has promised to spend $4bn in Central America tackling such issues. His administration has touted its "Build Back Better World" partnership (B3W) as a counterweight to China's Belt and Road Initiative, through which the latter invests in infrastructure in its developing-world trading partners. Daleep Singh, Mr Biden's deputy national security adviser and point man for B3W, chose three Latin American economies—Colombia, Ecuador and Panama—as the first stops on a "listening tour" intended to drum up interest.

Funding mobilised by the United States could be deployed to help tie the Americas together, through roads, rails, ports and broadband. And the intensifying strategic rivalry between the United States and China may well change the normally fraught politics of trade. A deepening of trade ties, which might otherwise be seen as a threat to domestic firms, may instead come to seem like insurance against the further deterioration of Sino-American relations.

That does not mean it will be easy for the governments of countries which have suffered terribly through the pandemic to take a gamble on liberalisation. Neither will it be easy to persuade Latin Americans who have repeatedly been let down by their leaders that this time is different. In Buenos Aires, Gabriel Pablo Imperiale, a driver, sighs, “People don’t believe in the government—how are you going to invest and bring the country forward if one day you’ve got legislators saying they’re going to change tax rules, [and] just like that, change the rules?” But if ever there were a moment to take a leap of faith, it is now. Another opportunity like this one could be a long time coming.■

Bello

Guillermo Lasso’s battle against populism in Ecuador

After a good start, problems have mounted for the banker-turned-president

Oct 14th 2021

AFTER HIS surprising victory in Ecuador’s election in April, Guillermo Lasso, a conservative self-made banker, confounded sceptics yet again by getting his presidency off to a flying start. He fulfilled a campaign promise to vaccinate half the population in his first 100 days (57% are now fully jabbed). His approval rating soared to over 70%. But the past fortnight has been difficult. A fight among gangs inside a prison ended with 119 inmates dead. The board of the National Assembly sent back without debate Mr Lasso’s key initiative, a bill to raise taxes and loosen restrictions on labour. And then the president was named as the controller of a number of offshore companies in a global trove of documents dubbed the Pandora Papers.

Last week Mr Lasso sat down with Bello in the unassuming presidential palace in the whitewashed colonial heart of Quito. He was unabashed by the setbacks to his plans. “I presented myself as I am and the Ecuadorean people voted for me,” he said. “They realised that we needed a change and that we couldn't continue with this totalitarian, populist model that has impoverished Ecuadorean citizens."

He was referring to the decade in power, from 2007 to 2017, of Rafael Correa, a populist leftist, which coincided with an oil boom. Mr Correa built roads and public buildings but he also doubled the cost of the central government in a spending binge that left the country laden with debt and near-bankrupt when the oil price fell. Mr Correa abused his popularity to harass opponents and the media, and to enact a new constitution which gave him control of supposedly independent institutions such as prosecutors and courts.

The country, which has used the US dollar as its currency since 2000, is still suffering the consequences of Mr Correa. His chosen successor, Lenín Moreno, turned against him while battling to reduce debt and a fiscal deficit of 8% of GDP. Mr Lasso wants to combine fiscal responsibility with faster economic growth. A recovery from the pandemic recession is picking up speed, helped by the vaccination drive which has allowed schools to open. His labour reform would also boost the number of jobs by making new contracts far more flexible.

Mr Lasso promises an "investment shock" by sweeping away barriers in oil, mining, electricity and telecoms. Ecuador has rejoined a World Bank body that arbitrates disputes with foreign investors. The government has renegotiated an agreement with the IMF which commits Ecuador to a fiscal adjustment that Mr Lasso says is now "very gentle". Most of the effort will come from a tax reform which is "social democratic" and targets the rich, says Simón Cueva, the finance minister.

The government now faces a choice in its dealings with the assembly, where the left won a majority. If it cuts its bill in two it can probably get most of the tax increase approved. Or Mr Lasso could put the proposals to a referendum. "We are analysing the alternatives," he says. "I don't think we need to talk of extremes," such as invoking a never-used clause of the constitution that allows him to trigger a fresh general election.

The president faces other political battles. The assembly has begun an investigation into the offshore investments which could possibly lead to his impeachment. He says that he severed all links to the companies in 2017, that Mr Correa’s attacks on bankers obliged him to invest abroad and that he is Ecuador’s top taxpayer, contributing $2.2m in income tax last year.

Leonidas Iza, the far-left president of CONAIE, Ecuador’s powerful organisation of indigenous peoples, threatens a “rising” to halt the removal of fuel subsidies. Two years ago such a rising almost toppled Mr Moreno. But CONAIE is more divided now, and Mr Iza says that talks with the government will continue.

To prosper, and even to survive, Mr Lasso needs to honour his promise of job creation (in which, of course, his bill would help). It favours him that other institutions are discredited. But he also needs to get his message across more effectively. He won because a majority of Ecuadoreans didn’t want Mr Correa’s proxy candidate, but many remain in thrall to populist ideas. Mr Lasso hasn’t yet managed to sell his liberal economic programme to the people, says Sebastián Hurtado, a political consultant. Before Mr Correa’s decade Ecuador, a country of many volcanoes, was dogged by eruptions of political instability. Unless Mr Lasso can persuade people of his plan, it risks a return to that.

Middle East & Africa

- Nuclear diplomacy: The final countdown
- Iraq’s election: Vote first, fight later
- Dubai expo: The far-fetched pavilions
- Burkina Faso: The ghost of Thomas Sankara
- South Africa’s Afrikaans press: Ja to change

The final countdown

A new crisis between America and Iran looms

Talks to restore a nuclear deal are going badly. The alternatives are grim

Oct 12th 2021 | WASHINGTON, DC

A FORMER FRENCH president, Nicolas Sarkozy, summed it up best: tough nuclear diplomacy with Iran, he said in 2007, was the best way to avoid the catastrophic choice between "an Iranian bomb or the bombing of Iran". To escape this dilemma President Joe Biden has been trying to revive the nuclear agreement with Iran that Barack Obama negotiated in 2015 and Donald Trump tore up three years later.

But Iran is not making it easy. It refused to speak directly to American officials in the six rounds of talks in Vienna that ended in June (it negotiated instead with European, Russian and Chinese intermediaries). It has not resumed formal negotiations since, citing the need for personnel changes after the election as president in June of Ebrahim Raisi, a hardliner. Talks could resume in November, Iran says.

Iran is spinning up a growing stock of 60% enriched uranium, which is a hair's breadth away from bomb-grade stuff. The acceleration has been helped by Iran's deployment of more, and more sophisticated, centrifuges to purify the fissile material. Other alarming developments include the conversion of enriched uranium hexafluoride gas into uranium metal—for which the most likely use is in bombs—and the hampering of inspections by the UN's International Atomic Energy Agency.

All told, Iran's "breakout time"—the time it would need to make one bomb's-worth of highly enriched uranium—has shrunk to about a month, calculates David Albright of the Institute for Science and International Security, a think-tank. American officials put it at "a few months". Either way, it is much shorter than the year or more that the world enjoyed when the nuclear deal, known as the Joint Comprehensive Plan of Action (JCPOA), was in force. (Putting a nuclear warhead on a missile would take perhaps another two years.)

Among Iran-watchers in Washington, there is a sense of foreboding about an approaching showdown. "The runway is getting shorter," says Antony Blinken, the secretary of state. On October 13th he warned that America "is prepared to turn to other options" to prevent an Iranian bomb—without saying what these might be.

Israel's prime minister, Naftali Bennett, is blunter: "Iran's nuclear programme has hit a watershed moment. And so has our tolerance," he told the UN General Assembly last month. Israel makes little secret of its covert campaign to assassinate Iran's nuclear scientists and sabotage its facilities. "Operations to destroy Iranian capabilities will continue—in various arenas and at any time," said Israel's military chief, Aviv Kochavi. Iran is the main subject of a flurry of diplomatic meetings, including one between Mr Blinken, Israel's foreign minister, Yair Lapid, and his Emirati counterpart, Sheikh Abdullah bin Zayed.

The looming crisis was predictable from the day Mr Trump withdrew from the JCPOA, calling it "the worst deal ever". The deal had placed limits on the Iranian nuclear programme in exchange for the lifting of many, but not all, international economic sanctions. Mr Trump's new barrage of sanctions was intended to exert "maximum pressure". But it failed to compel Iran to accept more stringent terms. Nor did it halt the country's development of ballistic missiles, or its support for client militias around the Middle East.

Mr Biden campaigned on a promise to restore the JCPOA. In office, he retained most of Mr Trump's sanctions in the hope of preserving America's bargaining power. But as the nuclear programme accelerates, it is Iran that is now exerting "maximum pressure" on Mr Biden, argues Mark Fitzpatrick of the International Institute for Strategic Studies, a think-tank.

In Iran's view, America has proven itself untrustworthy, as the supreme leader, Ayatollah Ali Khamenei, has long warned. The economic benefits of the JCPOA were short-lived. And Iran thinks it has withstood the worst economic pressure that America can apply. Sanctions, compounded by covid-19 and oil prices that until recently were low, have hurt a lot. The economy contracted by 6% in 2018 and 7% in 2019. The rial has lost 85% of its value since 2017 and annual inflation recently surged to 45%.

But now the economy is improving. The IMF estimated in April that it would grow by 3% this year, and that was before the recent spike in oil prices. China has become the biggest buyer of Iran's oil, and is incorporating it into its Belt and Road infrastructure scheme. Russia is talking of integrating Iran into a Eurasian trade group.

Regionally, too, Iran has become more powerful. It has helped to save Bashar al-Assad's regime in Syria and defended its friends in Iraq from the jihadists of Islamic State. To the south, its Houthi allies in Yemen have forced a Saudi-led military coalition to seek a way out of the war. In Afghanistan, the Americans have been chased away by the Taliban. Even America's allies in the Gulf have started trying to patch up relations with the theocracy.

Iran claims it seeks to build only a nuclear-power industry. But it seems determined at least to develop the wherewithal to make nuclear bombs at short notice. The JCPOA was hardly a permanent solution to the problem. It allowed Iran to continue enrichment and to experiment with more-sophisticated centrifuges, but under tight limits. "Sunset clauses" would remove most of these restrictions after eight, ten and 15 years (a tightened inspection regime would go on indefinitely). These compromises provoked intense opposition by the Republicans and parts of the Democratic Party, whipped up by Mr Bennett's predecessor, Binyamin Netanyahu.

The Biden administration at first sought an agreement that would be "longer and stronger" than the original. Iran, arguing that America had to atone for reneging on the JCPOA, has also demanded better terms, not least that America should move first by lifting all Trump-era sanctions.

Such a more-for-more deal seems beyond reach. The likeliest option is what Mr Blinken calls "a mutual return to compliance with the JCPOA". But that is losing its appeal, too. Even if stocks of highly enriched uranium are shipped out of Iran and centrifuges are dismantled, Iran has acquired valuable know-how that cannot be unlearnt. Mr Albright thinks the JCPOA can no longer restore the one-year breakout time. Moreover, the sunset clauses mean that Iran would be allowed to expand its enrichment programme in 2025.

Although the Biden administration does not intend to submit any agreement with Iran for congressional approval (just as the Obama administration skirted Congress with the JCPOA), hawkish congressmen are trying to find ways to oblige it to do so. Mr Biden will be hoping that some opponents, having seen the dangerous consequences of an unconstrained Iran, will support a deal. Under Mr Bennett, Israel has acquiesced to the talks for now; some Israeli officials see merit in the JCPOA. But some are privately expressing dismay about the apparent lack of an American Plan B, including military options. One idea floated by Israel is a strategy of "death by a thousand cuts"—conducting many small military and diplomatic actions, short of open air strikes.

Jim Risch, a Republican senator, warns Mr Biden that a revived JCPOA is bound to be repudiated by a future Republican president. His answer? Tighten the economic noose and prepare for the worst. "If the Iranians get close to getting nuclear weapons, this administration needs to think: what are they going to do when they get the call from the Israelis?" ■

Vote first, fight later

Iraq's dismal election prompts militias to threaten violence

Parties are talking war rather than wrangling over cabinet posts

Oct 14th 2021

ELECTIONS ARE supposed to be a smooth way to change power. In Iraq they seem to heighten hostilities. The vote on October 10th split the Shia majority between two snarling blocs. Muqtada al-Sadr, a gruff cleric-cum-militiaman popular with working-class Shias, emerged as the front-runner, with more than 70 of parliament's 329 seats, a third more than his tally in the previous election, in 2018. His nearest Shia rival, Nuri al-Maliki, won about half as many. But within hours Mr Maliki, a besuited former prime minister, had assembled a coalition of Shia factions and militias friendly with Iran, topping Mr Sadr's tally. Both men are claiming to have a mandate to form the next government.

Much will depend on which side Iraq's Kurds and Sunni Arabs take. Preliminary results suggest that Masoud Barzani's Kurdistan Democratic Party has 32 of the 63 seats won by Kurdish parties, so he will probably style himself as a kingmaker. Sunni voters, previously more divided, rallied behind Muhammad al-Halbousi, parliament's speaker, giving his party, Taqaddum, 38 seats.

Elections in Iraq are usually followed by months of wrangling between the main parties over who gets the big jobs with control of big budgets. But this time, before they could begin horse-trading, the two Shia blocs were threatening war against each other. In his victory speech on state television, Mr Sadr (pictured) vowed to disarm the pro-Iranian factions. "Arms must be controlled by the state only," he said, without a hint of irony, even though he heads one of Iraq's largest private armies.

The pro-Iranian militias bristled. Their main political arm, Fatah Alliance, had a bad election. According to preliminary results, its clutch of seats dropped from 48 to 14. Kataib Hizbullah, the most pro-Iranian militia, fielded 31 candidates, but won only a single seat. Few Iraqis, it seems, want it to brandish its swords. But rather than heed the message, the group's spokesmen denounced the result as "the biggest fraud…in recent history" and called on the militia to assemble. For some, this deployment was simply theatrical sabre-rattling. For others it was preparation for a re-enactment of the bloodshed of 2008, when Mr Maliki, then the prime minister, sent troops to crush Mr Sadr's forces in Basra, Iraq's second city.

Western tensions with Iran are making matters worse. Mr Sadr once fought against American forces but now considers Iran the bigger threat to Iraq's independence. In his victory speech he said embassies from every foreign country were welcome, tacitly including America. Although he still refuses to meet American officials, he uses the incumbent prime minister, Mustafa al-Kadhimi, as a go-between.

Iran, meanwhile, is egging on its local allies to oppose Mr Sadr. Esmail Ghaani, the head of Iran's Quds Force, the foreign wing of the Islamic Revolutionary Guard Corps, arrived in Iraq on election day. "They're not going to hand Iraq to Mr Sadr on a golden plate," says an Iraqi official.

Iraq's election commission further muddled the mayhem. Its claim of a turnout of 9m voters, or 41%, in the face of a boycott, induced a few guffaws. Some monitors guessed it was possibly half that. The EU, observing an Iraqi election for the first time, listed numerous violations in its mission report. The comma in its phrase, the "officially announced turnout was low, 41%", sounded a bit like a cough. Millions of people were left off the register of voters. Days after the vote the election commission was still changing results on its website, citing problems with manually counting the vote. Some losing candidates and their followers have alleged vote tampering and blocked main roads with protests. Others called on armed supporters to descend on the commission's offices unless the results were changed.

The gloom, however, is not entirely without glimmers. Mr Kadhimi, who is also a former intelligence chief, is wisely staying outside the fray. He withdrew from the election months ago, but hopes he may again be picked as the compromise candidate on whom all factions might agree. Young Iraqis, who call themselves the *Tishreenis* (after the Arabic word for the month in 2019 when they first started their protests to demand sweeping change), also celebrated. Despite their calls for a boycott of the ballot, their main party, Imtidad, together with independents, won some 20 seats. New Generation, their Kurdish counterpart, won another nine. "Next election we'll sweep the board," enthused a protester in the southern city of Najaf. Had he and his friends voted, they might not have needed to wait. ■

The far-fetched pavilions

At the Dubai expo, no one is eager to talk about reality

There are no politics at the Middle East's first world's fair

Oct 16th 2021 | DUBAI

THE SETTING is dramatic. Visitors passing from the harsh midday sun to the dim interior are met with slogans. "We believe that every human is part of the collective conscience," reads a message on the walls of the Syrian pavilion at the Dubai expo. Why the Syrian government has spent years dropping bombs on many of those humans is not explained.

The $7bn fair is the first "World Expo" in the Middle East. Like much else in the United Arab Emirates (UAE), which wants to attract visitors to revive its economy, the expo strives to gloss over politics. Exhibitors are able to present Panglossian visions of themselves to investors and tourists.

Many of the pavilions, intentionally or not, capture something about a country's character. America puts guests on a moving walkway for an earnest civics lesson. China greets them with a video from Xi Jinping. Visitors to the British one spend most of their time in an orderly queue.

For countries in the region, there is much to gloss over. Lebanon's pavilion feels like a tourism ad, with large monitors showing glamour shots of the country. Such an exhibit would be impossible in Lebanon itself, where the power went out for 24 hours earlier this month. Some countries have yet to showcase anything. Libya's is almost empty, with walls that smell of fresh paint and a television playing cartoons. Iraq missed the opening, too.

Egypt is a popular stop. There are a few nods to the past: hieroglyphs and a replica of King Tut's coffin. Much of it, though, is given over to portraying Egypt as an economic powerhouse, an image at odds with its sluggish private firms. On a giant video screen, a woman in pharaonic garb talks about industrial zones being built along the Suez canal. If Abdel-Fattah al-Sisi is Egypt's new pharaoh, a fish farm near Suez is apparently his Karnak temple.

No one acknowledges politics, not even occupied Palestine, which allows visitors to touch a piece of Jerusalem's Dome of the Rock and smell soap made in Nablus. Instead, many countries want to do business. At Iran's unfinished pavilion, where one door leads to a construction site, space is given over to a sort of bazaar, with companies hawking ceramic tiles and carpets.

Back at the Syrian stall there are booths for firms selling cables and olive oil, and one for Cham Holding, a conglomerate under American and European sanctions. Another space is lined with 1,500 wood panels that were posted to Syrians around the world with instructions to draw their hopes. Some are painted with the regime's flag, or Bashar al-Assad's face. Organisers insist they tried to reach a representative sample of the now-sprawling diaspora. Yet none seems to have sent wishes for a less brutal government or accountability for a war that killed hundreds of thousands of their fellow citizens. A neon sign nearby declares, "What you see isn't all there is"—an apt slogan for the whole expo. ■

Thomas Sankara’s ghost

Burkina Faso opens trial for the assassination of Sankara

But in a country ablaze with violence it may not make for harmony

Oct 14th 2021 | OUAGADOUGOU

AFTER BARELY four tumultuous years of revolutionary government, Thomas Sankara was gunned down in Ouagadougou, Burkina Faso’s capital, in 1987, during a coup. It was hatched by his erstwhile best friend, Blaise Compaoré, who has said that he did not order the killing, but who then ran the show until he in turn was turfed out after an uprising in 2014. Since 2015 this poor, arid country of 22m has wobbled along more or less democratically.

In the past few years, however, a wave of jihadist violence across the five countries of the Sahel (the others are Chad, Mali, Mauritania and Niger) has washed over Burkina Faso, too, giving everyone the jitters. So what is the point of the trial, which opened on October 11th in Ouagadougou, of 14 men accused of being involved in the killing of Mr Sankara and a dozen or so of his comrades all those years ago, seeing that the chief defendant, Mr Compaoré, is snug in exile next door, in Ivory Coast?

Another leading defendant, Hyacinthe Kafando, Mr Compaoré's security chief, is also abroad. But Mr Compaoré's right-hand man, General Gilbert Diendéré, sat dressed in camouflage among the other 12 accused in the packed courtroom, not far from the families of the victims of the coup, including Mariam Sankara, the late president's widow. "We are expecting justice to be done," she says. "It is unfortunate that all the accused are not here."

Sankara, a self-proclaimed Marxist-Leninist and admirer of Fidel Castro and Muammar Qaddafi, is still revered in left-wing circles across Africa for his firebrand populism and fierce hostility to the West. He was especially critical of France, his country's former ruler. Aged 33 when he took power, he promptly changed the country's name from Upper Volta to Burkina Faso (The Land of Upright People). He expropriated feudal landholdings, promoted education and health care (with mass-vaccination programmes), opposed female genital mutilation and forced marriage, urged reforestation and rejected foreign aid ("He who feeds you, controls you"), rebuffing the IMF and railing against corruption and capitalism.

He also banned political opposition, muzzled the media, clobbered trade unions, terrified much of the country's small, beleaguered middle class and summarily executed a clutch of figures tied to the previous regime. He set up Cuban-style "committees for the defence of the revolution" and "popular revolutionary tribunals" that sometimes chastised people for "laziness". Pioneers of the Revolution, his youth movement, wore berets like Che Guevara. Many Africans liken Sankara to Che. Whether this is a compliment or an insult depends on one's view of handsome, violent Marxists.

"He was dedicated to everything he did. He sacrificed everything to serve his people," says Pierre Ouedraogo, an old friend who presides over a memorial in his name. "Most African intellectuals think first about themselves, but he thought about the people first," he says. Sankara's friends and fans in Ouagadougou hope the trial will expose the murky details of Mr Compaoré's plot to oust him, punish the alleged assassins and so bring belated comfort to the families of those who were killed.

Less clear is whether details of France's suspected involvement in Sankara's demise will be revealed. Brian Peterson, a biographer of Sankara, doubts there will be a smoking gun implicating any foreign powers. “This will disappoint many people,” he says. If France were candid about what happened, the trial could help to redefine its relations with Burkina Faso “as a partner, not as imperialist overlord”. President Emmanuel Macron may not agree.

Some reckon the current president, Roch Kaboré, will try to use the trial to boost his own government’s popularity, which has been waning in part because of its failure to fend off the growing jihadist insurgency linked to al-Qaeda and Islamic State. Thousands have perished and more than a million have been displaced. Moreover, Mr Compaoré still has a following in the country, especially in the army. So it is not certain that bringing him to book, even in absentia, will enhance national reconciliation, as the government claims.

The insurgency caused 335 civilian deaths in May, June, July and August, up from 80 in the previous four months. Both sides have committed atrocities. “The Sankara trial should not be made to bear the sole burden for tackling Burkina Faso’s long-held culture of impunity,” says Corinne Dufka of Human Rights Watch. ■

Ja to change

The meaning of South Africa’s most popular magazine

For more than a century Huisgenoot has reflected shifts in Afrikaner culture

Oct 16th 2021 | JOHANNESBURG

A GLANCE AT its website belies the historical significance of *Huisgenoot*, the magazine with the highest circulation in South Africa. Among the most-read stories in early October were “*Skokoomblik toe bruidegom se rug tydens onthaal breek”* and “*Vrou se oog per ongeluk met supergom toegeplak”*. For those unfamiliar with Afrikaans, the language spoken at home by 12% of South Africans, these tales concern the “Shocking moment when groom’s back breaks during wedding reception” and the sticky situation in which a “Woman’s eye is accidentally glued shut with super glue”.

It is a far cry from the early days of the magazine. After the Anglo-Boer war (1899-1902) there was what Herman Giliomee, a historian, calls “the building of an Afrikaner ethnic consciousness” among the disparate group of South Africans of mostly Dutch descent. Important to that effort was

Huisgenoot (Home companion), launched in 1916. It presented Afrikaner history as a heroic epic, extolled Afrikaner literature and helped standardise Afrikaans as its articles were used in school comprehension tests.

By the 1970s Afrikaner nationalism had long since metastasised into apartheid, and circulation of the dry cultural weekly was dwindling. As well as being racist, apartheid South Africa was stuffy, pious and insular. Television, which one politician called the "devil's own box", was introduced nationwide only in 1976, meeting a pent-up demand for escapism and glitz. A revamped *Huisgenoot* tapped into that desire, introducing celebrity features, puzzles, recipes and so on, while glossing over apartheid. It was like *People*, but for white people.

"It is painful to look at how we covered politics in those days," says Yvonne Beyers, the current editor. But in its own way *Huisgenoot* reflects how nowadays, "We are South Africans first and Afrikaners second." White celebrities are prominent but reporters use shoe-leather journalism to get gripping first-person accounts of South Africans from all walks of life. It recently featured the gay wedding of two "coloured" (mixed-race) characters in a soap opera. "If we had published that 20 years ago there would have been an outcry," says Ms Beyers. Today the magazine reflects "how varied Afrikaans-speakers are", she adds. Some 44% of its readers are coloureds (most of whom speak Afrikaans), a slightly higher share than the 42% who are white.

Editors remain the custodians of Afrikaans. They keep an eye on English neologisms or translations of English idioms. (In Afrikaans one says the "ears of the hippopotamus" rather than "the tip of the iceberg".) But, in contrast to a century ago, *Huisgenoot* embraces the language's diversity by, for instance, quoting coloured South Africans in their vernacular. "We want to show a language that is still alive," says Ms Beyers. "This is not the Afrikaans of 1916."

Europe

Uncomfortable truths

It is tempting to blame foreigners for Europe's gas crisis

The main culprit is closer to home

Oct 16th 2021

"RUSSIA IS ABOUT bears now, it's not about bullies." So joked Sergei Ryabkov, Russia's deputy foreign minister, this week, speaking about the crisis in Europe's natural-gas market. His country favours stability and lower prices over runaway prices, he insisted: "We would prefer to have here a bear market."

Russia is responding to a view gaining currency in European capitals that Gazprom, the state-controlled energy goliath that is the continent's biggest supplier, has been stoking the continent's energy crisis by withholding exports of natural gas. European parliamentarians are demanding that Gazprom be investigated for not shipping more gas, allegedly as a ploy to secure final regulatory approval for the controversial Nord Stream 2 pipeline designed to ship Russian gas to Germany.

The Cassandras get it half right. Europe is indeed mired in an energy crisis. The price of natural gas has skyrocketed of late across Europe. This has led to panic in Britain, where the government is now considering offering subsidies and other state support for steel, chemicals and other heavy energy users. On October 12th E.ON, a German energy firm, took the extraordinary step of suspending new gas-supply contracts for residential customers.

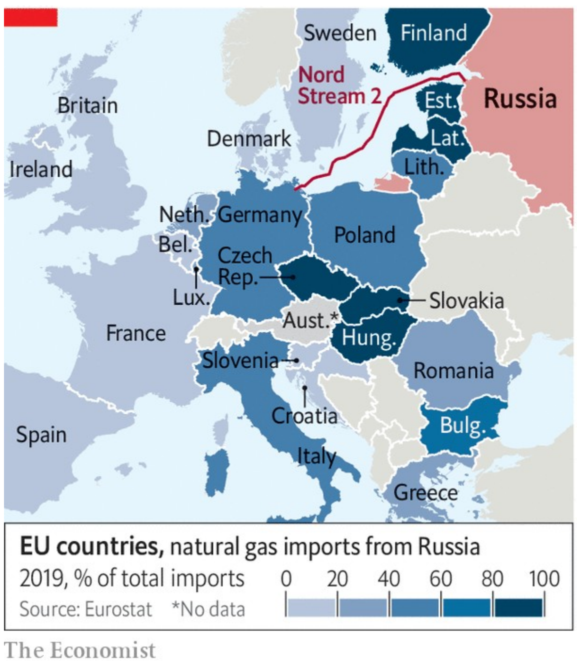
Worse yet, the continent looks headed for a bleak winter with a possibility of severe gas and power shortages. Matt Drinkwater of Argus Media, an industry publisher, observes that official forecasters are concerned that the La Niña weather phenomenon may produce an especially harsh winter not only in north-west Europe but also in north-east Asia and North America, which would spark further global competition for energy.

