The Economist

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The world economy's strange new rules

A SPECIAL REPORT

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Politics this week

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Turkey invaded northern **Syria** to crush Kurdish militias, after Donald Trump said he would pull American troops out of the region, giving Turkey a green light. President Trump was widely condemned for abandoning the Kurds, who fought alongside America against Islamic State and still guard captured IS prisoners in camps. He justified the betrayal by claiming that the Kurds "didn't help us in the second world war". Actually, they did. Kurds of the Assyrian Parachute Company fought for the Allies in Greece and Albania, among other places. See article .

Protests against the government continued in **Iraq**. The authorities responded with force, killing more than 100 people and wounding 4,000. The government also shut down the internet and imposed curfews, but it has been unable to fix the economy or curb graft. See article .

An election observer in **Mozambique** was shot dead, allegedly by police, ahead of a presidential poll already marred by violence and irregularities. See article .

Veiled threats

Hong Kong's government invoked a colonial-era emergency law to ban the wearing of masks during protests. Thousands of people, many of them masked, protested. Others clashed with police, started fires and vandalised property, resulting in the first closure of the city's mass-transit rail network in 40 years. See article .

Nationalists and supporters of the Communist Party in **China** claimed to be outraged by the general manager of the Houston Rockets, who had tweeted the words "Fight for freedom, stand with Hong Kong". China's state broadcaster, CCTV, suspended broadcasts of games involving America's National Basketball Association. Other Chinese firms severed ties with it. Basketball stars are still free to criticise America. See article .

North Korea and America resumed disarmament talks for the first time in seven months. But North Korea broke them off after a day, accusing America of intransigence. The dictatorship threatened to test more long-range missiles and nuclear bombs if it does not get more of what it wants by the end of the year. See article .

The lower house of **Malaysia's** parliament voted for a second time to repeal the country's "fake news" law, which was imposed by the previous government to stifle criticism.

Thailand ordered owners of publicly accessible wireless networks to keep records of their customers' identities or their browsing history, to help the authorities identify people who criticise the government or the monarchy.

New Zealand's government said it would admit more refugees, and scrap rules that have impeded applicants from Africa and the Middle East. See article .

Failed statecraft

Negotiations between the European Union and Britain over **Brexit** appeared close to collapse. Boris Johnson, Britain's prime minister, had put forward a new deal he thought the House of Commons might accept, but the EU said it would be hard to resolve differences before the October 31st deadline. After Downing Street briefed that it was all the fault of Germany and Ireland, Donald Tusk, the president of the EU, told Mr Johnson to stop the "stupid blame game". That was the mildest rebuke Mr Johnson has faced in recent weeks. See article .

A gunman spouting anti-Semitic slogans killed two people in the **German** city of Halle and tried to force his way into a synagogue.

France's security services faced scrutiny following the killing of four policemen in Paris earlier this month by a colleague. The murderer, a Muslim convert, turned out to have praised the slaughter in 2015 of 12 people at *Charlie Hebdo*, a satirical magazine, for poking fun at the Prophet. Yet he still had access to top-secret police intelligence files. See article .

Portugal's Socialist Party won the most seats in the country's general election. But it fell short of an overall majority, suggesting that the prime minister, António Costa, will again have to seek allies on the radical left. See article .

Lenín and the people

In **Ecuador** protesters complained about the withdrawal of fuel subsidies, at one point forcing their way into parliament. The unrest, the worst the country has seen for years, prompted the government to move temporarily from the capital, Quito, to the port city of Guayaquil. Lenín Moreno, the president, defended the cuts. His supporters pointed out that the subsidies were costly, wasteful and ecologically damaging. But they are popular. See article .

Álvaro Uribe, **Colombia's** president from 2002 to 2010, was questioned before the supreme court about accusations that through his lawyer he had tried to bully and bribe witnesses to retract claims that he had helped set up a unit of a paramilitary group in the 1990s. In 2012 Iván Cepeda, a left-leaning senator, first accused Mr Uribe of having links to paramilitary groups. Mr Uribe denies wrongdoing.