Europe’s stores of natural gas were well above the five-year average at the start of 2021, but a long winter combined with lower production in Norway and Britain (in part due to pandemic-related snags) means storage is now at worrying levels. Edward Morse of Citigroup, an American bank, predicts that if this winter is indeed a bitter one, those stores could run out.

Fuel switching was an option in the past, but that is difficult now. For example, green activism has stymied Europe’s nuclear development. James Huckstepp of S&P Global Platts Analytics, a research firm, notes that the region “can’t flip back to coal plants easily because some of them have been closed—and the rest made unattractive because of carbon policies.” And as recent painful episodes of low wind and depleted hydroelectric reserves across parts of Europe have made clear, renewable energy is not yet a reliable substitute for gas.

Using less gas will be difficult, at least in the short term. But is it possible for Europe to get hold of more gas? One way is to try to bully Russia into exporting more. Ursula von der Leyen, the president of the European Commission, recently praised Norway for helping with the gas crisis, but pointed an accusing finger at the Kremlin: “This does not seem to be the case in Russia.” But analysts reckon that the gas giant is actually exporting more gas to Europe this year than it did before the pandemic, and its big continental customers have recently confirmed that it is meeting its contractual obligations. There is little hard evidence that Russia is a big factor in Europe's current gas crisis.

Another possible way to boost supply would be to increase imports of liquefied natural gas (LNG) by ship. Over the past two decades, Europe's strategy of reducing reliance on Gazprom led to big investments in LNG, which now makes up some 20% of the continent's gas (up from none a few decades ago). When the global gas market was well supplied a few years ago, Europe enjoyed low gas prices thanks to access to surplus cargoes. But the combination of stagnant investment in new production and a sudden spike in global gas demand linked to the global economic recovery has led to a mad scramble for LNG of late.



That has some in Europe pointing, with a bit more justification, to another foreign bogeyman. Mr Morse notes "a tendency among European officials to put the blame on China". LNG imports have shot up in the Pacific region, with mainland imports soaring by 25% of late. Cargoes from America and the Middle East are spurning European ports, lured by the hefty price premium offered by Asian buyers. One advantage they have is explicit state support. In China, energy-security concerns have led officials to ensure adequate winter supplies "at all costs".

The other advantage they have, explains Michael Stoppard of IHS Markit, a research firm, is that most Asian gas is still procured on long-term contracts linked to the oil price—a practice Europe abandoned as it liberalised gas markets. Since Asian buyers are hedged, they feel less pain than do European counterparts fully exposed to today's astronomical prices. Mr Putin has, with some justification, ridiculed Europe's embrace of "market-based" pricing for gas as the work of some "smart alecs" at the European Commission, and suggested that Gazprom stands ready to revive the old-fashioned type of oil-linked contract.

In the end, no foreign bogeyman offers a satisfying explanation for Europe's gas crisis. There is another plausible, albeit controversial, explanation found closer to home: the continent's headlong rush to decarbonise its energy system. Mr Morse argues that what Europe's leaders are hiding from on the eve of the UN's big climate summit next month in Scotland is the first crisis of the energy transition. As it shifts away from fossil and nuclear power and embraces renewables, the region has not properly dealt with the need for redundancy on the grid. America has such problems too, but he notes that it is self-sufficient in energy. Europe is far from it. ■

For more expert analysis of the biggest stories in economics, business and markets, [sign up to Money Talks](), our weekly newsletter.

Viennese walks

Sebastian Kurz is forced out of the Austrian chancellery—again

The Czech prime minister is on the way out, too

Oct 16th 2021 | BERLIN

HE MAY ONLY be 35, but Sebastian Kurz has been involved in enough political intrigue for several lifetimes. On October 9th Mr Kurz was toppled as Austria's chancellor for the second time in three years, amid claims that he had masterminded a conspiracy to buy himself favourable media coverage. In America Mr Kurz would barely be old enough to run for president. But his career at the top of Austrian politics may already be approaching its end.

Mr Kurz and nine others stand accused of an elaborate plot to upend the leadership of the conservative Austrian People's Party (öVP), and ultimately of the country. Prosecutors allege that, starting in 2016, the finance ministry siphoned taxpayers' money to fund bogus opinion polls, published in a compliant newspaper, to help Mr Kurz unseat Reinhold Mitterlehner, then head of the öVP, and take his job. Fake invoices are said to have disguised the ploy. The evidence is in a stash of 300,000 text messages discovered on the phone of Thomas Schmid, a supporter of Mr Kurz who was working at the finance ministry. They show Mr Kurz egging on Mr Schmid; at one point he describes Mr Mitterlehner as an “arse”. (On October 12th a pollster was arrested in connection with the case. Mr Kurz protests his own innocence.)

Mr Kurz tried to cling on when the news broke, but resigned under pressure from the Greens, the öVP’s coalition partner, and his own party’s regional barons. He proposed as his replacement Alexander Schallenberg, an ally who had served as his foreign minister since 2019. A career diplomat, Mr Schallenberg shares his erstwhile boss’s tough views on migration but not his instincts for populist tub-thumping, nor his obsession with media coverage. This will relieve other EU leaders, many of whom were tiring of Mr Kurz.

Yet will Mr Schallenberg really be in charge? Moments after being sworn in he insisted on Mr Kurz’s innocence and said he would continue to consult him closely. Insiders say he does not want to trample on Mr Kurz’s democratic mandate. Mr Kurz says he will not be a “shadow chancellor”. But he immediately appointed himself head of the öVP’s parliamentary group, a position that affords him a seat at the cabinet (and immunity from prosecution, although he says he will seek to have this lifted). He will hope to return as the party’s candidate for chancellor at the next election. That is due in 2024, though so delicate is the political mood that few believe the öVP-Green coalition can survive that long.

Still, if the obsequies for Mr Kurz are premature, so are expectations he can simply ride out the storm, says Marcus How at VE Insight, a Vienna-based political consultancy. Even if there is no smoking gun linking Mr Kurz to the poll-buying conspiracy, further revelations are likely as prosecutors wade through Mr Schmid’s messages. Their investigations, and thus possible criminal charges, will rumble on for years. Once Mr Kurz loses his aura of political invincibility, his party’s regional chiefs will drop him quicker than a hot *Knödel*.

The broader stench engulfing Mr Kurz has become hard to ignore. Once feted as the *Wunderkind* future of European conservatism, his freshness appealed to voters tired of the grubbiness that has long bedevilled Austrian public life. Instead he has been embroiled in endless scandal. The first coalition he led, a controversial alliance with the far-right Freedom Party (FPö), collapsed in 2019 when an FPö leader was ensnared in a video sting. In May Mr Kurz was accused of perjuring himself before a parliamentary committee investigating corruption. In his brief political life the former chancellor has been in coalition with three of Austria's four other main parties; all of them have ruptured. That is a warning for anyone else who might think of going into government with him.

Mr Kurz's fall coincided with a comparable defenestration in Prague. On October 9th Andrej Babis, the Czech Republic's billionaire prime minister, lost an election to a five-party alliance. Mr Babis has also faced allegations of corruption, linked to EU subsidies channelled to his agricultural empire. (He denies wrongdoing.) Yet Milos Zeman, the erratic president, may try to delay the exit of Mr Babis, an ally, as long as possible. One day after the election Mr Zeman was rushed to hospital, leaving the country in constitutional limbo. Like Mr Kurz, Mr Babis is down—but not yet out. ■

France’s wannabe Trump

Eric Zemmour, the anti-immigrant radical who could supplant Marine Le Pen

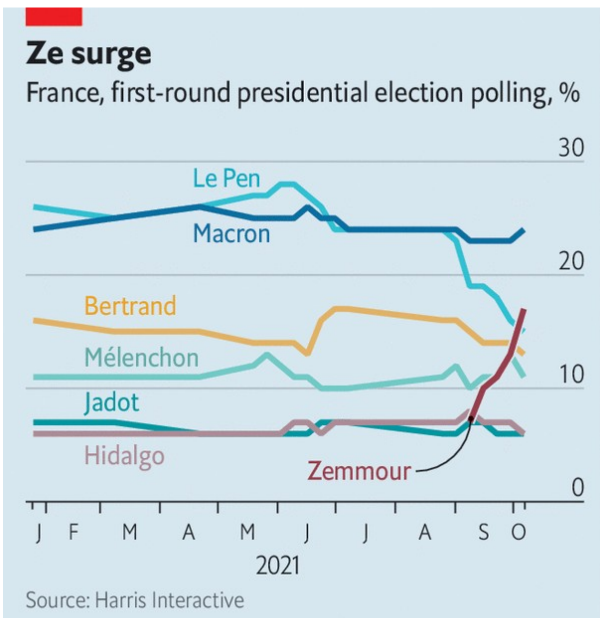
He says Islam has no place in France. Many voters seem to agree

Oct 12th 2021 | PARIS

“T HE FRENCH Trump, it’s you!” a Parisian ally of the former American president once told Eric Zemmour. Or so the outspoken anti-immigrant polemicist claims in his latest bestselling book. A few weeks ago, such an assertion appeared self-serving and fanciful. But a recent poll surge by this Vichy apologist and television personality has taken established French political parties by surprise. Mr Zemmour is seeking nothing less than to turn nationalist party politics upside down and outflank Marine Le Pen, by making the hard-right leader look too soft.

Ahead of next April’s two-round presidential election, two recent first-round polls have put Mr Zemmour in second place, ahead of Ms Le Pen and behind Emmanuel Macron, the sitting president. This has transformed him from a commentator on frenzied TV talk shows into the subject of them. Which is exactly where the radical nationalist, who has been convicted of inciting racial hatred, wants to be. Polls still suggest Mr Macron will lead in the first round and win in the second. But they also suggest that Mr Zemmour, who has yet to confirm he is running, could upset presidential ambitions on the left and the right.

The 63-year-old Mr Zemmour has been a controversial pundit for a quarter of a century. His *décliniste* books predict the collapse of French civilisation, with titles such as "French Melancholy" and "French Suicide". More recently he has grabbed attention as a provocateur on CNews, a cable channel that some liken to America's Fox News. "Zemmour *président*" posters have been pasted to lamp posts and walls. Last month Mr Zemmour was forced to quit his nightly TV show under French rules that require broadcasters to give equal airtime to political figures. The broadcast regulator judged that he was already more politician than journalist, and so his appearances would have to be counted as such.



The Economist

Whereas Ms Le Pen has tried to sanitise her party's xenophobic image and distance it from its roots, Mr Zemmour seeks to radicalise, provoke and frame the debate around his own obsessions. He is "counter-feminist", anti-woke, and blends erudition with outrage, simple sentences and rant. Of Jewish-Algerian descent, he has declared that Vichy France in fact protected French Jews, that foreign first names (such as Mohammed) should be banned, and that Islam is not compatible with France. Jean-Marie Le Pen, founder of the party his daughter now leads, said approvingly that Mr Zemmour says “things that nobody dared say, except me”.

Mr Zemmour’s popularity may yet prove fleeting. But the polemicist, who claims he is a Gaullist, seems to have found a potent pitch. It mixes a veneer of intellectual respectability with crude populism, in a way that links the ultra-Catholic bourgeois vote to the working-class electorate. Ms Le Pen, by contrast, appeals to those on tight budgets, from the populist right to the ex-Communist left. In 2017 Ms Le Pen scored fully 34% in the second round, against Mr Macron. But she failed to win a single region at elections this year, and her star has waned. Now she and Mr Zemmour are competing for many of the same disillusioned, hard-right voters. The provocateur, who has styled himself as a sort of French Trump with more brains, could take votes from the nationalist fringe of the mainstream right as well as from her, and threaten her place in the run-off.

Mr Zemmour’s surge is further confirmation of the weakening of political parties in French presidential politics. Mr Macron showed to spectacular effect in 2017 that it is possible to seize the presidency under the fifth-republic constitution without an established party. “There will be a before and an after Macron,” says a voter: “The old parties of left and the right, they don’t exist anymore. People don’t identify with them. They feel lost.”

The Socialists, whose candidate in 2017, Benoît Hamon, scored just 6%, are not polling much better this time, even under their current hopeful, Anne Hidalgo, the mayor of Paris. The Greens’ nominee, Yannick Jadot, is also struggling. A clutch of other candidates lie even further to the left. None shows any inclination to give way to any other, and even if they did this might not be enough for the left to make it to the second round.

On the centre-right, the Republicans will vote for their nominee on December 4th. The three favourites are Xavier Bertrand, head of the northern Hauts-de-France region, Valérie Pécresse, head of the Ile-de-France region around Paris, and Michel Barnier, the former EU Brexit negotiator. Mr Bertrand is preferred by the French as a whole. But the 70-year-old Mr Barnier, who is less well-known in France than in Britain and fancies himself as an elder statesman, has made a calculated pitch for the anti-immigration vote. For card-carrying members, who will vote for the nominee and tend to be on the party's right, this could be just their champion. Meanwhile, Edouard Philippe, a centre-right former prime minister, launched his own new party, Horizons, on October 9th but promises to use it to help Mr Macron in 2022.

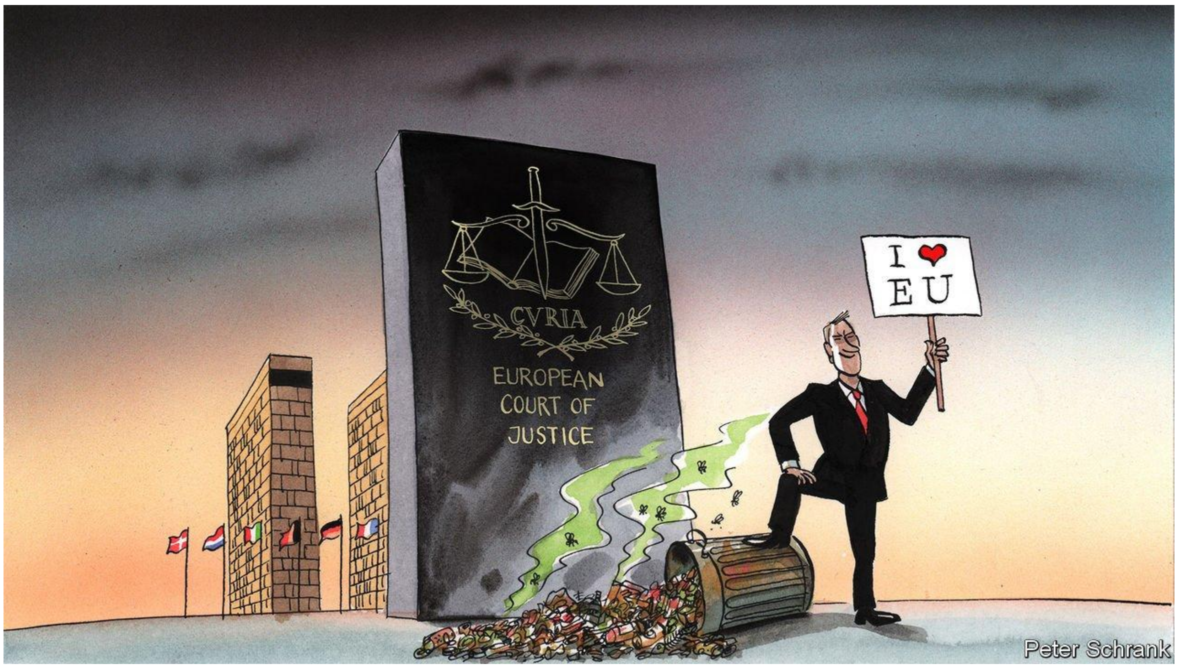
By splitting the hard-right vote, Mr Zemmour could in fact end up helping Mr Macron's re-election prospects. No poll yet suggests that Mr Zemmour could win a run-off. "He's capturing attention as the curiosity candidate," says Emmanuel Rivière of the Kantar polling group: "It's far harder to run a real campaign than to appear on TV or attend a book-signing." All the same, the president's party is warning against complacency. "It's going to be tough," says Roland Lescure, one of Mr Macron's deputies: "It's winnable, but it's not won yet." With six months to go and France in a febrile mood, Mr Zemmour is dragging politics onto toxic ground, and contributing to what could be a nasty, divisive campaign. ■

Charlemagne

Poland is a problem for the EU precisely because it will not leave

Unlike Britain, Poland will remain inside the tent causing trouble

Oct 14th 2021



B REXIT, BEFORE it happened, was imagined in many forms. Hard, soft, Norwegian, Swiss or Turkish. Briefly, an Albanian option was discussed. Often it was just "clean". A "clean Brexit" would free Britain from the EU's single market, customs union and its courts, advocates said. Just as there are many ways of leaving the EU, there are many ways of remaining. There is the clean version, in which countries quietly accept the EU's strictures. Then there is the messy version, where governments foul up the club. Think of it as "dirty remain".

To see dirty remain in action, look at Poland. Its Constitutional Tribunal challenged the legal order of the club in a ruling on October 7th. In a case brought by the Polish prime minister, the court, which is stuffed with allies of the government, ruled that fundamental parts of EU law do not trump Poland's constitution. The judgment, which was exactly what the government wanted, has punctured six decades of European case law. In short, the EU's supreme court is no longer supreme, as far as Poland is concerned.

Poles protested in droves, claiming that the government was attempting to drag the country out of the bloc against their will. But anyone expecting a British-style "Polexit" will be disappointed. Support for the EU within the country is among the highest in the union. Standing for an election in Poland on a platform of quitting the EU would be akin to a manifesto promising to drown puppies. The problem is not that Poland is trying to leave the EU; the problem is that it intends to stay.

Dirty remain is more pernicious than Polexit. The risk is that the EU's legal order in Poland slowly fades, argues Daniel Sarmiento of the Complutense University of Madrid. A domino effect takes over. If courts across the EU cannot trust their Polish peers, then the EU's legal system starts to gum up. An arrest warrant here is not honoured there; a banking licence granted in one country may not be honoured in another. Over time, an area over which people, goods, capital and services can flow freely turns into one where they can move only with trouble.

Bad behaviour can spread. Eurosceptics have mostly given up on leaving the EU. It is, as Britain has shown, rather stressful. Eric Zemmour, the nationalist radical mulling a run in the French presidential election, has pledged to restore the primacy of French law over EU law. Even more mild-mannered figures, such as Michel Barnier, the EU's Brexit negotiator, toy with the same idea. If one government can avoid abiding by unpopular rulings by the EU's top court with little fear of sanction, it becomes a tempting option for all.

As an idea, "dirty remain" has a veneer of respectability. Its Polish proponents argue that everyone else does it, but only Poland is attacked. Polish judges are fond of citing their German counterparts, who have accused the European Court of Justice (ECJ) of overstepping the mark in recent years. In such rulings, the medium counts as much as the message. No one doubts the independence of Germany's constitutional court. No one believes in the independence of Poland's.

The messages are different, too. The German court accused the ECJ of exceeding its mandate in approving a programme of bond-buying by the European Central Bank. The Polish court said the country's constitution trumped fundamental parts of EU law, such as "ever closer union", a much more sweeping ruling. The German court was playing with matches; its Polish counterpart doused the EU's legal system in petrol and deliberately started a fire.

On paper, the solution to such a disagreement is simple: leave the EU. Britain made things easy for the club when it departed. Rather than hanging around blocking things and generally causing a fuss, it followed the procedures as laid down in Article 50 of the treaties it was so keen to leave. Doing this without a clear plan was "like putting a gun in your mouth and pulling the trigger" according to Dominic Cummings, the man who led the Vote Leave campaign. Yet to the surprise of EU diplomats this is exactly what the British government did.

Instead, Poland is following a strategy that played out in *Watchmen*, a comic. In it, Rorschach, a vigilante, is sent to jail, where he greets a fellow inmate in the canteen by tipping the contents of a deep-fat fryer over his head. "None of you seem to understand," he says to his now-crispy foe. "I'm not locked in here with you. You're locked in here with me." In the EU, destinies are linked. If one person starts hurling a fryer, everyone must duck. David Cameron, Britain's prime minister at the time, begged for concessions from the EU ahead of Britain's referendum on leaving it, including an opt-out from "ever closer union". Poland threw its fryer without warning.

Such dirty tricks are difficult to deal with inside the club. A nation-state can enforce its will internally, sending in the police or even, in extremis, the army to quell insurrection. The EU has no such tools. The European Commission could refuse to sign off on Poland's share of its covid-19 recovery fund, depriving the country of €57bn ($66bn), for instance. The danger is that this will prompt Poland to bring the EU's workings to a halt in protest.

Amicable divorce or poisonous marriage

Bad behaviour outside the club is less of a problem. After doing things by the book as a member, Britain has discovered a rebellious streak, trying to renege on the terms of its deal with the EU. This causes little trouble for the EU. Rather than an existential problem, Brexit is a tedious one involving the movement of sausages across the Irish sea. Britain has been cauterised. By contrast, the rule of law in Poland is an open wound. It is a long-term threat, which needs to be solved if the EU is to thrive. Just as a financial crisis in one country can spread to another, so can a constitutional crisis. Dealing with a departure is relatively easy for the EU. Handling dirty remain is much harder. ■

Britain

Two plus two make four

Academic freedom in British universities is under threat

A campaign of harassment against Kathleen Stock, a philosophy professor, highlights a stifling orthodoxy

Oct 13th 2021

STUDY PHILOSOPHY at Sussex University and, in your first year, you may read John Locke. The Enlightenment thinker is celebrated today for his "Letter Concerning Toleration", in which he argued that to compel men "by fire and sword to profess certain doctrines" was not only immoral but pointless: the only true persuasion is the "inward persuasion of the mind". If the students and staff denouncing Kathleen Stock, a professor in the philosophy department, are familiar with Locke's argument, they seem unmoved by it.

Since term began protesters in balaclavas and masks have been denouncing Professor Stock's "transphobia". They have let off flares next to signs saying "Stock Out" and put up posters reading "We're not paying £9,250 [$12,600] a year for transphobia—fire Kathleen Stock". One group stated that: "Our demand is simple: fire Kathleen Stock. Until then, you'll see us around."

Police have advised her to install CCTV cameras at home and implied that she may need security guards to return to campus.

For years, a debate has rumbled over whether there is a problem with free speech in British universities. Those who say there is not deny that "cancel culture" is a real thing and regard those who disagree with them, wherever they sit on the political spectrum, as reactionaries borrowing talking points from the American right. Their opponents point out that silencing is by its nature hard to detect: silence doesn't make much noise. For them Professor Stock is not merely a persecuted woman. She is proof, personified.

As any good academic would point out, one is a poor sample size. But there is other evidence that free speech is at risk in British universities. A report by the University and College Union (UCU) in 2017 ranked Britain 27th out of the (then) 28 members of the European Union for the legal protection of academic freedom. A study from Policy Exchange, a right-leaning think-tank, found that 32% of academics who identified as politically right-leaning, and 15% of those who identified as centrist, practised self-censorship. Speak to academics and many will tell you that there is a problem—and tell you not to quote them.

Few academics (generally a leftie lot) will shed many tears over the silencing of more right-wing colleagues. What makes Professor Stock's case so illustrative, then, is that her credentials (liberal, lesbian, feminist, OBE) are so impeccable and her claims so vanilla. She is being vilified because she has said, and written in a recent book, "Material Girls", that biological sex exists and should in some circumstances take precedence over self-declared gender identity, and that therefore some female-only spaces (women's changing rooms, sports, prisons) should be off-limits to trans women, that is, males who identify as women. That accords closely with most Britons' opinions, and with British law.

But activists who oppose her argue that such views should not be taught uncritically in universities. Lecturers might teach biological sex as a historical artefact, says one, just as they would teach that people used to believe "toxic things about the priority of white people". But just as universities would not teach eugenics, so the immutable, binary nature of sex should not be promoted "as an ideology that is real".

To believe that biology is bunkum may be novel, but students have always been a rum bunch. In the 19th century they set fire to effigies to protest against degrees for women. In the 20th, they embraced communism. But when students turned Trot, vice-chancellors did not don boilersuits and salute their comrades. Modern academia has been less stalwart.

In January more than 600 academics signed an open letter protesting against Professor Stock being awarded an OBE. Rather than condemning the attacks against her, the Sussex branch of the UCU urged a university-wide investigation into “institutional transphobia” and warned that “appeals to both employment rights and academic freedom are often instrumentlised” (in other words, used as cover for bigotry). Shereen Benjamin, a sociologist at Edinburgh University, has long suffered harassment for similar views. In 2019, when students who agree with her put up stickers around campus saying that “Female is a biological reality”, the principal called them “offensive” and said those responsible would be disciplined.

Just how much dissenting views are being stifled on campus was thrown into sharp relief last year when Cambridge University tried to change its policy on freedom of speech to demand that staff “be respectful of the differing opinions of others”. Arif Ahmed, a philosophy lecturer, objected, saying that “not all views are equally deserving of respect”. He wanted “respect” amended to “tolerate”. To have his amendment voted upon, he needed 25 academics’ signatures. He struggled to get them, despite approaching more than 100 people. Many said they backed him privately but would not do so publicly: they feared for jobs, promotions and contracts. Eventually, he succeeded, and when votes were cast in late 2020, 86.9% were in favour of changing “respect” to “tolerate”.

With hindsight, that may have been the moment when the tide turned against campus silencing. After the Sussex row started to make the headlines Lady Falkner, a cross-bench peer who is head of the Equality and Human Rights Commission, an official watchdog, and is married to an academic, wrote a letter to the *Times* saying that “university is a place where we are exposed to ideas and learn to debate with each other”. Students, she says, “do not have a right not to be made uncomfortable. They can’t say that because they feel uncomfortable, someone should be fired.”

The leadership of Sussex University, too, is finding its voice. In recent days Adam Tickell, its vice-chancellor, wrote to all staff saying that “we cannot and will not tolerate threats to cherished academic freedoms”. The stir that provoked alarmed him, he says. “The degree of interest in me speaking out in support of academic freedom…is a concern to me, because it should be no more news than [saying] the Pope is Catholic.” Universities might admit the pope’s catholicity. They have been less willing to celebrate their own. ■

Master and commander

British defence strategy is undergoing a naval tilt

The promotion of an admiral to run the armed forces accentuates the turn to the seas

Oct 14th 2021

IN A COUNTRY of grand titles, no official holds a loftier one than Britain's first sea lord, the head of the Royal Navy, whose office predates that of the prime minister. Now Admiral Sir Tony Radakin, the incumbent, has been handed dominion over not just the oceans, but also land, air and space. On October 7th the government announced that he would become the next chief of defence staff, the country's most senior military officer, to replace General Sir Nick Carter on November 30th.

Admiral Radakin, a trained barrister born in Oldham, in the north of England, will be the first naval officer to hold the top job in almost two decades. That is no coincidence. After 20 years of grinding land warfare in Iraq and Afghanistan—the latter concluding in disastrous fashion in August, with the fall of Kabul—British defence strategy is once more acquiring a pronounced naval flavour.

In March the government published a review of foreign policy that emphasised Britain's role as a "maritime trading nation". It promised to deepen the country's connections to Asia, Africa and the Gulf and set out a "tilt" to the Indo-Pacific. A subsequent defence review said that the armed forces would be designed for "permanent and persistent global engagement", not just preparing for big wars.

One manifestation of this maritime tilt is that while the army is being shrunk, the navy's fleet is planned to grow to 24 frigates and destroyers by the 2030s, though with a lean period over the coming decade. In a speech in May Admiral Radakin hailed a "renaissance of British shipbuilding".

Today's ships are being worked hard. Last year the Royal Navy sent ships to the Barents Sea, the heart of Russian naval power, for the first time since the cold war. In August a British destroyer skirted Crimean waters, drawing fire from Russia's coastguard. The crown jewel of the fleet, a carrier strike group built around HMS *Queen Elizabeth*, one of two new aircraft-carriers, is voyaging through Asia. On September 27th one of its destroyers passed through the Taiwan Strait, becoming the first British warship to do so in 13 years.

Some sailors will stay far from home. The Royal Navy plans to deploy two small vessels to Asia permanently. Though it will stretch the navy thin, a pair of "littoral response groups", in essence a handful of commando-packed amphibious ships, will deploy in the North Atlantic this year, and to Oman, in the Indian Ocean, in 2023.

These strategic shifts—a maritime turn, greater attention to Asia and an emphasis on using the navy to make friends—came together in the AUKUS pact of September 15th, in which America and Britain agreed to help Australia build nuclear submarines to deter China. It cannot have hurt Admiral Radakin's candidacy that he helped negotiate the agreement.

Meanwhile on land, the mood is glummer. Having provided six of the past ten defence chiefs, the British Army saw Admiral Radakin chosen ahead of two of its own: General Sir Mark Carleton-Smith, chief of the general staff (the head of the army) and General Sir Patrick Sanders, who leads Strategic Command, which controls special forces and cyber capabilities.

Despite its active role during the pandemic last year and its response to the fuel crisis this month, as well as its successful airlift from Kabul, the army is smarting from brutal cuts in the defence review. But it has also botched key projects. Ajax, an armoured reconnaissance vehicle that was supposed to serve as the digital hub for Britain's future armoured division, is suffering from potentially crippling problems with vibration and may have to be scrapped. Francis Tusa, a defence analyst, says that some in the army are worried that it will not be able to deliver a high-readiness brigade (roughly 5,000 troops) to NATO by 2024, as promised, because of equipment shortages.

The army, caught between peacetime missions that require light infantry, and preparation for high-end warfare with heavier forces, "is in danger of no longer having a clear role—or being able to perform one", warns Anthony King of Warwick University, who advises the army. Preserving inter-service harmony may require Admiral Radakin to pay close heed to the Royal Marines' motto: *per mare, per terram*—by sea, by land. ■

Back to the past

The Northern Ireland protocol is up for discussion. Again

The Conservative government starts another game of chicken with the European Union

Oct 13th 2021

BREXIT BATTLES are back. And not surprisingly the biggest is over Northern Ireland, the hardest issue in previous negotiations. It was supposedly solved in the withdrawal treaty of 2020 by the Northern Ireland protocol, which averts a hard border with the Republic of Ireland by keeping the North in the EU's single market and customs union for goods, even though Great Britain is out of both. But that inevitably means border and customs controls between the two, in the Irish Sea. The Democratic Unionist Party (DUP) complains that 20% of EU border checks in the first quarter were in Northern Ireland, and wants the protocol scrapped. In July the British government proposed instead a radical revision that would dispense with almost all controls.

On October 13th the European Commission offered a compromise to keep the protocol but pare back checks, notably for chilled meats and medicines, and scrap those on products clearly destined for consumption in Northern Ireland. It claims this would end half today's controls. Yet as in a game of chicken, Lord Frost, Boris Johnson's EU negotiator, pre-empted this offer a day earlier by reiterating his demand for a complete rewrite of the protocol, placing much emphasis on British insistence, on grounds of sovereignty, on eliminating the role of the European Court of Justice (ECJ) in policing it.

The protocol was central to the Brexit deal that Mr Johnson presented to voters in December 2019 as a triumph, because it got rid of the Northern Irish backstop negotiated by his predecessor, Theresa May. That would have kept the whole of the United Kingdom in a customs union with the EU. Mr Johnson said his deal gave Northern Ireland the best of both worlds. But Lord Frost now says the protocol was accepted at a moment of negotiating weakness and has proved unsustainable. The suspicion in the EU is that the government acted in bad faith by agreeing to the protocol with no intention of applying it—a notion confirmed this week by Dominic Cummings, Mr Johnson's then chief of staff.

Flouting one treaty hardly makes it easier to win agreement to another. And it is also unlikely that the EU could accept the removal of the ECJ, which is essential to the single market's legal order. Other countries might then seek similar treatment. It was Mr Johnson and Lord Frost who rejected alternatives: not only Mrs May's backstop but also the Norwegian one of joining the EFTA court that mirrors the ECJ or a Swiss-style veterinary deal to avoid food checks. And despite the DUP's campaign, business and most voters in Northern Ireland support an improved protocol if uncertainty over its future can be settled. There is no popular demand to scrap the ECJ's role.

Now weeks of talks will start. Brussels is wary of a British habit of pocketing concessions only to ask for more. Trust is lacking all round. Lord Frost's labelling of Britain's EU membership as a "bad dream" rankles. So do his threats to invoke Article 16, which allows unilateral suspension of parts of the protocol if trade is badly disrupted. It is unclear how this would help either to increase certainty or to end the ECJ's involvement. It might well trigger retaliation, including suspension of part or all of Britain's trade deal with the EU. Unilaterally stopping controls on goods flowing to Northern Ireland might force a hard north-south border instead. And Mij Rahman of the Eurasia Group, a consultancy, notes that, if this is rejected on political grounds, it would create pressure for customs controls between Ireland and the rest of the EU, which would be unacceptable to Dublin as well as the EU.

Better than risking a trade war would be to co-operate on simplifying checks under the existing protocol. Yet Mr Johnson and Lord Frost believe that bloody-mindedness towards the EU is the only way to win out. The evidence for this is thin: it was Britain, not the EU, that made the most concessions in the withdrawal treaty and trade agreement. Perhaps more worrying is the view that fights with the EU may bolster domestic support for Mr Johnson's government, just as they may for the DUP in Northern Ireland, which faces a tough election battle against other unionist parties and Sinn Fein, the main nationalist one, next May. This winter may be frosty. ■

For more coverage of matters relating to Brexit, visit our [Brexit hub]

All talk and no trouser

Why Stormont has dithered endlessly on corporation tax

A window of opportunity to attract investment to Northern Ireland will not stay open forever

Oct 14th 2021 | Belfast

IN BRANDING TERMS, Ireland is a superpower, from world-famous writers and musicians to the Irish-themed pubs scattered across the globe. But for business, as its government's department of finance cheerily acknowledges, the 12.5% corporate-tax rate introduced in 2003 is "at the centre of the 'Irish brand'". Irish operations are central to the tax planning of many multinationals, among them Google, Apple, Pfizer and Johnson & Johnson. And they, in turn, have been so central to Ireland's economy that its government long held fast against demands to raise the rate, despite endless complaints from other members of the European Union about undercutting and unfair competition.

On October 7th Ireland finally buckled, agreeing to raise its corporate-tax rate for large companies to 15%, a proposed global baseline, as part of a broader attempt to crack down on corporate tax avoidance. It was not only a big policy shift for the Republic, but a reminder, if one were needed, of the weakness of the devolved administration in Northern Ireland, and its politicians' inability to seize opportunities and make trade-offs.

For the six counties of the island that remain part of the United Kingdom, the Republic's low-tax policy has long provoked envy and an urge to emulate it. In 2015, after more than a decade of lobbying Westminster, the devolved administration in Stormont gained the power to lower its corporate-tax rate. It was the sole big idea for transforming a region that had been left painfully dependent on the public sector by 30 years of sectarian violence. When it was first mooted, the UK-wide rate was 30%. But by 2015 it had fallen to 20%. Nevertheless, Stormont announced that year that it would cut its rate to 12.5% in 2018.

Under European Union state-aid law, such a policy was permissible only if Northern Ireland bore the cost, estimated at the time as around £275m ($375m) a year, or 0.6% of its GDP. The British Treasury imposed another condition: that the devolved administration got its finances in order. But in 2016 the "cash for ash" scandal came to light. A scheme intended to boost renewable energy was so badly designed that people who burned wood pellets received subsidies higher than the cost of the fuel.

The scandal caused the devolved government to collapse, and Northern Ireland did without an administration for three years. In the meantime came the vote to leave the European Union. Then covid-19 struck. But as the province emerges on the other side of both Brexit and pandemic, a corporate-tax cut looks as distant as ever.

Under the Brexit withdrawal agreement, European state-aid law still applies to swathes of Northern Ireland's economy. And post-covid belt-tightening means that Westminster would in any case be unlikely to make up a revenue shortfall. Cutting corporate taxes "would only be possible if it was affordable," says Conor Murphy, the finance minister for the devolved government, "which it is not at this time, given the very constrained budgetary position we face and the huge pressures on public services, particularly health".

In March the Northern Irish administration appointed Paul Johnson, the director of the Institute for Fiscal Studies, a London-based think-tank, to examine whether more tax powers could be devolved to the province. Last month he told an audience in Belfast that although low corporation tax had played a role in the Republic's prosperity, other policies had mattered, too: a long-term economic strategy and stable tax system, investment in technology and education, access to the single market, and plenty of immigration. "You need to pull that lever alongside a whole bunch of other things to be effective," he said, "and it may be less effective now than it would have been 20 years ago."

Hold me back and let me at him

That highlights Northern Ireland's dilemma. Even if it slashes corporation tax, it does not have the Republic's consensus on keeping the rate low. Companies considering investing in Northern Ireland would worry that politicians would change their minds. Sinn Fein, the main nationalist party, which is expected to gain the largest number of seats in next year's elections to Stormont, likes the idea of cutting corporation tax mainly because it likes harmonising policies across the island, never mind what those policies are. But on corporate tax, that nationalistic principle clashes with its left-wing economic ideology (it regards leftists in Cuba and Venezuela as fellow-travellers, though has been much less radical in government).

In April 2023 the UK-wide corporation-tax rate is slated to rise to 25%, re-widening the gap that the tax rise in the Republic is about to narrow. A higher mainland rate means the possibility of gaining a larger competitive advantage—but also a bigger loss of revenue, unless the lower taxes are more than counterbalanced by an ensuing boost to investment and economic activity. But given the chance to test their big idea, politicians used to other people doing the taxing while they do the spending have failed to screw up the courage. ■

Demography and destiny

In Britain, childlessness seems likely to return to 1920s levels

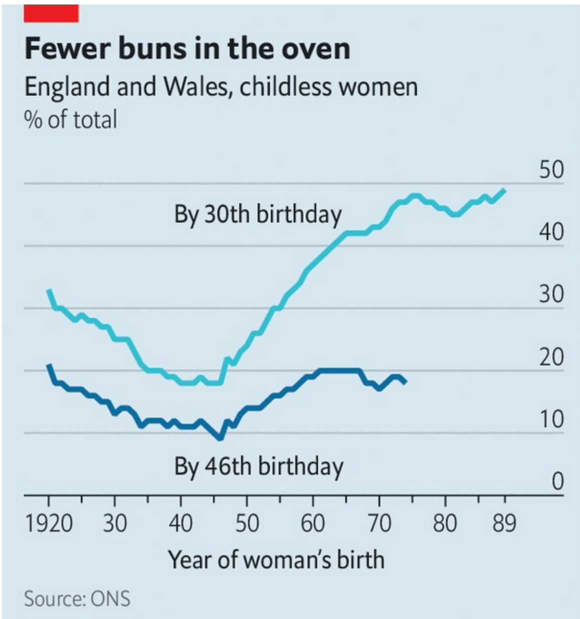
That will strain the care system, and perhaps change the culture

Oct 14th 2021

ANYBODY MULLING a career as a midwife or nursery manager might want to reconsider. On October 14th the Office for National Statistics reported that in 2020 the fertility rate in England and Wales, which is expressed as the number of children per woman, fell to 1.58, the lowest since records began in 1938. Babies are particularly scarce in inner London. Just 5,442 were born in the borough of Newham last year, down from 6,426 in 2012. And almost all were conceived before covid-19 made the prospect of going into hospital unappealing. The tally for 2021 may well be lower.

Birth rates can fall for several reasons. Couples may decide to stop at two children rather than going for a third. Gaps between pregnancies can extend. If women merely delay having children, the fertility rate will fall and then rebound, as happened to some extent in the 1970s and again around the turn of the century. But this time it looks as if people are going without altogether.

A recent article by John Ermisch, an Oxford University sociologist, finds that the drop in the English and Welsh fertility rate has been caused largely by a decline in first births. Women without university degrees, who have historically been more likely to have children, are emulating the better-educated. If the current pattern holds, Mr Ermisch reckons, 21% of women will have no children—back to the level of the cohort born in 1920 (see chart).



The Economist

Although the stereotype of a childless woman is a trouser-suited careerist running too late to the IVF clinic, the reality is different. One study of Britons born in 1970 found that the two most important reasons for remaining childless, among both men and women, were that they did not particularly want children or did not meet the right partner. That hints at a broad change in norms and expectations. A new paper on America by Melissa Schettini Kearney and two other economists comes to similar conclusions. They think fertility is declining not because of economic pressures, but because people's assumptions about life and families have changed. In particular, children are thought to require much more effort and attention than was the case in the past.

Few old people are childless today. Those celebrating their 80th birthdays this year belong to a cohort born in 1941, among whom only 11% ended up child-free. Falling fertility and growing lifespans mean that the number of childless 80-year-olds will triple over the next two decades, according to the ONS, and seems likely to rise thereafter. That will put more pressure on the care system, because old people without children are more likely to receive formal care.

Culture might change, too. British novels used to be stuffed with elderly bachelors, spinsters and maiden aunts, but they faded from view in the 20th century. “The position of an unmarried, unattached, ageing woman is of no interest whatsoever to the writer of modern fiction,” complained a character in “Quartet in Autumn”, a novel in 1977 by Barbara Pym, who was the standout exception to the rule. Bring back the literary spinster—or, failing that, look to Pym’s novels for a vision of the future.

How red is my valley?

Mark Drakeford wants to shake up Welsh politics

Welsh Labour has remained strong, despite the party's troubles elsewhere in Britain

Oct 14th 2021

UNTIL RECENTLY allies of Mark Drakeford, the first minister of Wales, would have said he was neither recognisable nor photogenic enough to be centred in campaign materials. But since becoming first minister in 2018, the grey-haired former social worker with a penchant for ill-fitting suits has become a political star. At the Labour Party's recent conference in Brighton he was both warmly welcomed at a far-left fringe meeting and applauded rapturously when the party's leader, Sir Keir Starmer, lauded his electoral success. Celebrity, says Mr Drakeford, is not necessarily an asset. But it gives him a chance to shift the policy agenda in Wales—despite strong headwinds and a devolution settlement that reserves to Westminster some of the powers he would like to use.

Next year Labour will celebrate a century of dominance in Wales. So it may not seem all that impressive that in May's elections to the 60-seat Senedd Cymru (Welsh Parliament), it raised its haul of seats from 29 to 30, enabling it to form a minority government. But the country is Brexit-leaning, and support for independence is rising. In 2016 53% of voters in Wales backed leaving the European Union, and in February Savanta ComRes, a pollster, found 35% supported an independent Wales. These twin nationalist forces have brought Labour low in England and Scotland. Before May's election, polling predicted such a bad showing that Mr Drakeford might lose his seat. Party members talked nervously about a coalition with Plaid Cymru, which campaigns for Welsh independence.

It was Mr Drakeford who turned the tide. His cautious approach during the pandemic contrasted with that of the prime minister, Boris Johnson. At times he warned Welsh people not to hop across the border for a pint in an English pub when Welsh ones were closed. He was recorded saying that Mr Johnson "really is awful". Under his leadership, Welsh Labour doubled down on its long-standing message that it is a defensive force protecting the country against Westminster's recklessness. Richard Wyn Jones of Cardiff University, who is studying May's election results, has found the words most used by voters to describe why they backed Labour are "Welsh", "Mark" and "Drakeford".

The turnaround gives Mr Drakeford considerable authority to set the political agenda. He comes from his party's radical-socialist tradition, having supported Michael Foot and Jeremy Corbyn, far-left Labour leaders whose tenures ended in catastrophic defeats in 1983 and 2019, respectively. But he also served as finance minister under his predecessor, Carwyn Jones, who distanced himself from Mr Corbyn. He became first minister promising "21st-century socialism", but apart from nationalising the railways in February there has been little sign of it. "He doesn't fit neatly into any mould," says Mr Wyn Jones. "Neither the right nor left of the Labour Party quite know what to make of him."

And being radical in Wales is hard, because the Welsh first minister, unlike his Scottish counterpart, lacks control over justice and welfare spending. His borrowing powers are limited, and though in 2019 Wales gained the right to vary income-tax rates, it has not yet done so. Since the founding of the Senedd in 1999, Labour has focused on small-bore, crowd-pleasing measures, such as making medical prescriptions and hospital parking free to everyone, and on blocking controversial New Labour or Tory policies, such as the academies programme, which gave state-funded schools greater independence to manage themselves.

This timidity is in part because support for Welsh devolution is still shallow. A fifth of the electorate want the Senedd abolished, according to Beaufort Research, a market-research firm, and turnout in Senedd elections has never passed 47%. By limiting its reach into people's lives, it has avoided raising the hackles of those who think it is an expensive talking-shop.

Instead, Mr Drakeford is planning Corbynista policies that can be implemented on a shoestring. Plans to make workers more involved in public-sector bodies' decision-making, and to encourage more collective bargaining, fall short of Mr Corbyn's manifesto pledge to force companies to give a third of seats on their boards to workers, but are inspired by the same belief in the power of employee engagement. Free meals will be provided during school holidays to eligible children, and he has promised to build 20,000 new environmentally friendly homes for rent.

The most radical-seeming policy is a planned trial of universal basic income. But since it will be restricted to young adults leaving care, and the Welsh government lacks the power to expand it to all adults, it is more a potentially useful way to support a disadvantaged group than a transformation of the welfare state.

Crempog and eisteddfods

Talks with Plaid Cymru about an electoral pact might be more consequential. Rumours swirl that it might lead the Senedd into uncharted territory, for example by increasing the number of seats and implementing a Plaid manifesto pledge to raise council tax for wealthy households. That would test the limits of what the two-thirds of Welsh people who oppose independence want the Senedd to do.

The opportunity to change Wales has come rather late in Mr Drakeford's career. He is 67 and has said that he plans to step down before the next election to the Senedd in 2026. But he is eager to push against the confines of his office, believing that the pandemic showed people the ability of the

Welsh government to act on big issues. Having a deadline only adds to his determination, he says. "This may be 'old man in a hurry' stuff." ■

International

Blockheads

Governments are finding new ways to squash free expression online

Would-be autocrats are learning from China, and each other

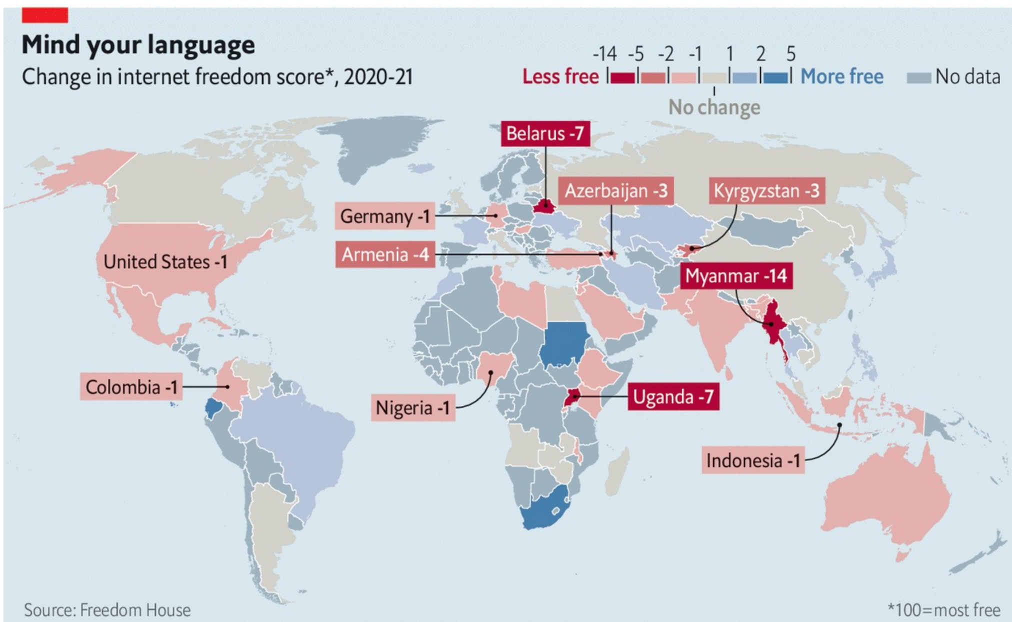
Oct 16th 2021 | DAKAR, DUBAI, ISTANBUL, NEW YORK AND SINGAPORE

ON OCTOBER 8TH two journalists, Maria Ressa and Dmitry Muratov, won the Nobel peace prize for their "efforts to safeguard freedom of expression". The Kremlin congratulated Mr Muratov for being "brave", which he is. Six of his colleagues at *Novaya Gazeta*, the Russian newspaper he founded in 1993, have been murdered.

Ms Ressa is brave, too. Her news organisation, Rappler, started as a Facebook page in 2011. It is one of very few in the Philippines that criticises Rodrigo Duterte, a president who urges the police to kill suspects without trial. At least ten journalists have been murdered since Mr Duterte came to power. In 2016, when he was president-elect, he said: "just because you're a journalist you are not exempted from assassination, if you're a son of a bitch."

The Nobel award recognises a sad truth. Globally, freedom of expression is in retreat. The bluntest methods of silencing dissent are widely wielded: autocrats and criminal gangs often use the sword against the pen (or bullets against bloggers). Many governments also lock people up for peacefully expressing their views.

But these old-fashioned forms of repression are increasingly reinforced with or replaced by newer techniques. Freedom House, a think-tank, reports that in the past year efforts to control speech online escalated in 30 of the 70 countries it monitors, and receded only in 18 (see map). Many autocrats and would-be autocrats look with envy at China, where the Communist Party has overseen the construction of a walled-off information sphere, within which criticism of those in power can barely be seen or heard. None can copy it exactly, but many are deploying digital tools to curate the information that reaches their citizens.



The Economist

Some autocrats still believe that suspending internet services completely is a good way to stymie critics, particularly in an emergency. In 2020 there were at least 155 regional or national internet shutdowns in 29 countries, according to Access Now, an NGO. More than a hundred of those took place in India. But shutdowns batter economies and make strongmen look crude. In 2011 a panicked Hosni Mubarak, Egypt's dictator, tried to quash a revolution by switching off the internet. Outrage—and boredom—spurred even more Egyptians onto the streets. Mr Mubarak was ousted.

China's model is more sophisticated. Its national firewall blocks access to foreign social media and a host of other sources of information. Armies of human censors scan Chinese websites. Controls are constantly refined. In 2009 the government suspended internet access almost entirely in Xinjiang, a western region, following riots there. Now the internet is up again but police force Uyghurs, an oppressed minority, to install mobile apps that spy on all their online activity. They can be locked up for downloading a foreign product such as Skype, or software that lets them visit foreign sites such as Facebook.

Any government can order an internet service provider to blacklist sites it doesn't like. Turkey blocks nearly 470,000 sites. It added 59,000 to the list last year. But creating a firewall even remotely like China's is hard, even for governments willing to spend billions. One reason is that China's internet infrastructure was built, from the outset, with these kinds of controls in mind. The party was blocking sites as early as 1996, when only about 150,000 Chinese were online.

Another reason China's controls have proven so effective is that it has a domestic market big enough to support home-made alternatives to every major international website. There is plenty of content inside the firewall to keep Chinese web users entertained, so it chafes less. The sheer size of the Chinese market also reduces the economic costs of walling off the national web. Meanwhile, the Communist Party has extraordinary powers to boss domestic web firms around. Companies such as Tencent, a social-media giant, and Baidu, a search engine, have to hire, train and manage most of the censors who keep China's internet spotless.

China also exports software and hardware that help other regimes build a more authoritarian internet. Iran is a happy customer. Officials there cite China's "great firewall" as a model to emulate. Iran already blocks popular foreign services such as Twitter and Telegram. But its pious leaders think it has not gone far enough. The government has been working to create an alternative internet known as the National Information Network. The idea is that all its services would be hosted on domestic servers, with access linked to national identity cards.

Virtual insanity

Russia's plans for purging the domestic internet of free thought are among the most ambitious. Vladimir Putin claims that the global internet is a tool of the CIA. In 2019 he signed an "internet sovereignty" law with the proclaimed goal of protecting Russia from online threats to its security. That law ordered all providers to install technology that allows the Kremlin to track, filter and reroute traffic.

Gregory Asmolov of King's College London says that although Russia is ramping up its controls years after China began doing so, it is benefiting from being able to plug in much more modern kit. Roya Ensafi at the University of Michigan says the government is growing keen on tools that make websites slow to load, instead of completely unreachable. That renders them useless for distributing photos and video (the kinds of content the Kremlin finds most troublesome). It is more difficult for clever web users to get around than old-fashioned methods of blocking sites, and more difficult for organisations that monitor and publicise cases of online censorship to detect.

The Russian government is also trying to nudge its citizens to stop using big websites headquartered abroad. It is throwing money at Rutube, an alternative to YouTube owned by Gazprom, the state gas giant. Blocking YouTube is not yet feasible; ordinary Russians would be outraged if they could no longer watch cooking shows and celebrity tittle-tattle on it. But if enough content is herded onto Rutube, it might one day be possible to shut down YouTube without too much backlash.

Meanwhile, all new mobile phones sold in Russia must be set to use Yandex, a Russian search engine, by default. The government plans to require all public-sector workers, including teachers and university professors, to use only Russian email and messenger services while doing their jobs.

Other governments are also trying to persuade users to ditch foreign sites. The United Arab Emirates steers residents towards messaging apps with murky origins (at least one is connected to a government-backed firm). When members of India’s ruling party fell out with Twitter earlier this year they began encouraging their supporters to use Koo, a local alternative. In January spin doctors working for Turkey’s president, Recep Tayyip Erdogan, said they would no longer communicate using WhatsApp, a messaging service owned by Facebook. They encouraged people to sign up for Bi P, a product of Turkcell, a big Turkish telecoms company.

Autocrats reckon that having more citizens on domestic services will make it easier to police what they say. They are also using new software to spy on citizens no matter which devices they own or which websites they visit. Freedom House says 45 countries in its sample were found to have used such “spyware” at some point in the past 12 months; it calls this a “crisis for human rights”.

In July investigators for more than a dozen newspapers said they had obtained 50,000 phone numbers of people who they believe were being considered for surveillance by clients of NSO Group, an Israeli firm that helps governments snoop on mobile devices. The governments included those of Mexico, Morocco and the United Arab Emirates. The list of people who may have been surveilled included journalists, politicians and human-rights activists. A British judge ruled in May that Mohammed bin Rashid Al Maktoum, the ruler of Dubai, even used spyware to monitor his ex-wife. Snaffling personal data from people’s devices not only helps governments smear critics. It also discourages whistle-blowers and other people with important stories from speaking to journalists, for fear their identities will leak.

All this whizzy technology is increasingly combined with new laws to chill speech. Last year police in at least 55 of the 70 countries monitored by Freedom House investigated, arrested or convicted someone because of posts made on social media. That was the highest number of any year since the index was launched 11 years ago. They include a woman in Thailand who was sentenced to 43 years in jail for sharing clips from a podcast that criticised the monarchy (her initial sentence, of 87 years, was reduced because she pleaded guilty). Thailand is among several countries which have used “computer crime” laws to greatly expand the types of speech that can be considered criminal.

Lately web firms, not users, have been the target of most new rules. One increasingly common requirement is that they must store user data in the country in which it is generated, where governments can more easily get at it. China has required this since 2017. Other jurisdictions that have passed or are drafting similar legislation include Vietnam, Saudi Arabia, Dubai and Bangladesh.