A constitutional clash

America's Democrats promised subpoenas to make officials testify in their **impeachment** inquiry, after the White House said it would not co-operate. Having urged Ukraine to investigate Joe Biden, Donald Trump publicly called on China, too, to investigate his potential election rival. Meanwhile, **Ukraine's** prosecutor-general said he was reviewing a number of closed investigations, including a case against the energy firm that had employed Mr Biden's son. He said he had not been put under any pressure to do so. See article .

It emerged that **Bernie Sanders** suffered a heart attack when he was admitted to hospital with what his campaign had described as "chest discomfort". He vowed to appear at the next Democratic debate.

Microsoft uncovered attempts by **hackers** linked to the Iranian government to target email accounts associated with an American presidential campaign, reportedly Mr Trump's. Though unsuccessful in their cyberattack, Microsoft said the hackers were "highly motivated" and "willing to invest significant time and resources" in their endeavour.

Business this week

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The OECD advanced proposals to ditch the current rules covering **international corporate tax**, "which date back to the 1920s and are no longer sufficient" in a globalised world, and create a system that acknowledges the "digitalisation" of the world economy. The plan would end decades of practice by allowing a country to tax a company that does "significant business" within its borders, even if it has no base there. The OECD wants to create a multilateral framework to override the patchwork of unilateral laws. The new system would apply not only to tech companies such as Apple and Facebook, which have been criticised for avoiding tax in countries like Britain and France, but also luxury-goods firms, carmakers and other highly globalised industries.

Hong Kong's stock exchange dropped its £32bn ($39bn) unsolicited bid for the **London Stock Exchange**. The LSE had rejected the offer, reiterating its commitment to buy Refinitiv, a financial-data provider. The British bourse has said it sees Shanghai as the gateway to Chinese markets, and has forged closer links with investors there. See article .

Trying to put the era of Carlos Ghosn behind it, **Nissan** appointed Makoto Uchida as its new chief executive, replacing the ousted Hiroto Saikawa, who was Mr Ghosn's protégé. Mr Uchida will head a new three-man leadership team at the Japanese carmaker, which is slashing production in the face of falling sales.

BP announced that Bob Dudley is to retire as chief executive early next year and be replaced by Bernard Looney, who heads its upstream business. Mr Dudley took the helm at BP in 2010, soon after the Deepwater Horizon disaster, steering the company through a flood of legal claims that ate into its profits. Before that he had headed TNK-BP, the company's joint venture in Russia, which eventually fell foul of the authorities.

A jury in Philadelphia ordered **Johnson & Johnson** to pay $8bn in punitive damages to a man who claims his childhood use of Risperdal, an antipsychotic drug, caused him to grow breasts. The company, which faces more than 13,000 lawsuits over Risperdal, said it would appeal against the verdict, which it described as "excessive and unfounded".

America's **unemployment rate** dropped to a 50-year low, of 3.5%. A broader measure of under-utilisation in the labour market fell to 6.9%, its lowest since 2000. See article .

The dark ages

Millions of people in **northern California** had their electricity cut off by **Pacific Gas & Electric**, as the utility endeavoured to prevent wildfires ignited by its power lines. PG&E filed for bankruptcy protection in January amid claims that its equipment had sparked deadly infernos. The blackout could last for days and affects Silicon Valley and the Bay Area, though not San Francisco. Southern California Edison said it was considering similar action, which would affect the Los Angeles area.

America lost its top spot to Singapore in the World Economic Forum's annual **competitiveness index**. Hong Kong, the Netherlands and Switzerland made up the rest of the top five. Britain was ninth in the 141-country survey.

At a signing ceremony at the White House, America and Japan sealed their new **trade deal**. The Trump administration sought the accord after pulling out of a transpacific agreement, which covers 11 countries. This bilateral pact is more limited in scope, mostly covering agricultural goods and avoiding thorny issues, such as car exports. Still, the deal does lower tariffs, a change from the tit-for-tat penalties levied in America's dispute with China. Ahead of another increase in tariffs on $250bn-worth of **Chinese goods**, Chinese officials travelled to Washington for a further round of trade talks.