India's government is especially keen to tame digital firms. It is demanding that WhatsApp identify who first sends any message on its platform, which would require removing the end-to-end encryption that protects its users' privacy. New rules which came into effect in February require big social-media firms to establish offices within India's borders, and appoint local representatives. These people face up to seven years in prison if their employers do not comply with local rules. These include taking down within 36 hours content the government deems threatening to public order, decency, morality or national security. To say that such vaguely worded statutes are open to abuse is putting it mildly.

In Turkey Mr Erdogan was accusing journalists of spreading "fake news" long before Donald Trump made it fashionable. Now his ruling Justice and Development party is considering making the publication of "disinformation" on social media a crime punishable by up to five years behind bars. The government doubtless hopes it will help keep a lid on dissent. Kerem Altiparmak, a human-rights lawyer, notes that the government has already succeeded in taming Turkey's press. He says if authorities can now subdue social media "the free flow of information will end."

Last year Turkey gave individuals and companies the right to demand that tech firms delete some information about them. This supposedly emulates the "right to be forgotten" held by citizens of the European Union, but safeguards against abuse of the new system are weak. By the end of 2020 nearly 40,000 news reports had been blocked or removed from the web by court order. These include a story about an adviser to Mr Erdogan who forged his high-school diploma, messages posted to a forum about the president's wife's luxury handbag, and articles about a wrestling champion who was convicted of rape. The web censors have occasionally ended up chasing their own tails. Earlier this year, after one court blocked access to a story concerning a tender secured by a friend of Mr Erdogan's son, a second court blocked access to news reports about the first court's decision.

In a few cases new rules aim not to delete speech, but to ensure that governments' own propaganda stays put. Leaders of all stripes took fright when, in January, big social-media sites suspended Donald Trump's account for inciting insurrection. In September Brazil's president, Jair Bolsonaro, signed an update to internet rules narrowing the circumstances under which firms can remove posts that they believe breach their in-house moderation policies. Mexico's senate majority leader has proposed a law that would allow the country's internet regulator to restore posts and accounts that social media firms have decided to take down. In June Nigeria began blocking Twitter after it deleted a message from the president, Muhammadu Buhari, alluding to Nigeria's civil war, in which perhaps 1m people died, and warning modern secessionists that they would be treated "in the language they understand".

Autocracies will doubtless continue to combine high- and low-tech ways of suppressing online speech. During tense times in Egypt police have sometimes stopped people on the streets and demanded they unlock their phones, to see if they have shared anything subversive. Soldiers in Myanmar have been carrying out similar duties since the army launched its coup in February. Freedom House finds that last year people in 41 countries were beaten up or killed because of things they had said online. In a speech in 2019 Paul Kagame, the president of Rwanda, warned online critics outside the country that they risked reprisals. His words carried especial menace, since Rwandan dissidents abroad have often met untimely ends. "Those making noise on the internet do so because they're far from the fire," he said. "If they dare get close to it they will face its heat." ■

An interview with Dmitry Muratov

A Russian editor says he won the Nobel because his slain colleagues could not

Six journalists for Novaya Gazeta have been murdered since 2000

Oct 14th 2021

THE DAY before Dmitry Muratov won the Nobel peace prize, the editor-in-chief of *Novaya Gazeta* stood in remembrance outside the Moscow apartment block where his newspaper's most famous journalist was murdered exactly 15 years before. Anna Politkovskaya was shot on October 7th 2006—Vladimir Putin's birthday. Her death, Mr Putin said at the time, caused more damage to Russia's authorities than her work. This callousness offended Mr Muratov. It hurts that the statute of limitations has passed and those who ordered the killing have still not been named.

Mr Muratov says he got the prize because it cannot be awarded to the dead. He says it belongs to Politkovskaya and five other colleagues murdered since 2000. To Yuri Shchekochikhin, an investigative journalist who was poisoned. To Igor Domnikov, bludgeoned to death. To Anastasia Baburova, a 26-year-old freelancer who had barely started writing when she was shot in the head in Moscow by an assassin who also gunned down Stanislav

Markelov, a human-rights lawyer. To Natalia Estemirova, abducted and killed in Chechnya where she also worked for Memorial, Russia's oldest human-rights organisation.

Yet it is also a prize for Mr Muratov and the newspaper he founded in 1993 with the help of Mikhail Gorbachev (who used some of his Nobel peace prize money to buy the paper's first computers). Its investigations into the sufferings of ordinary folk were not the kind of work many Russian journalists were seeking to do in the 1990s. During the oil-fuelled bonanza of the 2000s its campaigning journalism—edited in a down-at-heel office block and printed on A2 paper three times a week—seemed a relic of Mr Gorbachev's perestroika era. Its relentless reporting on war crimes in Chechnya, torture and other human-rights abuses spoiled the party, like an obsessive relative in a dusty jacket.

But as repression in Russia has grown, *Novaya Gazeta*'s investigations, including into the shooting-down of a Malaysian Airlines plane over Ukraine, have become mainstream. Every month it reaches more than 23m people on social media. Young journalists visit its office and post snaps on Instagram.

On the same day that Mr Muratov was awarded the Nobel prize the Kremlin labelled another nine Russian journalists "foreign agents", effectively barring them from the profession. On October 13th Mr Putin implied that Mr Muratov could yet be added to the list. Alexei Navalny, the jailed opposition leader, sent Mr Muratov a congratulatory message from his cell. He is one of the reasons, says Mr Muratov, that *Novaya Gazeta* continues to print on paper. "People in prisons don't have access to online. For as long as there are political prisoners in Russia, we will continue to print…You can always pull the plug on Instagram. Pulling a plug on *Novaya Gazeta* is harder."

Business

Playing for time

Don’t expect big oil to fix the energy crunch

Underinvestment highlights the complexities of shifting to clean energy

Oct 16th 2021

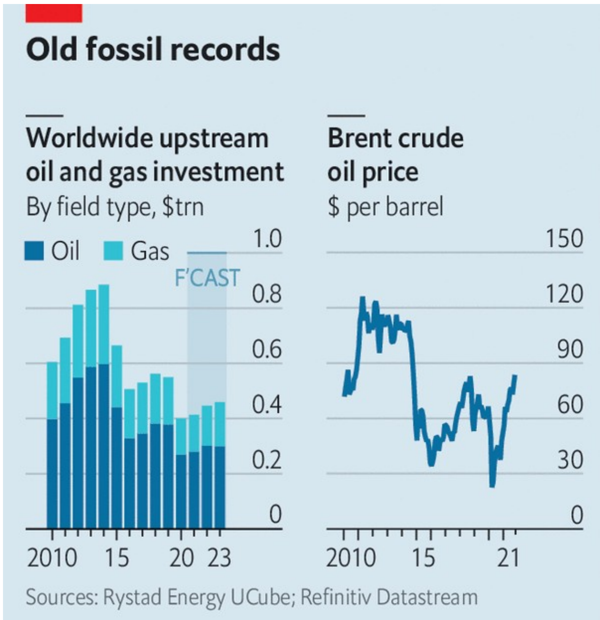
POWER CUTS in China. Coal shortages in India. Spikes in electricity prices across Europe. A scramble for petrol in Britain. Blackouts and fuel blazes in Lebanon. Symptoms of dysfunction in global energy markets are everywhere.

In recent days the mayhem has pushed oil prices in America above $80 a barrel, their highest level since late 2014. Natural-gas prices in Europe have tripled this year. Demand for coal, supposedly on the slag heap of history, has surged. The chief executive of one commodities-trading firm says he comes into the office at 5am in order to get the latest news on blackouts in one Asian country or another. And winter, with its need for heating, has yet to arrive in the northern hemisphere.

A few years ago producers of fossil fuels would have responded to such price signals by swiftly ramping up output and investment. In 2014, with crude above $100 a barrel, Royal Dutch Shell, a European supermajor, put more than $30bn of capital expenditure into upstream oil and gas projects. It then splurged $53bn on BG Group, a British rival, to become the world's biggest producer of liquefied natural gas (LNG).

Not this time. Climate change has led to unprecedented pressure on oil and gas firms, especially European ones, to shift away from fossil fuels. As part of Shell's long-term shift towards markets for lower-carbon gas and power, its upstream capital spending this year has shrunk to about $8bn. Last month it flogged its once-prized shale assets in the Permian basin in Texas to an American rival, ConocoPhillips, for $9.5bn. It is withdrawing from its onshore operations in Nigeria, a country where it first set foot in 1936. It recently said it would reduce oil production by 1-2% every year until 2030. Asked what the energy-price spike means for investment, Wael Sawan, its head of upstream oil-and-gas production is blunt. "From my perspective, it means nothing," he says.

This view is pervasive throughout much of the oil industry. In Europe, listed oil companies are under pressure from investors, primarily on environmental grounds, to stop drilling new wells. More upstream investment as prices rise could "delegitimise" their public commitments to cleaner energy, says Philip Whittaker of BCG, a consultancy. In America, publicly traded shale companies, which used to be all too eager to "frack" whenever oil prices spiked, are now under the thumbscrew of shareholders who want profits returned via dividends and buybacks rather than poured down a hole in the ground.



The Economist

State-owned oil firms are under budgetary constraints, too, partly because of the covid-19 pandemic. Only a few, such as Saudi Aramco and Abu Dhabi National Oil Company (ADNOC) are expanding production. The result is a worldwide slump in investment in oil and gas exploration and production, from above \$800bn in 2014 to just about \$400bn, where it is expected to stay (see chart).

Keeping it in the ground

Meanwhile, demand has returned with surprising buoyancy as the pandemic eases. For the first time ever the oil market could briskly reach a point of lacking any spare capacity, according to Goehring & Rozencwajg, a commodity-investing firm. That might be only a temporary state of affairs; Aramco and ADNOC could respond rapidly. But temporarily at least it would push prices of crude sharply higher, adding further strains to economies already suffering from soaring costs of natural gas for homes and energy-intensive activities, from steelmaking and fertiliser production to blowing glass for wine bottles.

From an environmental standpoint, higher prices may be welcome if they sap demand for fossil fuels, especially in the absence of a global carbon tax with bite. In its "World Energy Outlook", published on October 13th, the

International Energy Agency (IEA), an energy forecaster, said that the rebound in consumption of fossil fuels this year may cause the second-biggest absolute increase in carbon-dioxide emissions ever. To reach a goal of “net zero” emissions by 2050, the IEA says there is no need for investment in new oil and gas projects after 2021. Instead it calls for a tripling of clean-energy investment by 2030.

The IEA’s argument that no new natural-gas projects, which are less grubby than with other hydrocarbons, are needed rests in part on investments in low-emission fuels, such as hydrogen. But, it admits, these are “well off track”. This points to the risk of treating all fossil fuels, each of which bears the blame for carbon emissions, as equal culprits. Reducing natural-gas supply with no backup could be counterproductive.

For one thing, gas is currently the main substitute for thermal coal in countries like China and India that are keen to lower their power-related emissions. Bernstein, an investment firm, predicts China’s imports of LNG could almost double by 2030, making it the world’s biggest buyer. In the absence of investment in new projects, Bernstein expects global LNG capacity to be 14% short of what is needed by then. That would hamper Asia’s exit from coal.

Moreover, natural gas serves a vital function in maintaining the stability of the electricity grid, especially in places reliant on intermittent wind and solar power (at least until the world’s grids become more interconnected). In such markets the marginal cost of natural gas often sets power prices, even if most electricity comes from renewables with zero marginal cost. The higher the price of gas, the higher the electricity bills. This could dampen popular support for clean power.

Whether new supply will be forthcoming remains up in the air. As the boss of another commodities-trader observes, “because natural gas has been put in the dirty-fuels column, no one is investing.” For the private-sector supermajors, the problem is that they are all more or less evenly split between producing oil and natural gas. Because both often come out of the ground together, the two fuels tend to be inter twined in investors’ minds. This is frustrating. “It’s an incredibly myopic view that we lump oil together with gas," fumes one supermajor executive. Yet his firm does not seem likely to defy investors by ramping up gas output significantly.

An executive at another big oil company says the higher prices may add pressure to invest a bit more—but not to deviate from long-term climate commitments. Instead, he says new investment is likely to come from two sources that are not exposed to public pressure: the state-owned oil companies and privately held firms. The executive notes that the bulk of the recent increase in rig counts in the Permian basin has come from unlisted frackers, rather than publicly traded ones. Some compare this to bootlegging in the prohibition era. The higher the price of oil and gas, the more incentives there will be to produce them. Provided, that is, this happens out of the public eye. ■

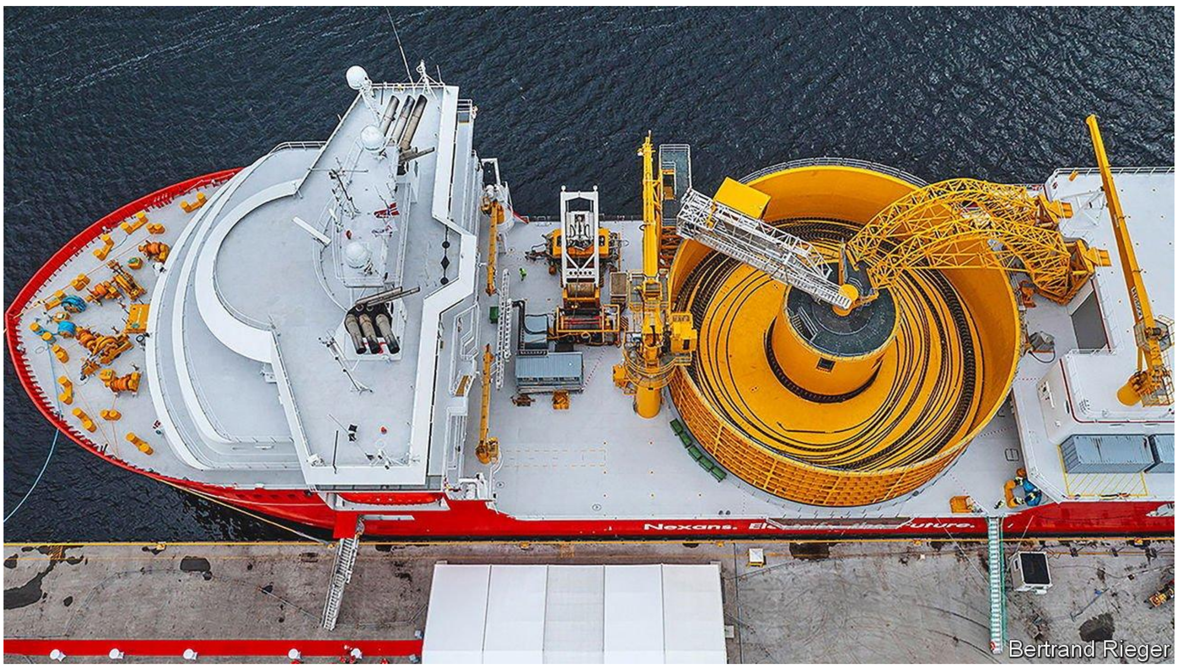
For more expert analysis of the biggest stories in economics, business and markets, [sign up to Money Talks](), our weekly newsletter.

An undersea change

The booming business of knitting together the world's electricity grids

Intermittent renewables and current mayhem in energy markets highlight the importance of firms that link up producers of power with faraway consumers

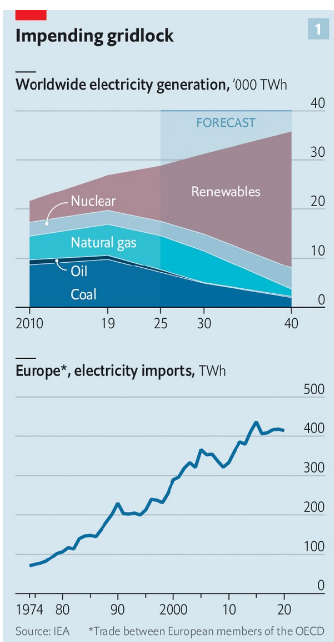
Oct 16th 2021 | CLV Nexans Aurora



IMAGINE A TOY boat that might fit in the palm of your hand. At mid-ship add a squat spool of sewing thread lying on its side. Scale that up about a thousand-fold and the result is the 150-metre-long *Nexans Aurora*. The thread in question is kilometres of high-voltage power line ready to be deployed from the aft of the ship across the sea floor. Each cable, weighing a hefty 150kg per metre and thick as a tree trunk, is a woven mix of aluminium, steel, lead and insulating material. The single stretch loaded up in a bobbin nearly 30 metres across is as heavy as the Eiffel Tower.

The ways electricity is both consumed (more of it, notably by cars) and produced (also more, increasingly through renewable sources, see chart 1) are changing. Balancing energy supply and demand is never easy, as mayhem in European gas markets has shown. It is all the more complex for electricity, which is trickier to store than not just gas, but also coal, diesel or wood chips. Renewables add more wrinkles: wind blows haphazardly; the sun can be obscured by clouds or night. As a result, most of the power that is produced has to be consumed immediately, and mostly in the place that produces it.

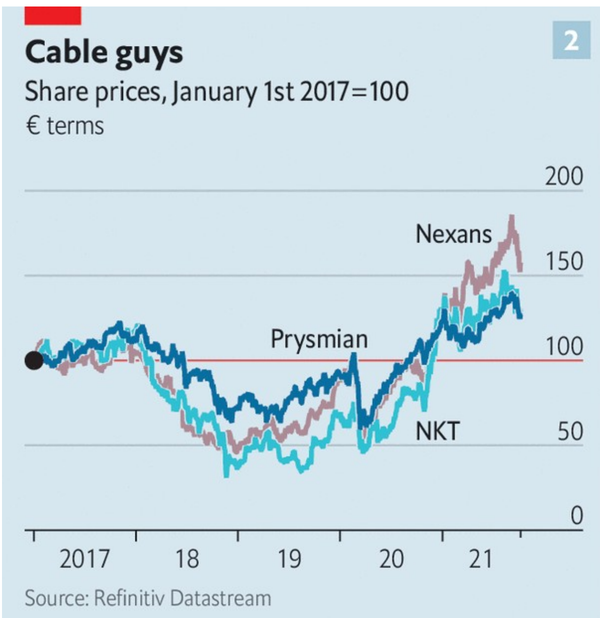
The idea of separating consumption from production in time—using giant batteries or other storage—has received plenty of attention from entrepreneurs, politicians and investors. But it is currently impractical at scale. So the notion of separating the two in space instead is gaining ground. It requires an upgrade in the behind-the-scenes wiring that carries power from where it is made to where it is used. The task can involve plugging an offshore wind farm into the grid. Also needed are connections joining up national networks, often within blocs where most of today's electricity trade takes place, like the EU.



The Economist

Either way, cables are required, and boats to lay some of them. The potential is vast. Just 4.3% of power generated in 2018 by members of the OECD, a club of industrialised countries, was exported, up from 2% in the 1970s but a far cry from a fungible commodity like oil.

All this has resulted in surging order-books for cable-makers and -layers like Nexans, the *Nexans Aurora*'s eponymous French owner. Credit Suisse, a bank, forecasts undersea wiring alone to bring in revenue of around €5.5bn ($6.4bn) in 2022, up from €4.5bn this year. It expects cable firms' revenues from offshore wind installations to more than treble in size between 2020 and 2035. Investors' enthusiasm around electric cables has sent share prices of Nexans and the industry's two other European giants, NKT and Prysmian, up by 48-125% in the past two years (see chart 2). In February Nexans announced that it would soon spin out its non-electric cables business (catering to industry and data centres) to focus on transmission lines.



The Economist

Satisfying see-sawing electricity demand is complicated but well understood. British grid managers have long known how to turn on power plants just as soap-operas end and tea-craving viewers turn on their kettles. Connecting power grids with different production and consumption patterns is equivalent, matching supply and demand by transferring electricity across distance instead.

Take Denmark. It has installed enough wind turbines that, when it blows, no other source of electric power is required. But it needs a Plan B, given the fickleness of wind. Without batteries it could keep old fossil-fuel plants open, and use them intermittently. A more elegant solution is a cable to

Norway, which has ample hydroelectric potential. When the wind blows, both places can use Danish wind power, keeping Norwegian water in reservoirs. On calm days the Norwegian lakes are drained a bit faster to succour Denmark.

Further links from Denmark to the Netherlands, Sweden, Germany and Britain (planned for 2023) provide yet more options. Add enough links to enough places, and electricity becomes a tradable commodity. For a local grid manager, reducing carbon emissions becomes a case of buying and selling the right contract rather than building a solar or wind farm in the wrong place.

That prospect explains why interconnections are multiplying. Europe is the new frontier of cable-laying. Electrification, notably through renewables, is a key plank of its ambitions to reach “net zero” emissions by 2050. National grids have been compelled by EU rules to integrate into a single network, often backed with public cash. The continent’s scraggy coastline is ideal for wind power—and for deploying electric cables at sea, out of sight of anyone who might object to them.

Shifting power-generation dynamics play a part. Germany, for example, was once a big exporter of power but is becoming an importer as it finishes shutting down its nuclear plants and phases out coal. The green push also means electricity is being generated in all the wrong places. In Italy, power plants were built near where industry was located, mostly in the north of the country. Now the wind blows and sun shines mainly in the less-developed south. “The shift to renewables means we need more rebalancing, more transition,” says Stefano Antonio Donnarumma of Terna, an Italian manager of transmission lines.

As a consequence, the making and deploying of electric cable is one of the rare industrial sectors that European firms dominate. Besides France’s Nexans, Prysmian is Italian and NKT is Danish. They have around 80% market share outside China, where demand is largely met locally. Beyond merely manufacturing woven metal wires (among other products), they lay them as well, commissioning and operating ships like the *Nexans Aurora*, a €170m craft fitted up the coast from an existing Nexans factory in Halden, Norway.

Advances in undersea cable-laying have helped open up the prospect of new and novel interconnections. Whereas previous generations of ships risked tipping over if they were to send wires much below 1,200 metres, the *Nexans Aurora* and a flotilla of similar vessels from its rivals can lay the cables at depths of 3,000 metres. (An accompanying robot can dig a trench in shallower waters, the better to protect against stray anchors and fishing nets.) That opens up the Mediterranean. This week the *Nexans Aurora* was preparing to deploy her first cable, connecting the island of Crete to the Greek mainland.

Longer cables mean fewer legs of 100km or so that need to be stitched together. The viability of much longer interconnectors is being mooted as a result. A 720km Norway-to-Britain link started operating this month. Many are in various stages of planning, for example hooking up Greece and Israel, or Ireland and France. Others are more speculative, such as a 3,800km cable linking the sun-baked solar fields of Morocco with Britain. Another consortium wants to link Australia, Indonesia and Singapore, a 4,200km project.

Christopher Guérin, boss of Nexans, says 72,000km of such cables will be laid in the decade to 2030, seven times the current stock. That comes on top of wiring needed to upgrade antiquated connections on land, many of which are past their sell-by date. A power crisis in Texas earlier this year helped unlock stimulus funds for grid upgrades in America, too.

A more immediate opportunity is hooking up wind farms to onshore power grids. Cable salesmen are cheered by the fact more and more such facilities are being developed far out at sea. The possibility of floating wind farms, which could be farther away still, will add to their order books. The International Energy Agency, a rich-country energy club, estimates 80 gigawatts of offshore wind farms will have to be installed every year by 2030 to meet decarbonisation targets. Each gigawatt of offshore capacity requires around €250m of cable input including the installation, says Max Yates of Credit Suisse. The cable costs roughly as much as the foundations, behind only the turbine itself.

The urgency of this global rewiring effort is almost imperceptible from the deck of the *Nexans Aurora*. Spools release their wire at a leisurely pace: 10-

12km a day is considered tidy work. But the future energy highways are at last becoming a reality. Steady as she goes. ■

Girls uninterrupted

Femtech firms are at last enjoying an investment boom

Not a moment too soon

Oct 16th 2021

Wally Skalij/Los Angeles Times/Polaris/Eyevine

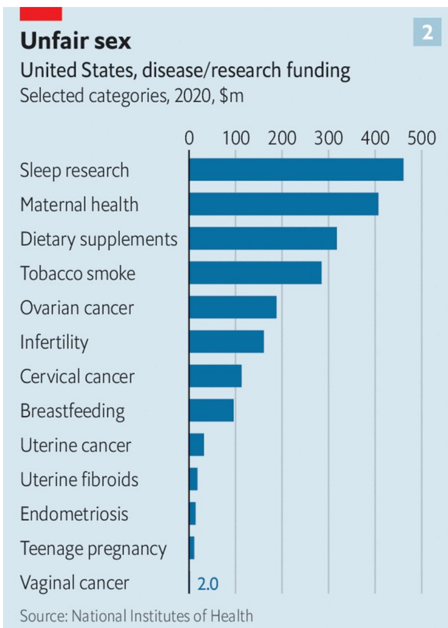
A HORMONE CALLED relaxin helps loosen up pregnant women's hips. Without it, the pain of delivery would be unbearable. Its job done, however, relaxin lingers in female bodies for up to a year, when softer ligaments make new mothers more prone to injury, as Jessica Ennis-Hill, an Olympic champion heptathlete, discovered in training after giving birth in 2014. Five years later Dame Jessica started Jennis, a fitness app to help other women perform safe post-natal workouts. It now lets users optimise workouts for the different phases of their menstrual cycles, and has just concluded a successful funding round.

Dame Jessica's startup is part of a wave of "femtech" firms coming up with ways for women to overcome health problems specific to their sex. The market could more than double from $22.5bn last year to more than $65bn by 2027, reckons Global Market Insights, a research firm. Having ignored it for years—in 2020 femtech received only 3% of all health-tech funding, and a modest $14bn has been invested in it globally to date—venture capitalists are at last waking up to the opportunity. So far this year they have invested nearly $1.2bn in the industry, nearly half as much again as the annual record in 2019 (see chart 1).

Last year Bayer, a big German drugmaker, paid $425m to buy KaNDy, a British developer of a non-hormonal treatment for menopause symptoms, and Bill Gates, Microsoft's billionaire co-founder, backed BIOMILQ, a startup that has produced cell-cultured human breast milk and aims to bring both parents closer to their newborns. In August Maven Clinic, an American startup which began as a femtech but has expanded to other areas of health, raised $110m and achieved "unicorn" status, with a valuation of more than $1bn. In September Elvie, another British firm, raised $97m from venture-capital firms.

Unlike heath tech aimed at men, which often focuses on erectile dysfunction, a condition that afflicts perhaps one in ten potential users, femtech offers products like period trackers, which could be of value to virtually all of the world's 4bn women at some point in their lives. Moreover, women are 75% likelier than men to adopt digital tools for health care. That makes for a huge potential market.

A big reason femtech has been slow to grow has to do with the underlying medical science. For conditions that affect all humans, men are more commonly studied, largely owing to misplaced worries that women's hormonal fluctuations can confound results (male mice are favoured for the same reason). In the few more inclusive studies, results are seldom disaggregated by sex, obscuring how diseases—and the drugs used to treat them—affect women differently. "We have been operating as if women are just smaller versions of men," observes Alisa Vitti, a hormone expert whose work on the 29-day "infradian" body clock, which affects everything from metabolism to sensitivity to pain and is a uniquely female phenomenon, underpins many period trackers.



The Economist

As a result, plenty of woman-specific health issues have, despite their ubiquity, been routinely neglected. Femtechs help fill this research gap. Noting that eight in ten women suffer from premenstrual pain but no treatments have been specifically designed to allay it, founders of Daye, a British startup, designed a tampon laced with cannabidiol, after observing that the vaginal canal has more cannabinoid receptors than any other part of the female body.

Hertility Health, also of Britain, offers non-invasive tests which can help diagnose nine common gynaecological conditions. Elvie's silent wearable breast pump is a best-seller in America and Britain; its app-controlled pelvic-floor trainer reduces the chances of the typical intervention, whereby surgeons insert “a fishing net and lift up your pelvic organs because they are falling out of your vagina”, says Tania Boler, the firm’s founder.

Labour pains

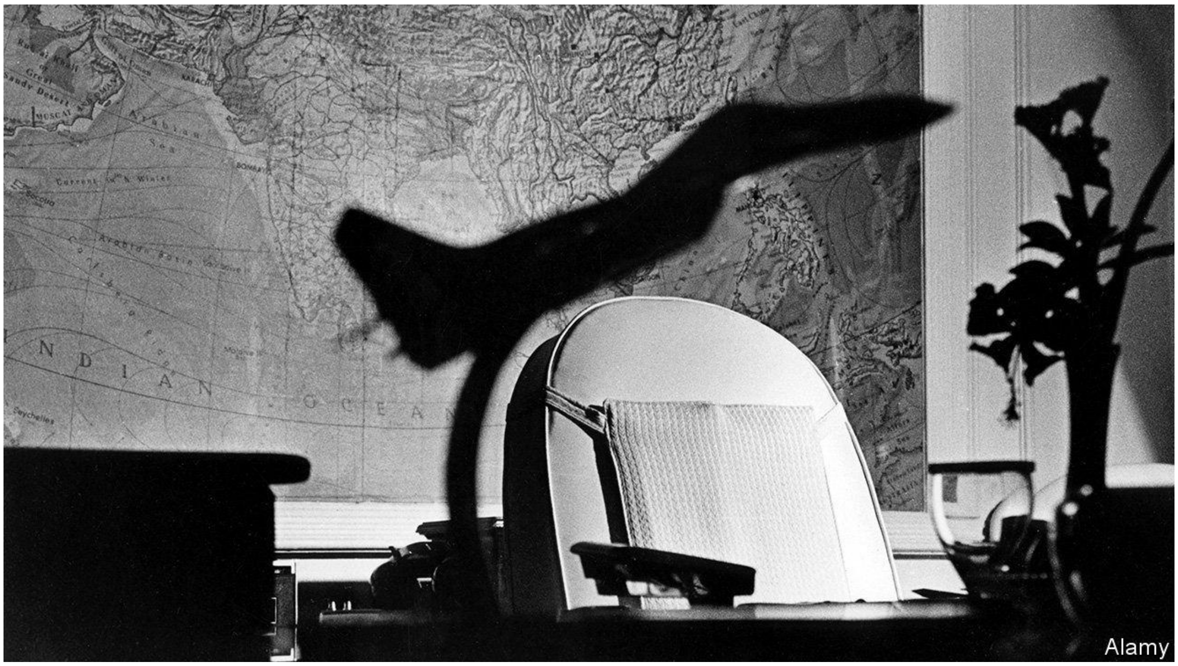
That is welcome progress. But too many femtechs face an uphill struggle. Helen O’Neill, who runs Hertility Health, calls the $5.7m funding round her firm closed in June a “soul-destroying” process. “It was predominantly grey-haired men saying they are not sure there is a market for this,” she says. Never mind that all women with a reproductive system require gynaecological help at some point. ■

The longest layover

Why does Tata Group want Air India back?

After a long delay, the loss-making flag-carrier flies free of state ownership

Oct 16th 2021



J.R.D. TATA recalled it as his saddest day. In 1978 the illustrious Indian industrialist opened the newspaper to discover that the government had fired him as chairman of Air India, the airline he founded in 1932 and managed even after its nationalisation in 1953. He called his secretary to ask if the story of his sacking was true. She replied that his successor, a former air marshal, was already making himself comfortable in his chair.

Tata, who died in 1993, frequently said that his job at Air India was to protect the airline from the central government in Delhi. No doubt the sentiment contributed to his sacking—and was justified. After his exit the flag-carrier entered a spiral. In recent years it was losing nearly $3m a day. Operating costs far exceed the industry average. So do customer complaints. Perhaps realising this, the government began trying to offload Air India in 2001, but deals repeatedly foundered over financial terms and demands that the state retain a residual stake, and possibly residual control.

On October 8th the drawn-out process finally concluded. The airline would return to Tata Group, today still one of India's biggest conglomerates. Its bid of $2.4bn (including $2bn in debt) beat the only other, from the owner of Spice Jet, a heavily indebted low-cost airline. Some of Air India's non-core assets, and its remaining $6bn in debt, will be transferred to a separate government-run holding company.

Given what has unfolded in India's aviation since J.R.D.'s inglorious dismissal, it is not entirely unfair to conclude the government did Tata Group a favour by taking Air India off its hands. Private carriers have emerged only to go bust. Covid-19 travel restrictions have caused the industry to wallow in losses. Indigo, the most successful carrier with a market share of 57%, is embroiled in litigation between its founders and has ejected multiple top executives.

On the surface, Tata Group's desire to return Air India to the fold looks foolish. The group already controls two smaller airlines through an 84% stake in AirAsia India (an affiliate of a Malaysian carrier) and a 51% stake in Vistara (co-owned with Singapore Airlines). Both have consistently lost money. Adding Air India to the mix seemingly deepens Tata's aerial woes. The carrier burns cash as fast as its old and frayed fleet burns kerosene. The workforce is unionised, difficult to manage and resistant to change. The terms of the deal prohibit redundancies in the first year and after that only through voluntary attrition.

Still, Tata's move is not without reason. Its current management sees its existing aviation operations as irredeemably subscale. The deal will double Tata's domestic market share to 27% and give it a platform for growth through Air India's network of landing slots abroad, particularly in London and New York. Air India owns a low-cost airline based in the state of Kerala that does a booming business ferrying Indian workers to and from the Persian Gulf, and could dovetail with AirAsia India.

Tata in turn may be providing Air India with capital and even more desperately needed good management. A pandemic-era depression in global aviation means aircraft are available. Boeing and Airbus are doubtless already pounding Tata's door. Tata Consulting Services, India's largest information-technology consultancy, could help tie together the various entities and enable savings in areas such as bookings and loyalty programmes. Tata’s hospitality division, Indian Hotels, could benefit from marketing links.

Managing this process will not be easy. Singapore Airlines is thought to have opposed the deal and hoped that Vistara would feed its own global network. Managing no-frills and full-service divisions makes sense in theory but no large airline has done it well. Crucial support for Air India comes from the country’s tight restrictions on foreign carriers, negotiated as bilateral treaties with their home countries. Those may be eased now that the airline is in private hands, reducing its advantage. Having reclaimed J.R.D.’s chair, Tata may find it not entirely comfortable. ■

For more expert analysis of the biggest stories in economics, business and markets, [sign up to Money Talks](), our weekly newsletter.

Bartleby

How to run better meetings

The jury system offers clues to managers everywhere

Oct 16th 2021

MEETINGS ABSORB more time and drain morale more consistently than any other corporate activity. Before the pandemic managers were spending an average of 23 hours a week in meetings. Since then the barriers to calling people together have come down. Now that calendars are routinely shared, an empty diary slot attracts invitations like picnics do wasps.

Ideas abound for how to make meetings better. Make people stand up, so they cannot settle in for the long haul. Write a memo on the topic at hand that everyone silently reads together at the outset. Toss a ball to each other to make it clear who has the floor and to stop the loudmouths from dominating. Most desperately of all, set aside time at the start for “fun”.

Yet there is a form of meeting that reliably results in good decisions and that commands general respect, even reverence. That meeting is the jury. Any system in which people still believe after more than 800 years is worth a closer look. In its broad principles, if not in its details, it has five lessons for meeting-throwers and meeting-goers.

First, its purpose is clear. “Why are we here?” is a question that humans grapple with not just in the depth of their souls but also during most Zoom calls. No jury doubts the point of its existence, the nature of its task or the need for multiple people to be involved. That level of shared understanding is something to aspire to in other settings.

Second, its size is right. The 12-person formula dates back to 12th-century England and the reign of Henry II. Temporary courts known as assizes summoned this number of men to hear land disputes. It has largely stuck ever since. For good reason. More people would add voices, but not value. Fewer people would mean less diversity of views. The advantages of keeping meeting numbers tight are not lost on Jeff Bezos, who operated a two-pizza rule at Amazon to limit how many people were in a meeting. The one-jury rule works just as well.

The third lesson concerns the agenda. Jurors have one, very important, question to consider, and a limited number of choices to make. Clarity keeps people focused. No juror is likely to suggest backing up a bit in order to brainstorm what the criminal-justice system should look like. And whereas many pundits advise keeping meetings short, time is not a constraint: jury members do not leave until a decision is made. “Putting a pin in it” is just not an option.

The fourth lesson is about membership. Jurors are less prone to groupthink than the attendees of the average meeting. Prospective members are deliberately drawn from a wide pool, and anyone whose mind is already made up is supposed to be weeded out. Companies cannot convene a bunch of strangers to make decisions for them. But they can consciously try to bring in unfamiliar faces and call on different perspectives. And just as a jury foreman is not chosen by rank, a moderator need not always be the most senior person in the room.

The final lesson concerns psychological safety, the willingness of people to speak up. That can be hard when your boss is frowning at you. But structure helps. Trials are expressly designed to weigh lots of evidence and to take in opposing views. Before juries make decisions, they get to weigh competing accounts of what happened. The best firms echo this approach by structuring discussions in order to test arguments properly. Investment decisions at

Blackstone, a private-equity titan, are probed at meetings that systematically focus on the risk factors surrounding a potential deal, as well as what makes it attractive.

Things can go wrong in juries. Jury selection can rig outcomes rather than improve them. Domineering personalities can sway meeker ones. Also, people really can be idiots. A murder conviction in a British courtroom in 1994 was quashed after it was found that some members had used a Ouija board to ask the obvious question of one of the deceased. (The defendant was reconvicted at a second trial.)

Evidently, firms are not the same as courtrooms. Many corporate pow-wows are designed to transmit information and build culture, not to deliver verdicts. Unanimity is no way to run an enterprise. And deciding the fate of a fellow citizen is bound to be more engaging than the average business call. But serving on a jury is not an interruption to work. If you get summoned, you can both do your duty and see what makes for a really good meeting.

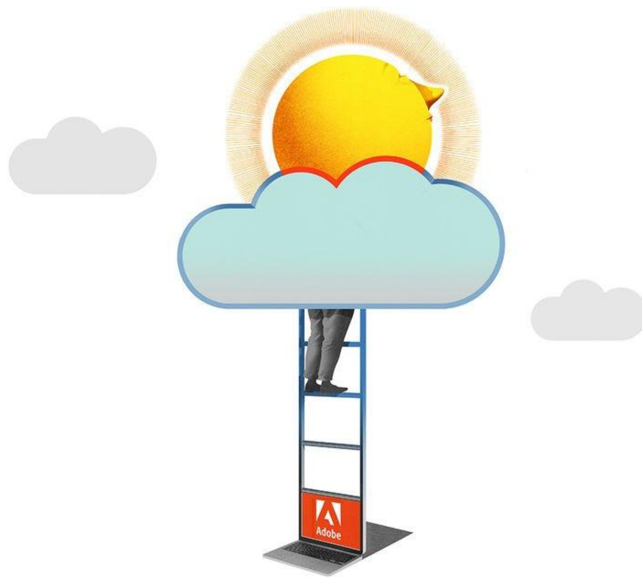
For more expert analysis of the biggest stories in economics, business and markets, sign up to Money Talks, our weekly newsletter.

Schumpeter

How Adobe became Silicon Valley's quiet reinventor

From an also-ran to the world's fourth-most-valuable software firm

Oct 16th 2021



Brett Ryder

BY SILICON VALLEY standards, Adobe is a dull company. Nudging 40 it is middle-aged. It does not make headlines with mega-mergers or have a swashbuckling chief executive. "I feel very comfortable not being out there pounding my chest," confesses its boss, Shantanu Narayen, in a rare interview. All the while, Adobe has quietly managed to adapt to the age of cloud computing. It has done a better job of reinventing itself perhaps even than Microsoft, the technology industry's best-known comeback kid. Microsoft's CEO, Satya Nadella, is said to have examined Mr Narayen's handiwork closely—and not just because he attended the same secondary school in India as Adobe's leader, albeit a few grades down. Since 2007, when Mr Narayen took the helm, Adobe's market capitalisation has swelled from \$24bn to \$276bn. In the past ten years it has outperformed both Mr Nadella's Microsoft and Salesforce, another rival business-software maker.

To most ears, Adobe is synonymous with desktop publishing. Founded in 1982, it set key standards, in particular PostScript, which tells printers where to make the dots, and PDF, the "portable document format" that allows printed documents to be distributed online. It also developed programs for editing digital content. One, Photoshop, became a verb. Adobe's pricey software was installed on desktop computers, and updated with new versions every year or so. By the late 2000s this model itself looked in need of an update. Smartphones unleashed people's creativity far from their desks and cloud computing enabled software to be offered as a service over the internet.

Rather than cling to the lucrative legacy business, Mr Narayen embraced a chance "to reimagine ourselves". Putting Photoshop and other popular but complex applications, such as Illustrator, fully into the cloud would have been technically too tricky. But Adobe still found a way to use the cloud to improve its products. Today Adobe's two original software businesses have morphed into two subscription-based "clouds". The smaller "Document" cloud provides services ranging from the mundane (converting a PDF into a word-processing file) to the mission-critical (managing the digital documents of government agencies). All have seen a boom during the pandemic-induced shift to remote work. The other, much bigger "Creative" cloud lets users edit all sorts of digital content, from websites to videos. Since this content no longer lives on hard drives but in data centres, it can be worked on from different devices and by several people at a time.

Adobe's transformation would not be half as successful, however, without other innovations. One is what the firm calls its "data-driven operating model" (DDOM), jargon for using data generated by its digital services to improve them and develop new ones in a perpetual feedback loop. Adobe has mastered this both internally and by developing a third cloud, which allows other firms to optimise their digital offerings. This "Experience" cloud lets its subscribers, among other things, track how online buyers behave and how they might best be guided to making a purchase.

Another innovation was its management structure. Some tech firms, such as Apple, espouse top-down micromanagement. Alphabet, Google's parent company, is almost anarchic in its bottom-upness. Adobe is a healthy mix. Mr Narayen sets out the destination, and the managers of the three clouds chart the exact course. To make DDOM and the Experience cloud work, for instance, he set a goal that was both precise and exacting: Adobe's data platform must be able to serve up content in less than one-tenth of a second. How that objective was reached was then up to the engineers.

Adobe's three clouds, operating model and management style help explain why it offers, in the words of Mark Moerdler of Bernstein, a broker, an "unusual investment combination in software": high margins and good growth. Its latest quarterly results are emblematic. Revenues rose by 22% year on year, to $3.9bn, while the operating margin edged up to 46%, according to Bernstein.

Possibilities for more data-driven growth abound. On October 7th Adobe completed the $1.3bn acquisition of Frame.io, a video-editing service. Artificial intelligence, which extracts patterns from digital information, will underpin many new services (such as Adobe's recent offering that turns PDFs into web pages, which can then be more easily navigated on smartphones). Similar algorithms could help professional content creators be more productive and also make Photoshop more accessible for newbies. The "creator economy" is only just getting going. And then there is the much-hyped "metaverse" of interconnected virtual worlds, which will be full of digital objects Adobe's tools help build.

Head in the cloud, feet on the ground

As Mr Narayen would be first to admit, the software business is full of risks. "Software follows a sort of S curve," he observes: performance eventually moves sideways if "you do not invest in the right opportunities". The Creative and Document clouds, which together generate 73% of Adobe's revenues and 80% of its gross profit, are a ripe target for competitors. Startups such as Figma, a website for designers of online services which is fully cloud-based, are betting even more than Adobe on online collaboration. With 14 years under his belt as boss, talk of succession is in the air. It would be as big a transition as the handover from Steve Jobs to Tim Cook at Apple, says Brent Thill of Jefferies, an investment bank. It is anyone's guess whether it could be as successful.

Investors have indeed cooled a bit on Adobe of late. Its market value is down by $40bn from a peak in September, a steeper decline than at most other tech giants. Yet the company has proved time and again that it can prosper by embracing change rather than fighting it. That has made Mr Narayen the darling of investors and analysts, as well as a role model for tech bosses such as Mr Nadella. Nothing dull about that. ■

For more expert analysis of the biggest stories in economics, business and markets, sign up to Money Talks, our weekly newsletter.

Finance & economics

The pandemic bonus

Wages are surging across the rich world

What it means for the economic recovery

Oct 13th 2021 | SAN FRANCISCO

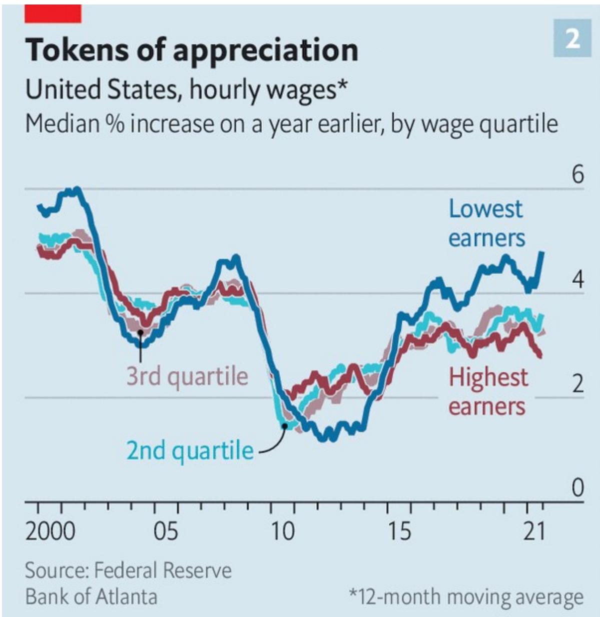
NOT LONG ago pundits obsessively checked the latest statistics on covid-19 cases. Now they are doing the same with the inflation numbers. American consumer prices rose by 5.4% in the year to September, according to figures published on October 13th, exceeding forecasts. A survey from the New York Federal Reserve released the previous day showed a small pickup in consumers' inflation expectations. In its semi-annual report on the global economy the IMF warned that the prospects for inflation were "highly uncertain". Soaring energy costs will push up consumer prices in the near term. Pay, too, is surging, as red-hot demand runs up against a shortage of workers. Does it stand to fuel further price rises?

When covid-19 first struck, most forecasters expected bosses to slash bonuses and yearly rises, or even to cut basic pay, as they did after the global financial crisis in 2007-09. Although wage growth did slow modestly early in the pandemic, that restraint has since been abandoned. Oxford Economics, a consultancy, finds that pay in the rich world is growing at a rate well above its pre-pandemic average. The acceleration in compensation per worker across the OECD, a club of mostly rich countries, is equally arresting (see chart 1).

The wage numbers have sometimes misled during the pandemic. When lockdowns were imposed poorly paid people in service jobs dropped out of the workforce, for instance, which had the effect of raising average pay as measured by statisticians. Even so, wage growth seems to have been stronger than the scale of the economic downturn alone would have suggested. Goldman Sachs, a bank, has created a "tracker" that corrects for pandemic-related distortions. Underlying wage growth, at about 2.5% across the G10 group of large economies, is as fast as it was in 2018.

No wonder then that pay has become a hot topic in the corporate world. On October 6th Bank of America increased its company-wide minimum wage by 5%. Amazon now boasts of roles in transport and packaging paying $22.50 an hour in America, making left-wing activists' demands for a federal minimum wage of $15 seem quaint. An index compiled by Goldman suggests that the share prices of American companies most exposed to rising labour costs have fallen by 4% since May, even as the broader stockmarket has risen by 7%. Even bosses in Germany, long used to acquiescent unions, now face demands to pay up.

Some workers are benefiting more than others. Analysis by *The Economist* of British wage data by industry suggests that annual pay growth is twice as dispersed as it was before the pandemic. Wages in the accommodation and food-service sector, which is struggling to attract workers, rose by 8% in the year to July; increases in manufacturing have been more modest. In America the wages of the least-paid quartile of workers are growing 70% faster than those at the top (see chart 2).



The Economist

Underlying pay is rising about three times as quickly in Anglo-Saxon countries as in continental Europe. That could be because places such as America and Canada rely more on the consumer-facing industries experiencing the worst labour shortages. And France and Italy, where annual pay growth is below 1%, probably do not face the same immigration crunch as Britain, which has Brexited, or Australia and New Zealand, which have closed their borders to keep out covid-19.

Only a few years ago economists were bemoaning weak wage growth. So it may seem churlish not to pop the champagne now that the opposite is happening. But pay can rise for a variety of reasons, some more benign than others. For a given level of productivity, higher wages must show up in one of two ways: as higher inflation or as a higher "labour share" of GDP.

Take inflation first. Costlier staff may force bosses to raise the price of whatever they are selling. At worst, higher inflation could cancel out any rise in cash wages, leaving workers no better off than they were before (and perhaps encouraging them to seek further increases). American real wages are growing on a monthly basis but they remain lower than a year ago.

Some firms seem happy to pass on a bigger wage bill to consumers. On a recent earnings call an executive at Domino's Pizza discussed how the firm might offset wage rises (pricier Margheritas might be on the way). Most S&P 500 companies are protecting margins "by passing on price increases to consumers", says Goldman.

Other firms, however, may absorb higher wages by accepting lower profits. That would change the distribution of the economic pie, raising the "labour share", or the proportion of GDP paid to workers as wages. Our analysis suggests that the labour share in the G7 has risen by about one percentage point since the pandemic began—equivalent to $400bn or so of extra real income for households each year.

What does this mean for the wider economy? A big topic of debate among economists is whether the labour share before covid-19 had been declining or not. It seems most likely that the share fell in America, so a recovery might be welcome. But an ever-rising labour share would be a worry: it would crimp companies' profits and thus the investments that are crucial to improving long-run economic growth.

There is another, happier, possibility. If productivity rises, then wage growth need not cause sustained inflation, nor push up the labour share. Instead the economic pie would grow, with more for everyone.

Some evidence suggests that workers are doing more with less. Firms are investing in new technologies to meet new demands, especially from online commerce. "Hybrid" work may be more efficient than everyone being in the office all the time. Productivity statistics are even cloudier than the wage ones; but since the third quarter of 2020 output per employed person has risen in 25 of the 29 rich countries for which figures are available.

The rise in wages, then, seems to reflect a number of underlying economic forces, and need not feed through entirely to inflation. But forecasting prices is just as hard as predicting covid-19 case numbers. One thing is clear: that if the pay surge endures, the consequences will be profound. ■

Hard bargains

Germany’s workers are in the strongest position in 30 years

And they are demanding more pay

Oct 16th 2021 | BERLIN

A HIGHLY SKILLED workforce, harmonious labour relations and restrained wage growth: all have long underpinned Germany’s economic success. But, as the recovery from the ravages of covid-19 continues, the three pillars are looking wobbly. A shortage of skilled workers is becoming more acute. Pay is rising against the backdrop of higher inflation. And some disgruntled unions are even threatening to strike.

Average wages in Germany rose by 5.5% in the second quarter, compared with the previous year. That may in part reflect a base effect: pay fell by 4% in the same period in 2020, when the economic shock from the pandemic hit. Still, workers today are in their strongest position in 30 years, says Gabriel Felbermayr of the Kiel Institute for the World Economy, a think-tank. Bosses are chasing after skilled staff in particular. Automation and migration cannot make up the shortfall, says Carsten Brzeski of ING, a bank.

Trade unions are not shy about using their increased power. “We are demanding a 4.5% pay increase for wood and plastic workers immediately, plus extra early-retirement funds,” says Frederic Striegler of IG Metall, Germany’s biggest union. Industry bosses are offering an increase of only 1.2% next year, and 1.3% the year after. That’s not enough, says Mr Striegler, as it will not compensate workers for inflation. Consumer prices rose by 4.1% in September, the highest rate in 28 years (though some of that reflects one-off factors, such as a temporary value-added-tax cut in 2020).

Unions used to prefer preserving jobs to securing pay rises, and so tended to come to an agreement with bosses who were unable to afford higher wages. Things are now more fractious. Workers at Carthago, a maker of motorhomes, went on strike this week, demanding a fair share of a surge in profits from booming demand for caravans. More strikes are planned at other makers of caravans and furniture.

The boss of IG Bau, a union representing some 900,000 construction workers, warned that it would call its first nationwide strike in 20 years if employers did not meet demands for a wage increase of 5.3% next year, as well as higher payments for travel to sites and a pay rise for east German construction workers to match rates in the west. Germany’s 16 states are in talks with unions about higher pay for more than 2.3m public-sector workers. Unions are demanding a 5% pay increase, with a rise of at least €150 ($173) a month for the least-paid and of €300 for health-care workers.

All told, an average wage increase of 5% next year seems “realistic”, reckons Mr Felbermayr. Pay in industries that rely on skilled workers may rise by even more. But the increases will not fan inflation further, at least not in the short term, says Mr Brzeski. Even after the rises seen so far this year, real incomes are still below pre-pandemic levels. And most firms in most industries can afford reasonable pay increases, as the state shouldered a large chunk of the cost of the pandemic. Yet staff shortages may well return as the population ages: the supply of labour is set to dwindle from 2023. Restoring harmony between workers and bosses could be a tall order.

The International Monetary Bank

The IMF decides to keep its boss

But not everyone is happy

Oct 16th 2021 | HONG KONG

IT TOOK 24 days and seven bureaucratic steps to start a business in Beijing, according to the World Bank's report on the ease of doing business in 2017. But an investigation released last month concluded that the bank's leaders, including Kristalina Georgieva, its former second-in-command, had pressed staff into doctoring the report to flatter China. The allegations left Ms Georgieva fighting to save her current job as head of the IMF. On October 11th the fund's board finally decided her fate. The evidence, it said, "did not conclusively demonstrate" that Ms Georgieva "played an improper role". It had taken almost 26 days and eight meetings for the board to finish its business. But at the end of it all, she could keep her job.

Ms Georgieva, a former EU commissioner, had won the backing of Britain, France, Germany and Italy, the powers that installed her in the first place. The finance ministers of 17 African countries praised her "human touch", as well as the $30bn the IMF mobilised last year to help the continent in its fight against covid-19. Two former chief economists of the bank (Lord

Nicholas Stern and Joe Stiglitz), one of whom has a Nobel prize, also expressed strong support. Mr Stiglitz described the investigation as a "hatchet job".

Arrayed against her in fearful symmetry were two other former chief economists of the bank (Anne Krueger and Paul Romer), one of whom has a Nobel prize. She also had to win over America's Treasury, led by Janet Yellen. It was under pressure from both sides of Congress, which are united in alarm about China's growing global influence. In a call with Ms Georgieva on October 11th, Ms Yellen said there was not now "a basis for a change in IMF leadership", but that the investigation raised "legitimate issues" and that the Treasury will "evaluate any new facts or findings". (Investigators are still working on a report for the bank's human-resources department on potential misconduct by former or current staff.)

Ms Georgieva also benefited from the perception that the changes made to the report in 2017 were mere judgment calls. But a separate investigation by the bank released in December 2020 established that the tweaks were, in fact, not judgment calls but errors. To take one example: the seven steps and 24 days required to start a business in Beijing had been incorrectly cut from nine and 26 at the last minute.

The manipulation of the data in this report and the one published in 2019 was bad enough that eight World Bank staff members eventually blew the whistle, triggering the investigation. Both the fund and the bank will have to ensure future whistleblowers feel protected enough to raise the alarm earlier. Ms Georgieva will have to prove that she is not a pushover for the fund's bigger members and can insulate its technical judgments from politics. The fund is supposed to review the voting structure of its board by the end of 2023. It is hard to imagine Ms Georgieva persuading America to back any redistribution of votes to China, as the country's growing economic weight would warrant.