Ahead of the talks, America increased the pressure on China by adding more Chinese companies to its **trade blacklist**, including startups working in artificial intelligence. One of them, Megvii, which develops facial-recognition technology, had recently filed for an IPO in Hong Kong. America says the firms are "implicated in the implementation of China's campaign of repression" against Muslims in Xinjiang. See article .

Meanwhile, **Apple** pulled an app from the iPhone that enabled protesters in Hong Kong to map police movements after it was heavily criticised in Chinese state media.

A slice of life

News that **PizzaExpress** might fold unless it can restructure its debt prompted campaigns on Twitter to save the 54-year-old restaurant group. Founded in London, the chain helped pioneer casual dining in Britain, concentrating its branches in upper-crust areas. It has gone through several private-equity owners. In response to the outpouring of affection, the pizza firm tweeted that "it feels good to be kneaded" and reassured investors that it was "still making dough".

KAL’s cartoon

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Macroeconomics
The world economy's strange new rules

Macroeconomics

The world economy's strange new rules

How economies work has changed radically. So must economic policy

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RICH-WORLD economies consist of a billion consumers and millions of firms taking their own decisions. But they also feature mighty public institutions that try to steer the economy, including central banks, which set monetary policy, and governments, which decide how much to spend and borrow. For the past 30 years or more these institutions have run under established rules. The government wants a booming jobs market that wins votes but, if the economy overheats, it will cause inflation. And so independent central banks are needed to take away the punch bowl just as the party warms up, to borrow the familiar quip of William McChesney Martin, once head of the Federal Reserve. Think of it as a division of labour: politicians focus on the long-term size of the state and myriad other priorities. Technocrats have the tricky job of taming the business cycle.

This neat arrangement is collapsing. As our special report explains , the link between lower unemployment and higher inflation has gone missing. Most of the rich world is enjoying a jobs boom even as central banks undershoot inflation targets. America's jobless rate, at 3.5%, is the lowest since 1969, but inflation is only 1.4%. Interest rates are so low that central banks have little room to cut should recession strike. Even now some are still trying to support demand with quantitative easing (QE), ie, buying bonds. This strange state of affairs once looked temporary, but it has become the new normal. As a result the rules of economic policy need redrafting—and, in particular, the division of labour between central banks and governments. That process is already fraught. It could yet become dangerous.

The new era of economic policy has its roots in the financial crisis of 2007-09. Central banks enacted temporary and extraordinary measures such as QE to avoid a depression. But it has since become clear that deep forces are at work. Inflation no longer rises reliably when unemployment is low, partly because the public has come to expect modest price rises, and also because global supply chains mean prices do not always reflect local labour-market conditions. At the same time an excess of savings and firms' reluctance to invest have pushed interest rates down. So insatiable is the global appetite to save that more than a quarter of all investment-grade bonds, worth $15trn, now have negative yields, meaning lenders must pay to hold them to maturity.

Economists and officials have struggled to adapt. In early 2012 most Fed officials thought that interest rates in America would settle at over 4%. Nearly eight years on they are just 1.75-2% and are the highest in the G7. A decade ago, almost all policymakers and investors thought that central banks would eventually unwind QE by selling bonds or letting their holdings mature. Now the policy seems permanent. The combined balance-sheets of central banks in America, the euro zone, Britain and Japan stand at over 35% of their total GDP. The European Central Bank (ECB), desperate to boost inflation, is restarting QE. For a while the Fed managed to shrink its balance-sheet, but since September its assets have started to grow again as it has injected liquidity into wobbly money-markets. On October 8th Jerome Powell, the Fed's chairman, confirmed that this growth would continue.

One implication of this new world is obvious. As central banks run out of ways to stimulate the economy when it flags, more of the heavy lifting will fall to tax cuts and public spending. Because interest rates are so low, or negative, high public debt is more sustainable, particularly if borrowing is used to finance long-term investments that boost growth, such as infrastructure. Yet recent fiscal policy has been confused and sometimes damaging. Germany has failed to improve its decaying roads and bridges. Britain cut budgets deeply in the early 2010s while its economy was weak—its lack of public investment is one reason for its chronically low productivity growth. America is running a bigger-than-average deficit, but to fund tax cuts for firms and the wealthy, rather than road repairs or green power-grids.