If Ms Georgieva feels ill-treated by the bank, she may get the last laugh. Even before she took over the fund, it was encroaching on the bank's turf, tackling issues such as inequality, climate and gender. Its response to the pandemic demonstrated its ability to lend more money, faster than the bank possibly can. Insiders share a joke loosely inspired by an old French quip about a divided Germany. Is Ms Georgieva unhappy with the bank? On the contrary. She loves it so much she would be glad to see two of them—the one she used to work for and the institution she is, still, leading. ■

For more expert analysis of the biggest stories in economics, business and markets, sign up to Money Talks, our weekly newsletter.

Rental resurgence

Another upward force on American inflation: the housing boom

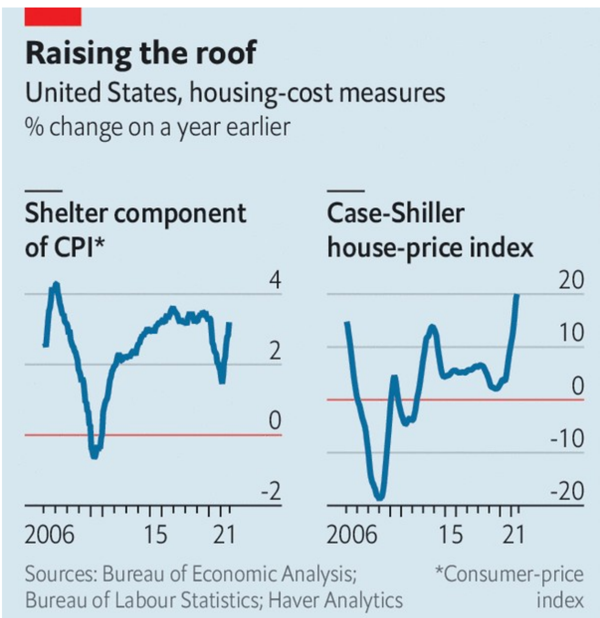
Property could join energy, shipping, used cars and wages as a contributor to rising consumer prices

Oct 16th 2021

FROM ENERGY and used cars to wages and shipping, the list of factors pushing up American inflation is growing fast. Could housing be next? According to figures published on October 13th, the consumer-price index (CPI) rose by 5.4% in the year to September. Its shelter component increased by 3.2%, up from 2.8% in the year to August. And it has further to run.

Shelter has the biggest weight in the CPI, making up 32% of the basket of goods and services used to construct the index. The component is broken into two main buckets: regular rents paid by tenants, and the imputed cost of living in owned homes. Although house prices rose by 20% in the year to July, they do not feed directly into the CPI. That is because statisticians treat home purchases as investment rather than consumption. Instead they capture homeownership by estimating "owners' equivalent rent", the amount an owned property could collect based on leased ones nearby. The rental market, therefore, is what drives shelter inflation.

For much of the pandemic both rents and shelter inflation were depressed. But there are two reasons to think the latest pickup in shelter costs will continue. The first is the expiry of the government's eviction moratorium. The policy had helped renters stay in their homes in 2020, even as lockdowns meant some were unable to work. Many tenants also negotiated lower rents during that time. Now that the moratorium has lapsed, Goldman Sachs, a bank, expects about 750,000 evictions by the end of year. That could lead to a jump in rents. The largest rises occur when a new tenant moves in, says Randal Verbrugge of the Federal Reserve Bank of Cleveland. Rents for new leases are up by 17% compared with what the previous tenant paid, suggests RealPage, a rental site.



The Economist

The second reason why shelter inflation might rise further is that market prices feed through to the inflation figures only slowly. Landlords tend to charge more rent when the value of their property goes up, but with a lag. Rises in new rents also take time to appear in consumer prices, because leases tend to last a year, and the CPI samples rents only every six months or so. President Joe Biden's Council of Economic Advisers estimates that a one-percentage-point increase in house-price inflation leads to a rise of 0.11 percentage points in the shelter component in 16 months' time.

A timely measure of rents, published by Zillow, a property site, is up by around 10% on the year. Further rises could follow as more new leases are signed. Laura Rosner-Warburton of Macro Policy Perspectives, a research firm, expects shelter inflation to climb to 4-6% by the end of 2022. That would contribute 1.3-1.9 percentage points to headline inflation, twice its average contribution in the decade before the pandemic. The next inflationary force could be home-grown. ■

For more expert analysis of the biggest stories in economics, business and markets, sign up to Money Talks, our weekly newsletter.

The shell games go on

A new study finds that dirty money remains easy to hide

Banks and corporate-service providers barely differentiate between clean and risky clients

Oct 16th 2021

A BOOK PUBLISHED in 2014 shook the world of offshore finance. “Global Shell Games” exposed the ease with which ne’er-do-wells could launder money or dodge tax using bank accounts held by anonymous shell companies. The book, NGO activism and numerous leaks—the latest, earlier this month, being the Pandora Papers—have since pushed governments to increase corporate transparency. Britain and other countries introduced public registers of company owners. America passed a law ending shell-company anonymity.

But to what end? The book’s authors are putting the finishing touches on a study that suggests little has changed. The banks and corporate-service providers (CSPs)—firms that set up companies for others—meant to be in the front line of the fight against financial crime do a terrible job of differentiating between legitimate would-be clients and those waving red flags.

The three academics behind the study—Jason Sharman of Cambridge University and Daniel Nielson and Michael Findley of the University of Texas at Austin—undertook what they call a “mystery shopping expedition”. They registered shell companies with varying risk profiles and then sent more than 30,000 emails to banks and CSPs in every country of the world to set up bank accounts. The riskiest-looking of these brass-plate firms were domiciled in places with a high corruption risk, such as Papua New Guinea or Pakistan. The safest-looking were from Australia or New Zealand. In between were shells from havens of offshore secrecy like the British Virgin Islands. In some missives the authors and their team posed as legitimate businessmen; in others as dodgier-sounding supplicants or actual miscreants, such as people on sanctions lists.

The global anti-money-laundering (AML) system that has evolved since the 1980s under the Financial Action Task Force (FATF), a multilateral agency, relies heavily on the private sector to weed out dirty money. Banks must follow “know your customer” rules and identify a would-be client’s real, or “beneficial”, owner.

This “risk-based” regime is broken, suggests the study. The authors found that the varying risk profiles made “almost no difference” to banks’ willingness to open an account; CSPs were even less sensitive to risk. (One Singaporean bank, however, deserves credit for smelling a rat, replying “Hey, you’re the Global Shell Games guys!”)

The study shows that the grunt-work of AML is being “pushed onto a private sector which can’t or won’t do it,” says Mr Sharman. “Banks are unable or unwilling to make the fine-grained risk judgments the system demands, because they use standardised, generic procedures.”

Although the conclusion fits broadly with previous research by the authors, Mr Sharman says he was surprised by the level of risk-insensitivity, because “some of our approaches were ridiculously dodgy”. Other experts will also be taken aback: scholars surveyed by the authors before they went shell-shopping predicted that the study would show the system to be working much better than it was before the transparency reforms of the past five years.

The FATF knows the system is far from perfect. Last year its chief, David Lewis (who has since resigned), admitted that national AML laws were rarely being used effectively. He also implored bankers to “stop just ticking the boxes”. Even before this study the agency was reviewing its approach. More than tinkering is in order. ■

For more expert analysis of the biggest stories in economics, business and markets, sign up to Money Talks, our weekly newsletter.

Xi's premium

Chinese companies suffer an intense cash crunch in offshore bond markets

Spreads on junk bonds are at their highest ever

Oct 16th 2021 | HONG KONG

GLOBAL INVESTORS are all too aware of the discount on the valuations of mainland firms as a result of Xi Jinping's aim to lower leverage, house prices and inequality in China. Borrowers, for their part, must contend with a "Xi premium" on sorely needed capital. The Chinese leader's policies may have led to a perilous credit crunch for many companies, especially property developers, in global markets.

Regulators have shaken the foundations of China's property market by toughening up on the amount of leverage developers can take on. This has pushed Evergrande, a home builder with more than 1,000 projects across China and $300bn in liabilities, towards collapse. It has missed five payments on offshore-dollar bonds in the past month. Several rivals have followed suit. Fantasia defaulted on offshore bonds on October 4th. Sinic Holdings said on October 11th that it would probably default soon. Modern

Land and Xinyuan Real Estate are hoping to delay payments on offshore bonds.

This wave of distress has led to a crunch in the offshore junk-bond market. Spreads (ie, yields compared with the risk-free rate) have reached nearly 17 percentage points, the widest gap on record. The market has for the most part shut to developers hoping to refinance their debts in October, says Sandra Chow of CreditSights, a research firm. One investment manager at a global institution says even non-property companies are being priced out, noting that "this is the definition of contagion."

The Economist

The problems run much deeper than the string of missed payments. One fear is that Chinese authorities are pressing companies to ignore the interests of creditors and to sell offshore assets and siphon cash back home, in a desperate attempt to ensure that unfinished properties that have already been sold to Chinese people are completed. The leading theory among investors goes that Evergrande is buying time to prevent its offshore assets being frozen by offshore creditors. A "privately negotiated" resolution on a yuan bond was announced on September 22nd in order to prevent an instant cross-default on dollar bonds. Although the group has since missed dollar-bond payments, a 30-day grace period gives the group until October 23rd before it is deemed to be in default and creditors can move to seize its offshore assets.

In the meantime, it is selling all it can, including a large stake in its property-services unit and its offices in Hong Kong.

Other groups may be considering a similar strategy. In recent weeks developers such as Fantasia and Sinic have been reluctant to pay offshore coupons. Some instances have surprised investors, suggesting that companies may be able but not willing to make these payments, says Arthur Lau of PineBridge, a Hong Kong-based investment manager.

If such behaviour is tolerated, or even encouraged, by the authorities, the impact could be devastating for the $1trn market for dollar bonds issued by Chinese companies. More defaults could come if yields stay high. Having crushed many private conglomerates that sought to buy overseas assets, and impeded Chinese share sales in New York, Mr Xi may now be putting his stamp on the offshore-bond market. ■

Plastic policemen

Credit-card firms are becoming reluctant regulators of the web

From sex to free speech, what goes online is increasingly up to financial companies

Oct 12th 2021

WHO SHOULD police the internet? For some time now the question has tied companies, regulators and campaigners in knots. Social networks spend billions moderating content posted on their platforms, but are still criticised either for not removing enough toxic material or for stifling free speech. They are not the only ones to grapple with the problem. Banks and credit-card companies too are finding themselves playing a bigger role in what is said and done in the public square—to their, and their customers', discomfort.

The boundary of censorship is now being extended further, into the pornography business. From October 15th adult websites worldwide will have to verify the age and identity of anyone featured in a picture or video, as well as the ID of the person uploading it. They will need to operate a fast complaints process, and must review all content before publication. These rules are being imposed not by regulators but by Mastercard, a credit-card giant.

Websites can choose not to work with Mastercard. But, as the company handles about 30% of all card payments made outside China, to do so would be costly. Visa, which manages 60% of payments, is also taking a firmer line on adult sites. The trend goes beyond porn. In the shadier corners of the web, and in areas where the law is unclear or out of date, financial firms are acting as de facto regulators.

Since the turn of the century, “payments have become a tool of domestic and international policy,” says Aaron Klein of the Brookings Institution, a think-tank. After the 9/11 attacks of 2001 America introduced new anti-money-laundering rules and more targeted sanctions. Financial firms must block payments to the people on a list that today runs to 1,604 pages.

Governments also began to tap banks for help at home. A craze for online poker prompted America’s Unlawful Internet Gambling Enforcement Act of 2006, which handed responsibility for blocking transactions not to the internet service providers that allowed access to poker sites, but to the companies that enabled the payments. As most American states legalised the cannabis industry in some form, its growth was nipped in the bud by federal laws that dissuade banks from dealing with marijuana moguls.

Handing enforcement duties to companies relieves the taxpayer of some of the cost. It is not unusual for big banks, such as HSBC or JPMorgan Chase, to employ more than 20,000 specialists in risk and compliance. In 2017 Accenture, a consultancy, reckoned that tech firms employed around 100,000 content moderators.

The effect is also to relieve politicians of making tough decisions. “Policymaking involves...achieving societal consensus on difficult issues. That has become harder in America,” says Mr Klein. When banks decline to deal with a customer because of “reputational risk”, it sometimes means “a bank regulator [has been] whispering to them, ‘We don’t like your being in this business’,” says Greg Baer of the Bank Policy Institute, an industry body in America.

Activists have also been applying pressure, causing firms to drop unpopular clients. In January, following outcry over a riot at the US Capitol, Deutsche Bank and Signature Bank ended their dealings with Donald Trump, then the president, whom Signature called on to resign. Mr Trump has presumably found other banks willing to work with him. But in some industries, enough banks have turned up their noses that it can be a problem. In August OnlyFans, a site known for its adult content, said it would no longer allow explicit material owing to pressure from partners including BNY Mellon, Metro Bank and JPMorgan (none of which commented). In the end the ban was reversed, after outraged pro-porn activists turned out to be even noisier than the antis.

Visa and Mastercard's near-duopoly makes the firms prime targets for protesters. In 2019 SumOfUs, a left-wing pressure group, tabled a proposal at Mastercard's annual meeting meant to stop payments to far-right groups. (The proposal was defeated.) Thirty-four women are suing Visa along with the owners of Pornhub, an adult site which they say hosted unconsenting footage of them. Illegal-porn sites "care a lot more about their finances than they do about the law", says Laila Mickelwait, whose Justice Defence Fund helps sex-abuse victims litigate. And, she adds, when financial firms change their policies it applies globally. Last year Visa and Mastercard cut off Pornhub over its hosting of potentially unlawful material.

Payment companies face a philosophical dilemma. "On one hand they try to be very open, accepting, willing to facilitate payments for whomever. They're not taking any sort of political or moral stance," says Lisa Ellis of MoffettNathanson, a research firm. "But on the other hand, they also feel like they have a very strong responsibility in making sure that they're not aiding and abetting any sort of crime."

Visa and Mastercard both say that, as global companies, their guiding principle is local legality. But things are not always black and white. In 2017, after a far-right march in Charlottesville, Virginia, Mastercard shut down the use of its cards on websites that had made "specific threats or incite[d] violence", but kept dealing with others labelled hate-groups. "Our standard is whether a merchant's activity is lawful, even when we disagree with what they say or do," the company said at the time.

In grey areas they have reason to err on the side of caution. Payment networks' risk of liability tends to be low, since they operate at one remove from the merchants. But being named in a sex-trafficking complaint does not look good. In working with a borderline adult site, for instance, there's "not a lot of upside and a lot of downside", says Ms Ellis. And in legally tricky areas it can be cheaper to issue a blanket ban than pick through every difficult case.

In policy areas where the law has yet to catch up, financial firms can end up writing regulations themselves. Some cases are innocuous: in 2019 Mastercard introduced rules for companies offering free trials, requiring that they alert customers before payments begin. But other policies involve real trade-offs between values like free speech and safety. Mastercard's requirement that adult sites screen content before publication ought to help stamp out illegal material, but will probably mean less of the legal sort too. The company suggests that it will cut off sites that use artificial intelligence to "nudify" clothed images, something which in most countries is not against the law. An executive at another firm wonders if such rules ought instead to be made by governments. "Where it's grey, who would you rather make the decisions?" he asks.

For as long as legislation lags behind, financial institutions will be left in a difficult position: accused either of being the "moral police", as one executive puts it, or of enabling wrongdoing. As Richard Haythornthwaite, then Mastercard's chairman, told the protesters at the firm's annual meeting in 2019: "If it is lawful, then we need to respect that transaction. If it is something that is swimming against the tide of society, it's for the society to rise up and change the law." ■

For more expert analysis of the biggest stories in economics, business and markets, [sign up to Money Talks](), our weekly newsletter.

Buttonwood

How to think about the unstoppable rise of index funds

They deserve scrutiny, not panic

Oct 16th 2021

THE HISTORY of modern finance is littered with ideas that worked well enough at small scale—railway bonds, Japanese skyscrapers, sliced-and-diced mortgage securities—but morphed into monstrosities once too many punters piled in. When it comes to sheer size, no mania can compare with that for passive investing. Funds that track the entire market by buying shares in every company in America's S&P 500, say, rather than guessing which will perform better than average, have attained giant scale. Fully 40% of the total net assets managed by funds in America are in passive vehicles, reckons the Investment Company Institute, an industry group. The phenomenon warrants scrutiny.

Index funds have grown because of the validity of the core insight underpinning them: conventional investment funds are, by and large, a terrible proposition. The vast majority fail to beat the market over the years. Hefty management fees paid by investors in such ventures, often around 1-

2% a year (and more for snazzy hedge funds), add up to giant bonuses for stockpickers. Index funds, by contrast, charge nearly nothing (0.04% for a large equity fund) and do a good job of hugging their chosen benchmark. Given time, they almost inevitably leave active managers in the dust.

“Trillions”, a new book by Robin Wigglesworth, a journalist at the *Financial Times*, chronicles the rise of passive funds from 1960s academic curiosity to 1970s commercial flop and then runaway success in the 2000s. It estimates that over $26trn—more than a year’s economic output in America—is now lodged in such funds. That is more than enough to set nerves jangling, given high finance has in the past built structures that turn out to be too big to fail.

Mr Wigglesworth, while broadly celebrating this passive revolution, also lays out where the pitfalls might lie. An obvious one is that index funds hand power to the companies that compile the indices. Once-dull financial utilities that reflected the performance of markets, such as MSCI, S&P and FTSE, now help shape them instead. Including a company’s shares in an index can force investors around the world to snap them up. The power of the index is indeed a potential shortcoming. But by and large the weakness is obvious enough for regulators and investors to guard against it.

Another concern is corporate governance. BlackRock, State Street and Vanguard, the three titans of passive investing, together own over 20% of large listed American firms (among other things). Although one person’s vote makes no difference, active managers who pick shares in a handful of companies will push for them to be well-run. Passive investors whose portfolio includes several hundred names might not be so fussed. That is worrying, given they could control the outcome of many a boardroom spat.

Passive giants respond that they are attentive owners, with staff dedicated to prodding the management of the companies they own. Better yet would be for their power to be diffused more widely. That is happening: BlackRock, which on October 13th announced it now manages $9.5trn in assets, plans to hand over some proxy-voting rights to the investors in its funds. This might also alleviate another concern, that companies owned by the same mammoth passive fund will not compete as energetically, lest their success damage other holdings in their shareholders’ giant portfolios.

The biggest gripe of asset managers is that tracker funds free-ride on stockpickers' hard work. Even mediocre active funds, taken together, help direct capital to worthwhile companies (and away from poorly run ones). Inigo Fraser Jenkins of Bernstein, a broker, once decried passive investing as "worse than Marxism": Soviet planners did a lousy job of allocating resources to promising ventures, but at least they tried. Index funds, however, revel in their passivity.

What to make of this risk? A market dominated by passive investors would indeed kick up concerns over whether capital is going to the right places. But domination is far from the case today. Active managers still play a big role in markets. Retail investing is vibrant (if sometimes over-exuberant). Private-equity firms keep public and private valuations broadly in line. Venture capitalists are flocking to startups.

Furthermore, the hypothetical flaws of passive funds must be set against the very real savings investors have made since they arrived on the scene. The effects of rising passivity are worth pondering, but not reversing.

For more expert analysis of the biggest stories in economics, business and markets, sign up to Money Talks, our weekly newsletter.

Free exchange

The Nobel prize in economics celebrates an empirical revolution

David Card shares this year's award with Joshua Angrist and Guido Imbens

Oct 12th 2021

A "CREDIBILITY REVOLUTION" has transformed economics since the 1990s. Before that, theory ruled the roost and empirical work was a poor second cousin. "Hardly anyone takes data analysis seriously," declared Edward Leamer of the University of California, Los Angeles, in a paper published in 1983. Yet within a decade, new and innovative work had altered the course of the profession, such that the lion's share of notable research today is empirical. For enabling this transition David Card of the University of California at Berkeley shares this year's economics Nobel prize, awarded on October 11th, with Joshua Angrist of the Massachusetts Institute of Technology and Guido Imbens of Stanford University.

The messy real world can often defy economists' attempts to establish causality. Working out how a rise in the minimum wage affects employment, for example, is complicated by the fact that some other influence (a chronically weak labour market, say) may have contributed to changes in both policy and employment. In other fields researchers establish causation by designing experiments where subjects are randomly assigned to different groups, only one of which receives a particular treatment, so that the effect of the treatment can be clearly seen. More economists are also using randomised controlled trials—indeed, the Nobel prize in 2019 rewarded such efforts. But many questions cannot be studied this way for reasons of politics, logistics or ethics.

This year's prizewinners surmounted such hurdles by using "natural experiments", in which some quirk of history has an effect similar to an intentional trial. In a landmark paper published in 1994, Mr Card and Alan Krueger studied the impact of a minimum-wage increase in New Jersey by comparing the change in employment there with that in neighbouring Pennsylvania, where the wage floor was unchanged. Although theory predicted that a minimum-wage rise would be followed by a sharp drop in employment, such an effect, strikingly, did not seem to hold in practice. The paper inspired further empirical work and injected new energy into thinking about labour markets. Krueger, who died in 2019, would probably have shared the prize had he lived.

The use of natural experiments quickly spread. Mr Card analysed another unique circumstance—Fidel Castro's decision in 1980 to allow emigration out of Cuba—to examine the effects of immigration on local labour markets. About half the 125,000 Cubans who fled to America settled in Miami. By comparing the city's experience with that in four other places which were similar in many respects, but which did not receive an influx of migrants, Mr Card found that neither the wages nor the employment of native workers suffered as a result of the migration.

Mr Angrist, together with Krueger, used a similar technique to examine the impact of education on labour-market outcomes. Because students of a more scholastic disposition are likely both to spend more time in school and to earn more in work, what looks like a return to education could in fact reflect natural aptitude. In order to determine causality, the researchers made use of odd characteristics of America's educational system. Although laws typically allowed students to drop out of school when they turned 16, all students born in the same year began school on the same date, regardless of their birthday. Those born in December, therefore, received more schooling, on average, than those born in January—and, the researchers found, also tended to earn more. Since the month of a student's birth may be assumed to be random, they concluded that the added education caused the higher earnings.

The study of schooling found that an extra year of education raised subsequent wages by 9%. Such an effect seemed implausibly large to many economists. But that reflected a difference in definition, concluded Mr Angrist in work with Mr Imbens. The two scholars noted that the effect of a "treatment" was not the same for everyone in a natural experiment. If the age at which students could drop out were raised from 16 to 17, for example, some would be forced to receive another year of schooling; others, who had always intended to stay in school, would be unaffected.

Together, the researchers developed methods to make the conclusions from natural experiments more useful. Economists refer to the quirky factor used in natural experiments (like the birth month of a student) as an "instrument". Messrs Angrist and Imbens explained the assumptions that need to hold for an instrument's use to be valid: it must, for instance, influence only the outcome being studied (earnings, in this case) through its effect on the treatment (years of schooling), and not other channels. By laying out these assumptions, the researchers allowed for more sophisticated analysis: the estimated boost to earnings in Messrs Angrist and Krueger's work, for instance, applies only to students who drop out as soon as they can. The benefits to those who choose to study longer cannot be observed. Moreover, the methodology also improved the transparency of research. The reader of a paper can judge for themselves whether an instrument satisfies the needed assumptions, and discount the result accordingly.

It's only natural

The credibility revolution, like any big upheaval, has had its excesses. Critics point to careless work and the mining of data in search of results that seem meaningful. Scholars are occasionally too eager to extrapolate findings from a particular natural experiment in ways that may not be justified, given the uniqueness of the circumstances. Yet the innovations developed by this year's prizewinners unquestionably changed the field for the better, illuminating questions once shrouded in darkness and forcing economists to push theory in directions that better describe real-world experience—a cause, indeed, for celebration. ■

Correction (October 12th 2021): A previous version of this article misstated the part of Messrs Angrist and Krueger's study. Sorry.

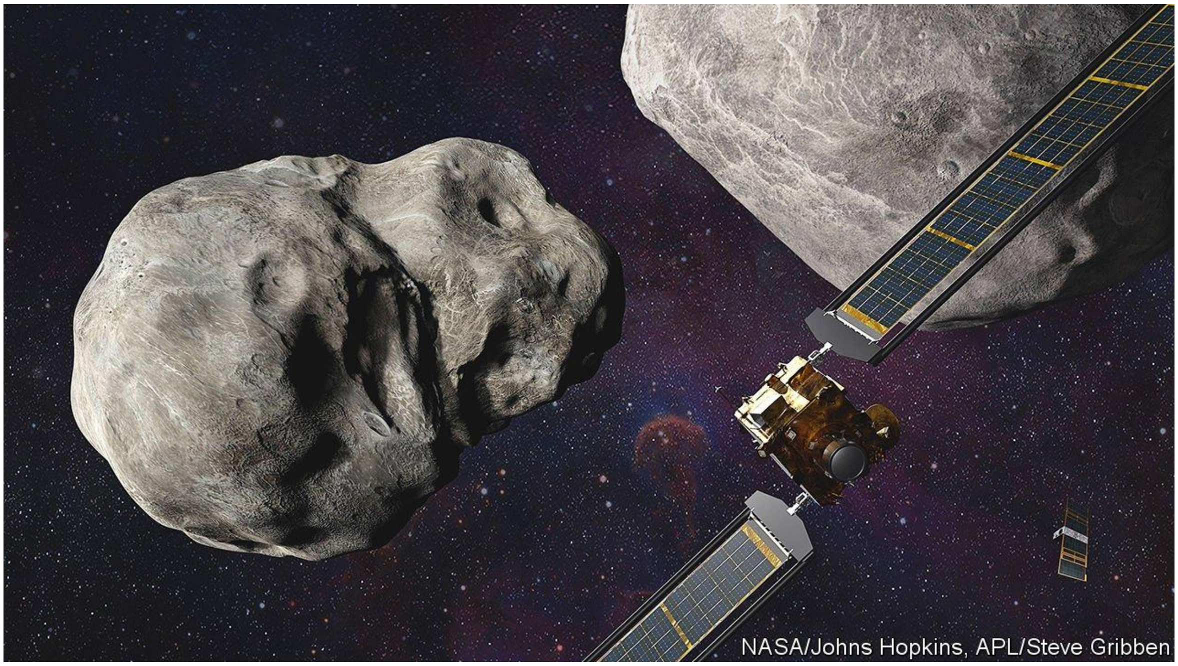
Science & technology

The Double Asteroid Redirection Test

An exploration of Earth's defences will launch next month

It will check how far it is possible to deflect an incoming asteroid

Oct 13th 2021



THE DEPARTURE of *Lucy*, on October 16th, if all goes well, is not the only forthcoming mission with asteroids as its destination. On November 24th DART should follow. The Double Asteroid Redirection Test, though, has a more practical purpose than *Lucy*. It will assess the feasibility of changing an asteroid's path, should one be discovered that threatens to collide with Earth.

DART, a probe weighing 600kg, is intended to crash, in September 2022, into Dimorphos, a tiny asteroid in orbit around a larger one, Didymos, at a velocity of 6.2km per second. The intention is to alter the speed of Dimorphos's orbit by about half a millimetre a second, thus shortening its orbital period, now 11.9 hours, by about ten minutes.

Didymos is 780 metres across. According to the project's lead investigator, Andrew Cheng of Johns Hopkins University, in Baltimore, if an object that size hit Earth it could devastate half a continent, causing firestorms and a subsequent cooling of the climate that might last for years. But even something the size of Dimorphos, only 160 metres across, would do a lot of damage. Its impact would create an explosion equivalent to 400-600 megatonnes of TNT. By comparison, the Tunguska bolide that exploded over Siberia in 1908, flattening more than 2,000km^2 of forest, released something like 20 megatonnes. And recently published evidence suggests that an explosion of similar size to Tunguska destroyed Tall el-Hammam, a city in the Jordan valley, in about 1650BC.

There are, moreover, a lot of unknown asteroids out there. NASA's Near-Earth Object Observation Programme, intended to discover 90% of asteroids larger than 140 metres across that have orbits near Earth's, is reckoned to have so far found less than half of them. None yet located is seen as a threat. But if such a threat were identified, the question would be whether anything could be done about it.

If collision with Earth was imminent, the answer is probably "no". But if it were years or decades away, a nudge of the sort DART will give Dimorphos could change a space rock's path enough for it to miss Earth after all—even a tiny alteration in such a body's orbit will grow over time.

Dimorphos's behaviour after DART hits it will thus be the subject of intense scrutiny. The impact itself will be monitored by LICIACube (Light Italian CubeSat for Imaging of Asteroids). This is a small craft, built by Italy's space agency, which will be launched along with DART and separate from it shortly before impact. After that, Didymos and Dimorphos will be tracked by ground-based telescopes. Then, in 2024, the European Space Agency will launch a follow-up craft called *Hera* that will arrive at the double asteroid in 2026, for a more detailed inspection. All these data will then be crunched to find out just how feasible an asteroid-deflection mission would be.

With luck, no such mission will ever be needed. But if one is, DART may prove to be the most important space probe ever to have flown.

Position-specific isotope analysis

How to tell biological from non-biological molecules

Isotopes can verify food additives and aid the search for ET

Oct 13th 2021 | Portland, Oregon

WOULD YOU like the vanilla in your custard to come from a field of lovely orchids or a barrel of wood pulp? The second option may not seem as appetising, but synthetic vanillin, as vanilla's flavour-inducing compound ($C_8H_8O_3$) is called, has a hundredth of the cost. Which warrants suspicion. When you pay your money, are you getting the real stuff?

A way to find out is to take a sharp look at those eight carbon atoms, because carbon itself comes in flavours, too. On Earth, the vast majority is ^{12}C, with atoms containing six protons and six neutrons. A mere 1.1% is its heavier sibling ^{13}C, which has a neutron more. It turns out that when producing vanillin, orchids incorporate a little more ^{13}C into the molecules they are making than synthesis by humans does.

Checking for the ratio of ^{12}C to ^{13}C in vanilla extract would thus seem to be the answer. But canny producers of cheap vanillin can evade that check by rigging their raw material to contain a bit more ^{13}C than usual, to make their product conform to analysts' expectations.

The counter-ploy is to look at where exactly in a vanillin molecule the heavy carbon atoms tend to be. The chemical steps the orchid's bean-producing cells perform to create vanillin steers them preferentially to certain positions. Copying those steps in a test-tube is hard.

Probing molecules to see where different varieties of an atom camp out is called position-specific isotope analysis, or PSIA. And this technology has advanced rapidly in the past few years, as Katherine Freeman, a professor at Pennsylvania State University and director of the NASA Astrobiology Centre for Isotopologue Research there, told a conference of the Geological Society of America in Portland, Oregon, on October 10th. PSIA now stands ready not only to check the origin of foodstuffs, but also to prise information from molecules about Earth's atmosphere millions of years ago, and perhaps help determine whether living organisms contributed to samples brought back from Mars.

The first step in any position-specific analysis is to cut up the compound under investigation. Vanillin molecules, for instance, have a protruding cluster of one carbon and three hydrogen atoms called a methyl group that is easily separated from the rest. This can then be tested in isolation by converting the carbon to CO_2 and weighing the resulting gas.

More sophisticated approaches are also available. One is to break molecules up into several pieces and record the average masses of each, using mass spectrometry. Another is to employ NMR spectroscopy, which measures how radio waves interact with atoms held in a strong magnetic field (^{12}C atoms behave differently from ^{13}C).

David Hoffman and Cornelia Rasmussen of the University of Texas in Austin are investigating a number of amino acids, the building blocks of proteins, using a twist on this technique—looking not at the atoms themselves but rather at the bonds within molecules between carbon and hydrogen atoms. These react differently to radio waves, depending on the type of carbon involved. The two researchers hope to find differences between amino acids of biological origin and those made in a laboratory—

knowledge that may be crucial for the investigation of samples from a planet where life possibly arose, such as Mars.

There are so many compounds worth checking for their inner isotopic life, that researchers are, Dr Freeman says, “like kids in a candy store”. Moreover, in addition to carbon, probing can be done for isotopes of nitrogen, sulphur, oxygen and hydrogen. But work on carbon has come furthest.

One of her own favourite molecules is glucose. In this, the isotopes’ positional preferences are strong. Since glucose is the “ur-molecule” from which most other biochemicals ultimately derive, that difference gets propagated far and wide into an organism’s molecular make-up. Indeed, it is preserved in molecules from the distant past, potentially enabling palaeontologists to track when life began on Earth in the absence of clearly distinguishable fossils.

Even farther out, literally, is what the method could reveal about compounds from meteorites. According to Dr Freeman, most of their molecules will have formed on the planet or asteroid the meteorite was once part of. But some could be much older. Weighing their isotopes may offer a taste of the interstellar medium as it was before the solar system started assembling itself. The opposite, then, of mere plain-vanilla research. ■

Snakes alive!

Why there are so many species of serpent

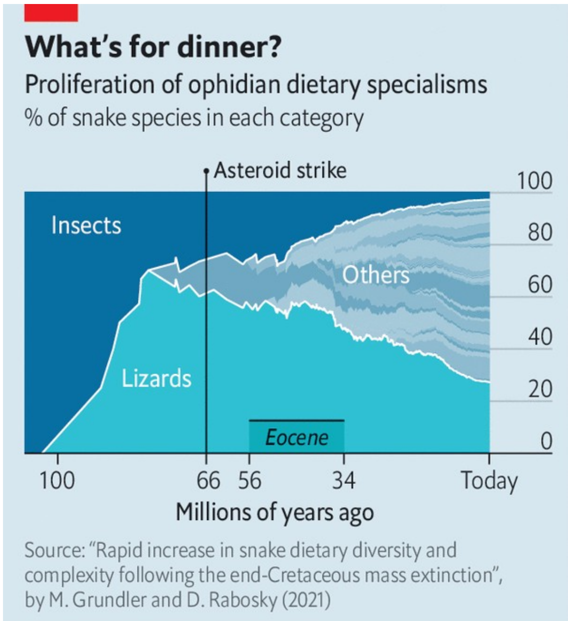
Mammals were not the only group to benefit from the dinosaurs' demise

Oct 16th 2021

THE CAENOZOIC—the era of Earth's history since an asteroid strike 66m years ago ended the dinosaurs' reign—is often called the age of mammals. And mammals did, indeed, do well in the scramble to fill the ecological niches suddenly vacated by that catastrophe, for there are now about 6,500 species of them. But several other groups were equally, if not more successful. Birds (technically dinosaurs, too, by ancestry, though few think of them that way) have about 11,000 species. Lizards have 7,000.

And there is yet another set of terrestrial vertebrates that prospered post-impact, but which are sadly neglected by zoologists. These are snakes. With almost 4,000 representatives, they are not as speciose as mammals. But they are not far behind.

Snakes' success is intriguing. Phylogenetically, in the way that birds are dinosaurs that sprouted wings, they are actually a group of lizards that lost their legs. But birds' success is unsurprising. They were the only dinosaurs to master flight. By contrast, partial or total leglessness has evolved more than a score of times in lizards. Yet each abandonment of limbs, except by snakes, has led to only a handful of modern representatives.



The Economist

In a study just published in PLOS *Biology*, Michael Grundler of the University of California, Los Angeles, and Daniel Rabosky of the University of Michigan shed light on the matter. They argue snakes' unique success among legless lizards is a consequence of a huge diversification of their diets made possible by the new animal groups that flourished after the (non-avian) dinosaurs' demise. To back their theory up, they put together information about the diets of 882 modern snake species. They then mapped this onto the best available understanding of snakes' family tree.

The oldest snake fossils go back to the mid-Jurassic, about 170m years ago. These snakes were predators of invertebrates, mainly insects. Their diets thus matched those of most of the other groups of limbless lizards now alive. Just over 100m years ago, however, as the chart shows, Dr Grundler's and Dr Rabosky's analysis suggests some snakes started eating other lizards. This change of diet was presumably enabled by the evolution around that time of what might be thought of as snakes' killer app—the equivalent, if you like, of a bird's wings. This is the detachment of their lower from their upper jaw, which gives them their famous ability to swallow prey whole.

Then, around 75m years ago, some snakes started adding other small vertebrates, such as frogs, to their diets.

But that was just the overture. As the chart shows, ophidian dietary diversification really got going in an epoch called the Eocene, which began 56m years ago, 10m years after the dinosaurs' demise. It was during the Eocene that many groups of animals now familiar first emerged (including most modern orders of mammals). Snakes, preying upon this diversity, themselves diversified in response, developing such hunting tricks as the venoms for which they are notorious. The result is the plethora of slithery serpents found today. ■

Fishing for allergens

A novel technique can discover new allergens

It will help make food safer to eat

Oct 13th 2021

FOR MANY, eating out is a pleasure. For the 5% or so of people who suffer from food allergies, though, it is anything but. Mostly, such allergies cause mild rashes and minor digestive trouble, but they have the potential to trigger anaphylactic shock, a potentially lethal inflammatory response. The resulting swelling can block a patient's airways, crash blood pressure and either speed up or slow down the heart.

The allergy-prone thus need to avoid contact with foods which may provoke this reaction. But that is hard, for two reasons. One is that some common allergenic foodstuffs, such as peanuts, are widely used as ingredients, so cross-contamination in factories and kitchens is an ever-present threat. That threat, though, is being countered by the development of a range of technologies intended to scan food quickly for the presence of allergenic proteins.

The other reason is that there is no comprehensive list of such allergy-provoking proteins for which to scan. This is particularly true for various sorts of seafood, which frequently provoke allergic reactions with untraceable chemical causes. But, as they describe in the *Journal of Agriculture and Food Chemistry*, Bi Hongyan at Shanghai Ocean University, in China, and his colleagues think they have invented a way to overcome this problem, by assembling a catalogue of suspects.

Their trick is a technique called immunomagnetic separation. This involves attaching antibodies from people suffering specific allergies to microscopic beads made of a special magnetic plastic, then exposing these beads to solutions with the problematic foods blended into them. As they would in the body, the antibodies bind to allergens when they encounter them in these solutions. The beads can then be fished out with a magnet, so that the allergens they have accumulated can be studied. Dr Bi knew this technique had been used in the past to detect a peanut allergen in both cornflakes and biscuits. He speculated that he could use it to discover allergens that had not yet been identified.

Many marine creatures eaten as food are allergenic, but the allergens in these seafoods are not as well studied as immunologists would like. Dr Bi and his colleagues therefore collected samples of blood serum from seven sufferers from severe seafood allergies. As a control, they also collected serum from eight allergy-free individuals. They then extracted antibodies from all of these samples, fixed them to beads and placed those beads in saline solutions that had had either a few grams of sablefish flesh or a few grams of greasy-back shrimp mixed into them. These two species stood in for ray-finned fish and crustaceans, two types of marine animals that can be particularly allergenic.

As the researchers hoped, some of the antibodies from the allergic volunteers stuck to proteins from the samples. This did not happen with antibodies from non-allergic volunteers. Using a combination of mass spectrometry and liquid chromatography they then identified the captive allergens. While some were familiar, many were not. Specifically, the process revealed that a protein called SVBP, which regulates the growth of blood vessels in sablefish, is an allergen that, if it had made it into the bodies of two of the blood-serum donors, would have triggered an allergic reaction.

Since SVBP was not a previously known allergen, this finding alone is important. Far more important, though, is that Dr Bi's technique appears to work and has the potential to identify yet more potentially lethal allergens. ■

Books & arts

Technology, business and society

Two new books explore the impact of accelerating technology

A third explains how to profit from it

Oct 16th 2021

The Exponential Age. By Azeem Azhar. *Diversion Books; 352 pages; $28.99. Published in Britain as "Exponential"; Random House Business; £20*

Human Frontiers. By Michael Bhaskar. *MIT Press; 432 pages; $29.95. Bridge Street Press; £20*

Masters of Scale. By Reid Hoffman with June Cohen and Deron Triff. *Currency; 304 pages; $28. Bantam Press; £20*

HISTORIANS OF SCIENCE distinguish between useful discoveries, such as dental floss, and "general-purpose technologies" that can be applied to numerous purposes—such as electricity, which powers everything from factories to streetlights to televisions. These transformative inventions, and the gadgets they spawned, were developed at a swift, industrial pace in the

19th and 20th centuries. Now, though, a new phase of progress is under way: many technologies are not following linear growth rates but exponential ones. This does more than speed up innovation. It poses drastic challenges for businesses, governments and society.

Many Western institutions are unprepared for this shift because they are stuck in an industrial-age mindset, say three new books. There is good reason for that: people are generally far more familiar with linear growth, in which things change or add up bit by bit, than with the exponential kind, whereby they double or triple (or more) at each increment. For example, if a step is a metre long and you take 25 of them, you have travelled 25 metres. But if each step grew exponentially, doubling from one to two to four metres and so on, your seventh pace would cover a football pitch—and your 25th would span 33m metres, or almost the circumference of Earth.

It may initially seem slow and boring, but exponential change suddenly becomes unfathomably dramatic. The world is in the midst of just such a transformation, argues Azeem Azhar. Computer technology, he notes, long observed Moore’s law, according to which the power of a computer chip (as measured by the number of transistors) doubles every two years, basically with no rise in cost. But, says Mr Azhar, today such exponential growth is also characteristic of other technologies that have been supercharged by digitisation or advances in artificial intelligence (AI). These include solar cells, batteries, genome-editing, augmented reality, 3D manufacturing, online business, even electric cars and urban farming—as well as, alas, online misinformation, cybercrime and warfare.

A slew of superstar firms are emerging on the back of these technologies. They are dominating their sectors because of network effects, whereby using the same platform is widely beneficial. For example, Alibaba, a Chinese e-commerce giant, created an online-payments system in 2004. Nine years later that had become the world’s largest mobile-payment platform, called Ant Financial. By having a plethora of data it could improve its service, which made it more popular, which in turn let it collect more data—a cycle known, in a term popularised by Jim Collins, a management scholar, as a “data flywheel” effect.

Ant Financial's data scientists saw that women who bought skinny jeans were also more likely to pay for phone-screen repairs. They speculated that the handsets were slipping out of the trousers' pockets. So the firm began directing offers of screen insurance at skinny-jeans-wearing women. Because of such insights and targeting, 80% of its customers use at least three of its five financial products. Traditional banks that lack such data are at a huge disadvantage—which Mr Azhar calls "the exponential gap".

With his experience as a startup entrepreneur, tech investor, innovation executive at big companies and journalist (including, 25 years ago, at *The Economist*), Mr Azhar is well-placed to decrypt these digital trends. He has a knack for interrogating and inverting conventional thinking, for example in making the case that the adoption of exponential technology leads to job increases, not cuts—witness the rising headcounts of expanding businesses such as Amazon or Ocado, a British online grocer. The unemployment that results, he says, is down to the firms that fail to adapt, not those that do.

Exponential or bust

The importance of harnessing technology for business is the theme of "Masters of Scale" by Reid Hoffman, a co-founder of LinkedIn, and his two co-writers. Readers of his book (based on a popular podcast of the same name) will need to look past the stomach-churning clichés with which he implores would-be tech moguls to "Shoot for the Moon" or "Get in the trenches". When he delves into the stories of his fellow entrepreneurs, by contrast, Mr Hoffman adeptly draws out the essence of their strategies.

Kevin Systrom, for instance, launched a photo-sharing app that grew exponentially by reducing its features rather than, as you might expect, expanding them: within ten weeks it had 1m users. The company, later named Instagram, was sold to Facebook for more than $1bn when it had just 13 employees. (Mr Hoffman duly advocates "blitzscaling", or doing whatever is necessary to get big quickly.) Often a founder's narrative is a mix of myth and pabulum, but beneath those are usually bold decisions that swayed the company's fate. The book illuminates the critical, often eccentric insights that have in some cases led to warp-speed success.

The implications of these technology and business trends for economic growth and the advancement of knowledge are Michael Bhaskar's theme in "Human Frontiers". He enters the debate over the "great stagnation": the idea that innovation is becoming harder because the most graspable advances have been made. According to this provocative thesis—a much gloomier one than Mr Azhar's—research is growing costlier and its findings less dramatic. Much of today's innovation aims to deepen understanding of existing science rather than exploring fresh terrain.

Mr Bhaskar used to be a writer for Google DeepMind, a top corporate AI laboratory, and he fluently explains the stakes of the debate, and the way the limits of knowledge have expanded in episodes ranging from the scientific revolution to the upheavals of AI. Yet, maddeningly, he declines to answer the question he poses. "Our ideas", he writes bathetically, "will either rapidly shrink from the frontier or continue charging towards it." Exponential or bust, in other words.

Cynics may snigger at the hype around tech firms. But exponential-age companies often enjoy the last laugh, whether in Amazon's routing of Sears, Netflix's besting of Blockbuster, Apple's defeat of Tower Records or Instagram's kibosh of Kodak. In each case, the upstarts were better at co-opting digital tools and applying them creatively. These books make a convincing case that something extraordinary is taking place in business and society. But they are far from the end of the conversation. ■

Spy fiction

A posthumous novel from John le Carré

“Silverview” is a worthy coda from a much-missed master

Oct 16th 2021

Silverview. By John le Carré. *Viking; 224 pages; $28 and £20*

WHEN JOHN LE CARRé died last December, he left behind a prodigious oeuvre that spanned six decades and chronicled human betrayal and geopolitical turmoil with a winning blend of intrigue, insight and moral complexity. He also bequeathed an archive of unpublished material. In it was one complete, full-length novel called “Silverview”, which he had been working on in tandem with the last two books he published during his lifetime, “A Legacy of Spies” and “Agent Running in the Field”. Now, almost a year after his death, the novel—the British author’s 26th—is emerging into the light.

As with those two other late-career works, the bulk of the book plays out in le Carré’s native land. It introduces Julian Lawndsley, who has recently escaped from the rat-race in the City (“I came, I stole, I conquered”) to run a bookshop in a small seaside town. One evening, just before closing time, he receives a final customer who shows a curious interest in the shop’s basement. Edward Avon claims to be an old school friend of Julian's late father, describing himself as "one of life's odd-job men". A connection is formed, after which Julian is invited to the Avon family home, Silverview, where he meets Edward's wife Deborah and their daughter Lily.

Le Carré opens up a separate narrative strand. When a tiny technical blip turns into a full-scale security breach, spy boss and "chief sniffer-dog" Stewart Proctor is asked to hunt down the source of the leak. His investigations involve dredging up retired spies and trawling through old case histories, including a botched operation in communist Poland and a tragedy in war-ravaged Bosnia. Proctor homes in on his quarry in a certain seaside town, keen to learn more about the turncoat and the rationale for his treachery: "Who do we find when we've pulled away the layers of disguise? Or were you ever only the sum of your disguises?"

"Silverview" takes at least 50 pages to gather momentum. "But what on earth was the endgame?" wonders Julian of Edward's intentions—a question some readers may ask about the novel as a whole in its early stages. When the plot takes shape, though, and motives come into focus, the story comes to life and acquires depth, pace and tension. There is a retro charm about proceedings—people keep diaries, write letters, send faxes and wear Homburgs—as well as a welcome array of familiar le Carré tropes, from sharply drawn characters to stimulating interviews and debriefings, plus a compelling denouement involving a wanted man on the run.

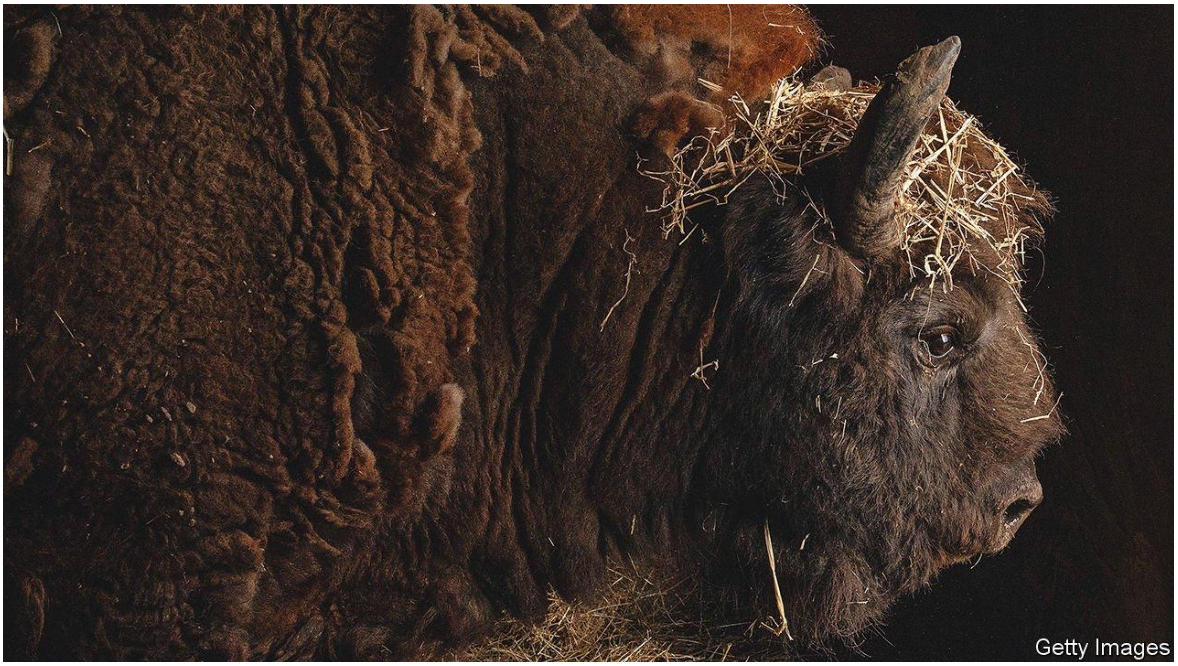
This book is by no means vintage le Carré. But nor is it the half-baked posthumous cash-in it might have been. Rather it is a worthy coda, a commanding farewell from a much-missed master.

Evolution

Humans have altered other species as well as the environment

Beth Shapiro explains how in "Life as We Made It"

Oct 13th 2021



Life as We Made It. By Beth Shapiro. *Basic Books; 352 pages; $30. Oneworld; £18.99*

HUMANS ARE a force of nature. This paradoxical thought is the glue that holds "Life as We Made It" together. But it is not the environment-changing effects of human activity on land, sea and air that intrigue Beth Shapiro—or not directly. Instead, she looks at how people have altered living organisms themselves, exerting an evolutionary pressure on other species.

If turning aurochs into cattle, wolves into dogs or teosinte into maize sounds like a sideshow compared with transforming the composition of the atmosphere, looting the oceans or destroying the rainforests, consider a few facts. The most common species of bird is *Gallus gallus*, the domestic chicken. Even excluding people themselves, the biomass of domesticated mammals exceeds that of the wild sort by a factor of 14. A third of Earth's dry land (deserts and ice caps included) is devoted either to growing domesticated plants for human consumption or to the nutrition of domestic animals.

How this came about, and where it is leading, are Dr Shapiro's topics. Her day job is as an evolutionary molecular biologist—a recent field, but one just old enough in 1999, when her research career got going, for lots of the good stuff to have been snaffled already. Mammoths, musk oxen, giant sloths, dogs, wolves, horses and even Neanderthals were all jealously guarded by other researchers. But, as her supervisor at Oxford pointed out, no one was studying bison.

Bison, it transpires, offer an excellent insight into human influence on other species' evolution. They started in Asia but migrated to North America during the last Ice Age. For 100,000 years they thrived. Then people followed them across Beringia, and the massacre began. Unlike many other large American mammals, bison were not exterminated by the new arrivals. Instead, they evolved. Being large, and thus an easy target, was bad. Being small, and better able to survive in the marginal habitats into which they were driven, was good. So evolution shrank them by 30%.

Later, a second wave of humans arrived, this time by sea from the east. The diseases they brought, particularly smallpox, ran riot among the human population, permitting an explosion in the bison's. But the newcomers also brought guns, railways and eventually another massacre. The last chapter of the bison's story involves a human change of heart. Having reduced the species to a handful of individuals (125, Dr Shapiro estimates), *Homo sapiens* set about saving it—at another price to its gene pool. Most bison today are privately owned and raised for their meat. They are selectively bred, not least for docility, and share some cattle genes after crossbreeding that happened a bit over 100 years ago.

Even the few remaining "wild" bison are intensively managed and carry cattle genes. Shrunk, tamed, crossbred and eaten, are bison now a domesticated species? The answer is ambiguous; but the bison's tale certainly matches that of other, clearly domesticated organisms, from cattle and sheep to wheat and peanuts.

Turning these (and dozens of similarly modified types of creature) into people, as Dr Shapiro summarises their edible fates, while harnessing others as workhorses, has permitted human domination of Earth. But it has also unleashed a demon. For it is only by continually improving the yield of domesticated species that all those extra mouths can be fed.

So far, selective breeding has kept up. But more is now needed. Though the engineering of genomes for agricultural purposes has, in the view of many, got off to a rocky start, new techniques can cut to the chase, circumventing the requirement for generations of selective breeding. Those same techniques promise other things besides. One is the idea of de-extinction—the creation of simulacra of organisms that no longer exist, such as mammoths, about which Dr Shapiro has written eloquently in the past. Another is the modification of human beings themselves.

That is a big and tortuous topic, and she does not dwell on it. But in an age when "technology" has become synonymous with the information kind, it is worth being reminded that other sorts are available. And with one of them people can, if they so choose, remake themselves. ■

Dante andante

A “Divine Comedy” ballet, 700 years after Dante’s death

Thomas Adès, Wayne McGregor and Tacita Dean have created a phenomenon

Oct 16th 2021

ARTISTS HAVE been reimagining the “Divine Comedy” for most of the 700 years since Dante Alighieri’s death. A silent-movie version of 1911 was the first of many attempts to adapt his masterpiece of temptation and redemption for the screen. It has inspired comics, manga series, death-metal albums and a video game. Now, seven years after the British composer Thomas Adès first mooted the idea to Wayne McGregor, an acclaimed choreographer, comes the first full-length Dante ballet.

They initially worked together 20 years ago. Mr Adès has since become best-known for his operas, particularly “Powder Her Face” and “The Tempest”. Composing for dance is different, emphasising rhythm, yet he leapt at the chance to do his first full-length piece for the Royal Ballet. Mr McGregor asked Tacita Dean, a British artist who works mostly with film, to design the production and costumes.

Composing for an orchestra is a slow affair. So rather than first writing a score, and only then developing the choreography and stage design, the trio began working on "The Dante Project" at the same time. The resulting show—which was to have its world premiere at the Royal Opera House in London on October 14th, after *The Economist* went to press—pulses with life, energy and ideas. For the audience it is less a conventional performance to be watched than a phenomenon to be experienced.

A poem in three parts, "The Divine Comedy" lends itself to theatrical staging. Ms Dean sketches the show's arc, across three acts moving "The Dante Project" from monochrome to colour, and from pencil drawing through photography to film. The "Inferno", the first part, which was staged separately in Los Angeles in 2019 (see picture), is set in an icy grey rather than a burning hell. The backdrop is an Antarctic seascape, bled of all warmth and turned upside down, literally: the dancers, when they appear, seem to be exploring a cave.