While incumbent politicians struggle to deploy fiscal policy appropriately, those who have yet to win office are eyeing central banks as a convenient source of cash. "Modern monetary theory", a wacky notion that is gaining popularity on America's left, says there are no costs to expanding government spending while inflation is low—so long as the central bank is supine. (President Donald Trump's attacks on the Fed make it more vulnerable.) Britain's opposition Labour Party wants to use the Bank of England to direct credit through an investment board, "bringing together" the roles of chancellor, business minister and Bank of England governor.

In a mirror image, central banks are starting to encroach on fiscal policy, the territory of governments. The Bank of Japan's massive bondholdings prop up a public debt of nearly 240% of GDP. In the euro area QE and low rates provide budgetary relief to indebted southern countries—which this month provoked a stinging attack on the central bank by some prominent northern economists and former officials (see Free exchange). Mario Draghi, the ECB's outgoing president, has made public appeals for fiscal stimulus in the euro zone. Some economists think central banks need fiscal levers they can pull themselves.

Here lies the danger in the fusion of monetary and fiscal policy. Just as politicians are tempted to meddle with central banks, so the technocrats will take decisions that are the rightful domain of politicians. If they control fiscal levers, how much money should they give to the poor? What investments should they make? What share of the economy should belong to the state?

A new frontier

In downturns either governments or central banks will need to administer a prompt, powerful but limited fiscal stimulus. One idea is to beef up the government's automatic fiscal stabilisers, such as unemployment insurance, that guarantee bigger deficits if the economy stalls. Another is to give central banks a fiscal tool that does not try to redistribute money, and hence does not invite a feeding frenzy at the printing presses—by, say, transferring an equal amount into the bank account of every adult citizen when the economy slumps. Each path brings risks. But the old arrangement no longer works. The institutions that steer the economy must be remade for today's strange new world. ■

The man without a plan

Donald Trump suddenly withdraws from northern Syria

The rash move betrays a shallow and incoherent policy in the Middle East

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BEHOLD THE "great and unmatched wisdom" of President Donald Trump. On October 6th he announced that American troops would withdraw from northernmost Syria, all but endorsing a Turkish offensive against America's Kurdish allies in the region. He did not warn the Kurds, who had fought bravely against the jihadists of Islamic State (IS). It was time to let others, such as Russia and Iran, "figure the situation out", he said. But hours later, after even his Republican colleagues objected, Mr Trump stepped back. Turkey, he warned, should not do anything that he considers "off limits". Ignoring him, Turkish forces launched a campaign on October 9th that threatens not only to revive IS, but also to condemn Syria to yet another cycle of slaughter.

The conflicting signals, sent by Mr Trump in a series of incoherent tweets, have confused everyone. But they should surprise no one. This is what American diplomacy looks like in the Trump era. When the president's closest advisers are not chasing up conspiracy theories in Ukraine (see Briefing), or defying the constitution by refusing to testify to Congress (see article), they are coping with a commander-in-chief who, according to his own former secretary of state, "is pretty undisciplined, doesn't like to read, doesn't read briefing reports, doesn't like to get into the details of a lot of things, but rather just kind of says: 'This is what I believe.'" That is no way to make policy anywhere in the world, least of all the Middle East.

Mr Trump is understandably frustrated by being stuck in the region. America has had troops in Syria for five years and Iraq for a decade and a half. His solution, backed by many Americans, is "to get out of these ridiculous Endless Wars". In December, with a similarly rash announcement, he began withdrawing from Syria, prompting his secretary of defence, James Mattis, to resign. About 1,000 American troops are now in the country, down from 2,000 last year. Only about a dozen diplomats remain in America's once-teeming embassy in Baghdad, a city beset by deadly protests. When Mr Trump visited the city last winter, he stuck to a remote air base and left without seeing Iraq's leaders.