As the characters of Dante and Virgil, his guide, descend into the depths, Mr Adès digs into the past, to the era of Tchaikovsky and Liszt, for musical inspiration. On the stage, Mr McGregor unleashes a riot of bodies in dark geometric forms. Dressed head-to-toe in a black that is covered in white chalk, the deadly sins—Envy, Greed, Sloth, Pride, Gluttony, Wrath and Lust—writhe and tremble, self-harm and headbutt, chalk passing from body to body in a drama of violence and temptation.

By contrast, "Purgatory", the next section of the poem, is set on Earth, as depicted by a huge green jacaranda tree that gives shade to a wide street. Mr Adès enriches the chant of a Sephardi cantor from Jerusalem with kettledrums and tambourines. The dancers appear in a dun colour, dust and wind adding to the sense of groundedness. As the second act progresses, rain turns the jacaranda mauve with flowers, conveying the optimistic view that life contains more joy than suffering. It is here that Dante meets his beloved Beatrice in a *pas de deux* that is as light as spun sugar.

In "Paradise", Ms Dean uses film to conjure up the glow of other planets. Musically, Mr Adès could have gone for a brassy, triumphant finale. Instead chromatic scales impose a sense of unexpected wonder as, at the close of one of the first great premieres after the pandemic, the dancers reach out for undiscovered worlds. ■

Johnson

Why you have an accent in a foreign language

It is because pronunciation, stress and rhythm are rarely taught well

Oct 16th 2021

OPEN A TEXTBOOK for a foreign language, and one of the first things you see is an alphabet, enumerating the letters used in the writing system and the sounds they represent. This is obviously crucial for unfamiliar systems, say those of Greek or Russian. But even for languages that rely on the Latin alphabet, the guide will explain how diacritics such as accent marks change a letter's pronunciation, and quirks such as the *-ch-* in German or *-gl-* in Italian. (The first often sounds like the *ch* in Scottish *loch*, the second like the *-ll-* in *million.*)

And with that, it's off to master greetings, vocabulary and so on, with little further thought for pronunciation. This is a shame. There is much more to learning a foreign accent than the sounds that the letters on the page represent. To begin with, the rough equivalents given in English are often quite rough indeed. In French, the *p* in *Paris* sounds rather different from the *p* in English, a contrast often neglected in textbooks: the French version lacks the strong puff of air of the English one. (Hold your palm in front of your mouth and say “Paris” in English. Then try making the *p* without the puff, and you’ll get the French kind.)

Even when textbooks or instructors mention this sort of nuance, the next step is often missing. As with chemistry, the important thing is not just how the elements behave in isolation, but how they come together. Each language has rules for these combinations, which native speakers (and many teachers) generally grasp but don’t or can’t explain.

Consider an easy example. All French words are stressed on the final syllable, a rule typically explained in textbooks. But the importance of the rule is often underplayed. It applies not only to French words but to any foreign name: French-speakers are acquainted with a Texan city called *yoos-TON*, not the English *HYOO-ston*. The final stress is quite emphatic, usually involving a higher pitch and greater volume. Meanwhile, English words often have a secondary as well as a primary stress: in “civilisation” the primary stress is on the fourth syllable and the secondary stress is on the first. In French, the final-syllable stress is so strong as to leave little room for any other.

Next, languages differ in what linguists call phonotactics—in effect, what is a permissible syllable and what isn’t. The *p* in *psychology* and *pterodactyl* is silent because English phonotactic rules do not allow native words to begin with *pt-* or *ps-* sounds. English does let these consonants join in the middle of words, like *uptown* and *upside*, so English-speakers can certainly pronounce them. But the rule about beginnings means that even if you encourage them to pronounce the *p* in *psychotic*, they tend to insert an extra vowel to make it fit the template, and say *puh-sychotic*. Anglophone commentators discussing Kylian Mbappé, a French footballer, find themselves compelled to add a third syllable, calling him *Em-bap-ay*.

A similar befuddlement affects many foreigners learning English, perhaps even more so. The reason a Spaniard might say he is from *Espain* when speaking English is that *sp-*, *st-* and other consonant combinations are forbidden at the beginning of Spanish words, which is why the capital of Sweden is *Estocolmo*. That is just one example. English is unusually rich in consonant clusters that are, in practice, not allowed in other languages. Google a video of foreigners trying to say *squirrel* for another case study.

The word combines an unusual *skw-* at the beginning, an odd vowel sound in the middle that most languages lack, and the tricky *-rl* at the end.

Another reason people are betrayed by their accents in other tongues, even if they are otherwise proficient, is that a language's rhythm can be hard to pin down. They differ in how they space the syllables in a sentence. Cantonese and Italian, for instance, are "syllable-timed": every syllable has roughly similar duration. Read this sentence aloud and try to pronounce every syllable this way, and you may find yourself halfway to mimicking an Italian. English is "stress-timed" (though less strictly), meaning that stressed syllables occur at roughly regular intervals, the remainder tending to be less distinctly pronounced. This is how you could distinguish Italian from English being spoken through a wall, even without being able to make out any individual sounds or words.

English-speaking tourists sometimes find themselves speaking English with a weird hybrid accent when they go abroad. Linguistic rhythm is infectious. But as with drumming or dancing, a little explicit teaching never hurts.

Economic & financial indicators

- Economic data, commodities and markets

Economic data, commodities and markets

Oct 14th 2021

Economic data
1 of 2

	Gross domestic product % change on year ago: latest		quarter*	2021†	Consumer prices % change on year ago: latest		2021†	Unemployment rate %	
United States	12.2	Q2	6.7	6.0	5.4	Sep	4.3	4.8	Sep
China	7.9	Q2	5.3	7.9	0.7	Sep	1.0	5.1	Aug‡§
Japan	7.6	Q2	1.9	2.3	-0.4	Aug	-0.2	2.8	Aug
Britain	23.6	Q2	23.9	6.4	3.2	Aug	2.8	4.5	Jul††
Canada	12.7	Q2	-1.1	5.4	4.1	Aug	3.0	6.9	Sep
Euro area	14.3	Q2	9.2	4.8	3.4	Sep	1.9	7.5	Aug
Austria	12.8	Q2	24.6	3.1	3.1	Sep	2.4	6.1	Aug
Belgium	14.9	Q2	7.0	5.0	2.9	Sep	2.3	6.4	Aug
France	18.7	Q2	4.5	5.5	2.1	Sep	1.6	8.0	Aug
Germany	9.4	Q2	6.7	3.1	4.1	Sep	2.5	3.6	Aug
Greece	16.4	Q2	14.5	6.5	2.2	Sep	0.1	13.2	Aug
Italy	17.2	Q2	11.2	6.0	2.6	Sep	1.3	9.3	Aug
Netherlands	10.4	Q2	15.9	3.9	2.7	Sep	2.2	3.2	Aug
Spain	17.6	Q2	4.3	6.1	4.0	Sep	2.4	14.0	Aug
Czech Republic	8.8	Q2	3.9	3.5	4.9	Sep	2.7	3.0	Aug‡
Denmark	10.0	Q2	11.7	3.2	2.2	Sep	1.7	3.6	Aug
Norway	6.1	Q2	4.4	3.0	4.1	Sep	3.0	4.2	Jul‡‡
Poland	11.2	Q2	8.7	5.3	5.8	Sep	4.1	5.6	Sep§
Russia	10.5	Q2	na	3.8	7.4	Sep	5.9	4.4	Aug§
Sweden	9.5	Q2	3.6	4.0	2.1	Aug	1.9	8.5	Aug§
Switzerland	7.7	Q2	7.4	3.5	0.9	Sep	0.3	2.8	Sep
Turkey	21.7	Q2	na	8.0	19.6	Sep	17.1	12.0	Aug§
Australia	9.6	Q2	2.7	4.2	3.8	Q2	2.4	4.6	Sep
Hong Kong	7.6	Q2	-3.7	5.4	1.6	Aug	1.6	4.7	Aug‡‡
India	20.1	Q2	-41.2	8.2	4.3	Sep	5.4	6.9	Sep
Indonesia	7.1	Q2	na	3.0	1.6	Sep	1.7	6.3	Q1§
Malaysia	16.1	Q2	na	3.8	2.0	Aug	2.4	4.6	Aug§
Pakistan	4.7	2021**	na	3.8	9.0	Sep	9.2	6.9	2019
Philippines	11.8	Q2	-5.1	4.3	4.8	Sep	4.1	6.9	Q3§
Singapore	6.5	Q3	3.4	5.4	2.4	Aug	1.8	2.7	Q2
South Korea	6.0	Q2	3.1	4.0	2.5	Sep	2.2	2.7	Sep§
Taiwan	7.4	Q2	-4.2	5.7	2.6	Sep	2.0	4.1	Aug
Thailand	7.5	Q2	1.5	1.4	1.7	Sep	0.8	1.5	Dec§
Argentina	17.9	Q2	-5.5	8.1	51.4	Aug	47.3	9.6	Q2§
Brazil	12.4	Q2	-0.2	5.0	10.2	Sep	8.0	13.7	Jul§‡‡
Chile	18.1	Q2	4.2	10.3	5.3	Sep	3.9	8.5	Aug§‡‡
Colombia	17.0	Q2	-9.2	9.8	4.5	Sep	3.4	12.3	Aug§
Mexico	19.6	Q2	6.0	6.4	6.0	Sep	5.3	4.1	Aug
Peru	41.9	Q2	3.5	12.6	5.2	Sep	4.2	10.1	Aug§
Egypt	7.7	Q2	na	3.3	6.6	Sep	5.4	7.3	Q2§
Israel	17.5	Q2	16.6	5.3	2.2	Aug	1.7	5.0	Aug
Saudi Arabia	-4.1	2020	na	2.2	0.7	Sep	3.1	6.6	Q2
South Africa	19.3	Q2	4.7	4.5	5.1	Aug	4.4	34.4	Q2§

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.

The Economist

Economic data
2 of 2

	Current-account balance % of GDP, 2021†	Budget balance % of GDP, 2021†	Interest rates 10-yr gov't bonds latest,%		change on year ago, bp	Currency units per $ Oct 13th	% change on year ago
United States	-3.4	-12.6	1.6		82.0	-	
China	1.9	-4.9	2.8	§§	-27.0	6.45	4.5
Japan	3.4	-8.9	nil		-8.0	113	-6.9
Britain	-3.9	-10.9	1.2		84.0	0.73	5.5
Canada	-2.6	-9.4	1.6		101	1.25	4.8
Euro area	3.3	-7.2	-0.1		43.0	0.86	-1.2
Austria	2.7	-7.7	0.1		49.0	0.86	-1.2
Belgium	1.1	-7.1	0.2		49.0	0.86	-1.2
France	-1.4	-8.7	0.2		48.0	0.86	-1.2
Germany	6.7	-5.7	-0.1		43.0	0.86	-1.2
Greece	-4.4	-9.6	0.9		14.0	0.86	-1.2
Italy	3.8	-11.5	0.9		24.0	0.86	-1.2
Netherlands	9.8	-4.7	-0.2		24.0	0.86	-1.2
Spain	0.9	-8.9	0.5		33.0	0.86	-1.2
Czech Republic	3.2	-8.7	2.4		135	21.9	6.4
Denmark	7.5	-0.3	0.1		59.0	6.43	-1.4
Norway	6.9	-3.0	1.4		76.0	8.53	8.0
Poland	2.3	-6.6	2.7		144	3.96	-3.3
Russia	4.5	-1.8	7.5		135	72.0	7.1
Sweden	4.3	-1.9	0.4		41.0	8.72	0.9
Switzerland	6.8	-3.8	-0.1		44.0	0.93	-2.1
Turkey	-3.0	-3.2	18.6		548	9.07	-12.7
Australia	1.8	-5.9	1.7		84.0	1.36	2.9
Hong Kong	2.5	-4.2	1.4		80.0	7.78	-0.4
India	-0.9	-7.2	6.3		41.0	75.4	-2.7
Indonesia	-0.2	-6.0	6.3		-52.0	14,218	3.5
Malaysia	2.6	-6.0	3.6		92.0	4.16	-0.5
Pakistan	-3.3	-7.2	10.7	†††	81.0	171	-4.1
Philippines	-0.9	-7.5	5.0		209	50.7	-4.2
Singapore	19.4	-4.2	1.7		81.0	1.35	0.7
South Korea	4.7	-4.4	2.4		87.0	1,194	-4.0
Taiwan	15.2	-1.2	0.5		13.0	28.1	1.8
Thailand	-0.9	-7.5	1.9		70.0	33.4	-6.8
Argentina	1.6	-5.7	na		na	99.1	-22.2
Brazil	0.5	-5.4	10.9		340	5.55	0.7
Chile	-1.5	-6.7	6.8		414	821	-2.8
Colombia	-4.1	-8.5	7.5		240	3,720	3.7
Mexico	1.8	-3.3	7.4		168	20.7	3.4
Peru	-3.4	-4.4	5.9		170	4.03	-10.9
Egypt	-4.4	-8.0	na		na	15.7	-0.1
Israel	4.3	-6.5	1.1		40.0	3.23	5.0
Saudi Arabia	4.5	-2.0	na		na	3.75	nil
South Africa	1.8	-9.0	9.4		-3.0	14.8	11.5

Source: Haver Analytics. §§5-year yield. †††Dollar-denominated bonds.

The Economist

Markets

In local currency	Index Oct 13th	% change on: one week	% change on: Dec 31st 2020
United States S&P 500	4,363.8	nil	16.2
United States NAScomp	14,571.6	0.5	13.1
China Shanghai Comp	3,561.8	-0.2	2.6
China Shenzhen Comp	2,394.4	nil	2.8
Japan Nikkei 225	28,140.3	2.2	2.5
Japan Topix	1,973.8	1.6	9.4
Britain FTSE 100	7,141.8	2.1	10.5
Canada S&P TSX	20,618.5	2.1	18.3
Euro area EURO STOXX 50	4,083.3	1.8	14.9
France CAC 40	6,597.4	1.6	18.8
Germany DAX*	15,249.4	1.8	11.2
Italy FTSE/MIB	25,958.7	1.4	16.8
Netherlands AEX	777.5	2.1	24.5
Spain IBEX 35	8,881.4	1.2	10.0
Poland WIG	74,283.0	3.5	30.3
Russia RTS, $ terms	1,855.1	2.2	33.7
Switzerland SMI	11,814.6	2.1	10.4
Turkey BIST	1,413.5	3.1	-4.3
Australia All Ord.	7,571.9	1.0	10.5
Hong Kong Hang Seng	24,962.6	4.2	-8.3
India BSE	60,737.1	2.6	27.2
Indonesia IDX	6,536.9	1.9	9.3
Malaysia KLSE	1,600.4	2.6	-1.6
Pakistan KSE	43,221.8	-2.6	-1.2
Singapore STI	3,156.4	2.4	11.0
South Korea KOSPI	2,944.4	1.2	2.5
Taiwan TWI	16,348.0	-0.3	11.0
Thailand SET	1,643.6	1.5	13.4
Argentina MERV	78,427.9	1.3	53.1
Brazil BVSP	113,455.9	2.6	-4.7
Mexico IPC	51,812.9	1.6	17.6
Egypt EGX 30	10,881.4	3.3	0.3
Israel TA-125	1,891.9	2.9	20.7
Saudi Arabia Tadawul	11,625.0	0.5	33.8
South Africa JSE AS	66,012.8	3.2	11.1
World, dev'd MSCI	3,039.0	0.8	13.0
Emerging markets MSCI	1,260.2	2.7	-2.4

US corporate bonds, spread over Treasuries

Basis points	latest	Dec 31st 2020
Investment grade	114	136
High-yield	337	429

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

The Economist

Commodities

The Economist **commodity-price index**

2015=100	Oct 5th	Oct 12th*	% change on month	% change on year
Dollar Index				
All Items	152.8	158.0	3.2	23.6
Food	129.7	127.6	0.1	22.3
Industrials				
All	174.4	186.4	5.3	24.4
Non-food agriculturals	145.8	149.9	10.0	45.5
Metals	182.9	197.2	4.3	20.5
Sterling Index				
All items	171.2	177.3	5.1	18.0
Euro Index				
All items	146.2	151.7	5.6	25.7
Gold				
$ per oz	1,754.6	1,763.2	-2.5	-6.8
Brent				
$ per barrel	82.6	83.5	13.3	96.4

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.

The Economist

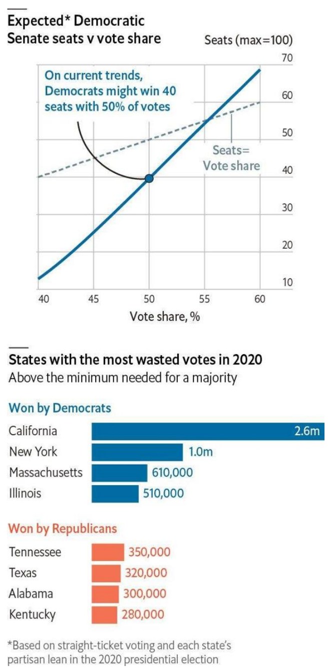
Graphic detail

The last frontier

The pivotal state for making America's Senate more proportional is Alaska

Plausible amounts of interstate migration could shrink but not eliminate Democrats' geographic disadvantage

Oct 16th 2021



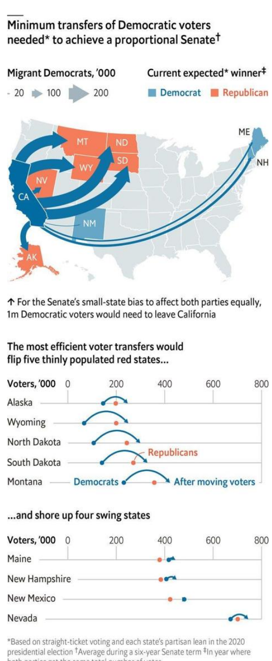
WITH A RAZOR-THIN majority, Democrats in America's Senate are struggling to pass a signature spending bill. Their woes stem in part from failing to win a bigger majority of votes, but also from the over-weighting of small states, which tend to be rural, in the upper chamber of Congress. Each state gets two senators. As Democrats have become the party of cities, the share of their voters that are packed inefficiently into a few big states has risen.

The constitution was designed to represent both places and people. And in 2020, Democrats' nationwide margin of victory was big enough to overcome geographic handicaps. But in future, Americans' growing taste for straight-ticket voting is likely to exacerbate the Senate's imbalances.

In 2016 and 2020, the only time a state supported different parties' candidates for the presidency and Senate was in Maine last year. And to win the Senate, Democrats need Republican presidential voters to split tickets. In a hypothetical scenario where everyone votes straight-ticket, each state's relative partisan preference is fixed at the levels from last year's presidential election and the two parties split total votes for Senate candidates evenly in every election, Democrats would win just 40 of 100 seats during a six-year Senate cycle.

Few legislative remedies exist for such a skew. The constitution bans amendments to Senate apportionment. And if straight-ticket voting were universal, it would take ten new blue states to close the gap.

In theory, however, voters could shrink this imbalance one by one, by moving to smaller states. The rise of remote work makes such choices more plausible. To test whether a hypothetical campaign of interstate migration could meaningfully reduce the disparity, we wrote an algorithm that determines how many Democratic voters would need to leave California to make the Senate fair to both parties over a full six-year cycle, and where they should go.



There were two clear groups of destination states. First, the best offence is often a good defence. Democrats hold both Senate seats in New Hampshire and Nevada, but their incumbents are vulnerable. Shoring them up would provide a counterweight to red-tinged former swing states like Iowa.

Next, one red state offers a seat swing per migrant twice as high as any other. In Alaska, which Donald Trump won by 36,000 votes, Democrats already get 40% of votes. Moreover, the state's new ranked-choice voting system could reduce partisan fervour. Just 100,000 new Democratic voters would turn Alaska reliably blue.

True to its nickname, Alaska is probably the last frontier for political migration. Republicans typically win North and South Dakota, Wyoming and Montana by 100,000 votes each. Assuming average turnout, flipping all four solid blue would take 2-3m transplants—four times the number that move out of California per year—from left-leaning demographic groups.

The assumptions underlying these estimates may not come to pass. Parties' coalitions evolve unpredictably, and split-ticket voting could make a comeback. But if Democrats do get desperate, moving to the frigid physical wilderness might help them to escape the political kind. ■

Sources: David Shor; *The Economist*

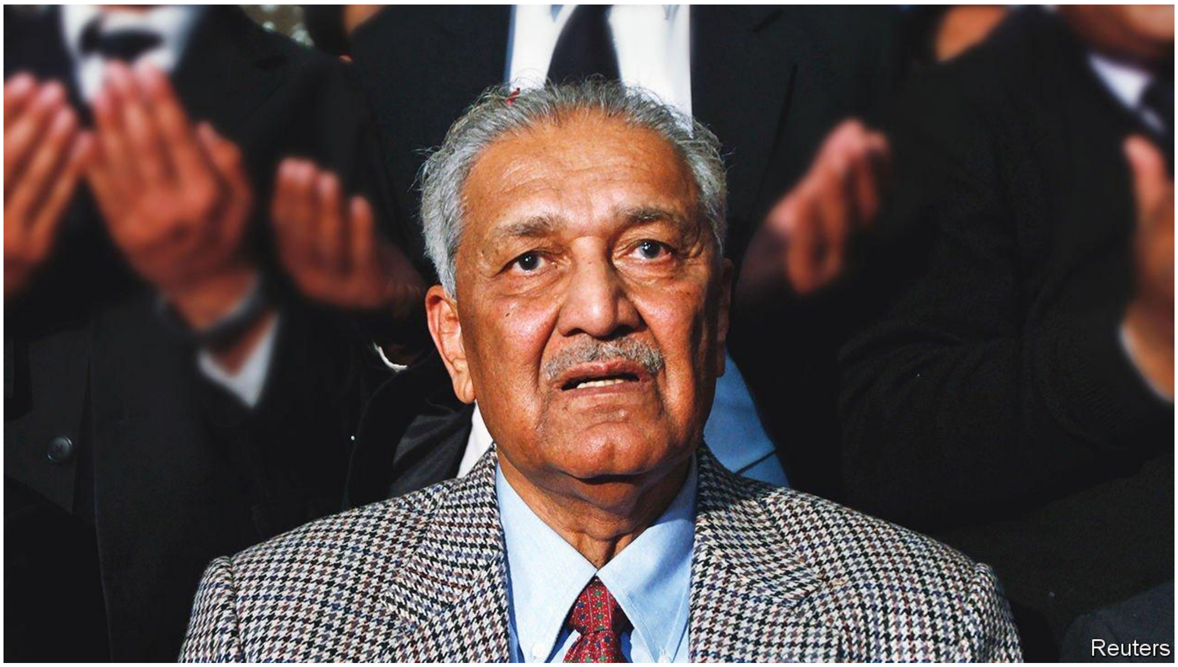
Obituary

Bombmaker

Obituary: A.Q. Khan was the world's biggest nuclear proliferator

The father of Pakistan's nuclear-weapons programme died on October 10th, aged 85

Oct 16th 2021



WHEN INDIA set off a nuclear bomb in the desert of Rajasthan in 1974, describing it implausibly as a "peaceful nuclear explosion", a young Pakistani metallurgist in the Netherlands was ready to volunteer his services to his country. A few months later Abdul Qadeer (A.Q.) Khan was explaining to the prime minister, Zulfikar Ali Bhutto, how uranium could be spun in centrifuges so it could be used in bombs. Within a decade, Pakistan had the ability to build and test a nuclear device; in 1998, it did so following a series of Indian tests.

In later years, he and his acolytes would cast this moment as if it were Albert Einstein writing to Franklin D. Roosevelt, revealing the secrets of the atom. A country which could not make sewing needles, good bicycles or even durable metalled roads was embarking on one of the latest and most difficult technologies, he recalled. After all, as the prime minister would confide in his prison diary while awaiting execution, if Christians, Jews and Hindus had the bomb, why should the Islamic civilisation not possess full nuclear capability too?

It hadn't started with bombs, or even with science. He was born in 1936 in Bhopal in what was then British India. Nearly half a century later the city would become known for an industrial gas leak at a Union Carbide plant that was said to have killed more than 16,000 people. But then it was a peaceful backwater where Muslim and Hindu had lived side by side for centuries. His father had been a teacher, a polite peace-loving man with seven children who even stopped his sons from shooting songbirds such was his respect, he said, for all things living. A year before his son was born, Khan's father retired to devote himself to the All-Indian Muslim League, an organisation that would play a crucial part in the movement for the creation of Pakistan as a separate Muslim country.

Although his parents lied about his birth date to get him into school early, he proved a diligent rather than brilliant student. At partition the family remained in Bhopal, but as the city's Muslims became increasingly harassed, they began to leave. Within a short time, several of his siblings had gone to Pakistan. At 16, when he finished high school, he followed them, taking with him little more than his beloved Mughal histories and a gold pen, a graduation gift from an older brother. Years later, speaking to his biographer, he would recall the intimidation and theft to which he and his fellow Muslims were subjected by the Indian police during the journey. Shortly before reaching the border, they stole his pen.

He had been under surveillance for years when he left the Netherlands in 1975 with stolen blueprints for centrifuges and details of the companies that supplied their components. In the years that followed, having provided Pakistan with nuclear know-how, he set up a dense corporate network to sell this information first to Iran and later to North Korea—which provided missile technology in return—and Libya. He sold a Chinese bomb design to Libya for tens of millions of dollars and offered it to Iraq, too. Where this money went remains unclear, though an investigation by Pakistan's National Accountability Bureau found that he owned several houses and had $8m in bank accounts in Pakistan, Switzerland and the United Arab Emirates. He bought a hotel in west Africa and named it after his wife.

This black market was the biggest and most advanced network of nuclear proliferation ever built. Its full extent remains unclear to this day. The former metallurgist had travelled to at least 18 countries, including Egypt, Saudi Arabia and Syria. The CIA, which reportedly had him on a kill list, believed that Osama bin Laden himself had sent envoys to try and arrange a meeting, although these approaches were thought to have been rebuffed.

In the end it was his dealings with Libya's dictator, Muammar Qaddafi, that were his undoing. The CIA, increasingly worried about the prospect of jihadists getting a nuke, had penetrated a Malaysian factory in his network. When it sent centrifuge parts to Libya in late 2003, spies tracked the shipment as it sailed through the Suez canal and had it diverted to Italy, where the incriminating equipment was impounded. When American investigators got hold of the plans for a nuclear bomb that he had sold to the Libyans, they were in a plastic bag advertising "Good Looks Fabrics and Tailors", Mr Khan's tailor in Islamabad. Libya came clean and its nascent nuclear programme was dismantled. In February 2004 he appeared on Pakistani television and admitted to "unauthorised proliferation activities". It was, he said, an "error of judgment".

Pakistani officials professed themselves shocked that their prize scientist—the only double recipient of the Nishan-e-Imtiaz, the country's highest civilian award—had been up to such mischief. Mr Khan, who spent years under de facto house arrest, said he took "full responsibility". Yet the idea that he had run an international nuclear cartel for over a decade and meanwhile acquired a lavish lifestyle, all without the country's powerful armed forces noticing, strained credulity. When he died, Imran Khan, the prime minister, declared him a "national icon". He was buried with full state honours.

Some considered him a hero

In an interview in 2008, Mr Khan, disgraced internationally but whose name graced schools and hospitals at home, came close to recanting his admission of sole responsibility and hinted that he had covered for others. "I saved the country for the first time when I made Pakistan a nuclear nation," he boasted, "and saved it again when I confessed and took the whole blame on myself."

As the Israeli newspaper, *Haaretz*, pointed out, A.Q. Khan will be remembered as the scientist who took Pakistan nuclear, as a shady businessman who spread nuclear technology across the world—and survived. He is among the few scientists who helped Israel's enemies, countries such as Iran and Libya, acquire vital nuclear technology and was not assassinated by Mossad. He died in his bed of covid-19. ■

Table of Contents