America's allies should shoulder more of the burden in the Middle East, as Mr Trump keeps saying. But he is wrong to think that he can leave the region without any consequences (see article). In Syria America's withdrawal and a Turkish invasion risk throwing the north into chaos and exacerbating ethnic tensions. That would please IS, which the Pentagon warns is resurgent, as is al-Qaeda. In 2011 Barack Obama also hastily pulled out of Iraq, leaving behind a cauldron of ethnic hatred that gave rise to IS. Mr Trump, like his predecessor, may find that withdrawal is soon followed by re-engagement—when he might regret abandoning his Kurdish allies.

The president's retreat creates a vacuum, allowing America's enemies to exert more influence in the region. The abandoned Kurds are already talking of turning for support to Russia and Bashar al-Assad, Syria' s dictator. Iran is an even bigger concern. Last year Mr Trump abandoned a deal that curbed its nuclear programme (and might just have smoothed America's path out of the Middle East) in part because it said nothing about Iranian meddling in the region. But after stoking tensions with a policy of "maximum pressure", Mr Trump has allowed Iran or its proxies to attack shipping and Saudi oil facilities with nothing more than a few sanctions in return. Nor has Mr Trump worked hard to counter Iran's increasing sway in Syria and Iraq, where the American-backed government is wobbling.

The reason presidents find it hard to leave the Middle East is that America has interests there. Pulling back requires planning to protect them. But, as the confusion over Syria shows, Mr Trump has no plan. When faced with the thorny issues presented by withdrawal, which had presumably featured in those unread briefings, his response has been to throw up his hands and turn his back. There is nothing wise about that. ■

Autonomous vehicles

Driverless cars are stuck in a jam

Blame Silicon Valley hype—and the limits of AI

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FEW IDEAS have enthused technologists as much as the self-driving car. Advances in machine learning, a subfield of artificial intelligence (AI), would enable cars to teach themselves to drive by drawing on reams of data from the real world. The more they drove, the more data they would collect, and the better they would become. Robotaxis summoned with the flick of an app would make car ownership obsolete. Best of all, reflexes operating at the speed of electronics would drastically improve safety. Car- and tech-industry bosses talked of a world of "zero crashes".

And the technology was just around the corner. In 2015 Elon Musk, Tesla's boss, predicted his cars would be capable of "complete autonomy" by 2017. Mr Musk is famous for missing his own deadlines. But he is not alone. General Motors said in 2018 that it would launch a fleet of cars without steering wheels or pedals in 2019; in June it changed its mind. Waymo, the Alphabet subsidiary widely seen as the industry leader, committed itself to launching a driverless-taxi service in Phoenix, where it has been testing its cars, at the end of 2018. The plan has been a damp squib. Only part of the city is covered; only approved users can take part. Phoenix's wide, sun-soaked streets are some of the easiest to drive on anywhere in the world; even so, Waymo's cars have human safety drivers behind the wheel, just in case.

Jim Hackett, the boss of Ford, acknowledges that the industry "overestimated the arrival of autonomous vehicles". Chris Urmson, a linchpin in Alphabet's self-driving efforts (he left in 2016), used to hope his young son would never need a driving licence. Mr Urmson now talks of self-driving cars appearing gradually over the next 30 to 50 years. Firms are increasingly switching to a more incremental approach, building on technologies such as lane-keeping or automatic parking. A string of fatalities involving self-driving cars have scotched the idea that a zero-crash world is anywhere close. Markets are starting to catch on. In September Morgan Stanley, a bank, cut its valuation of Waymo by 40%, to $105bn, citing delays in its technology.

The future, in other words, is stuck in traffic. Partly that reflects the tech industry's predilection for grandiose promises. But self-driving cars were also meant to be a flagship for the power of AI. Their struggles offer valuable lessons in the limits of the world's trendiest technology.

Hit the brakes

One is that, for all the advances in machine learning, machines are still not very good at learning. Most humans need a few dozen hours to master driving. Waymo's cars have had over 10m miles of practice, and still fall short. And once humans have learned to drive, even on the easy streets of Phoenix, they can, with a little effort, apply that knowledge anywhere, rapidly learning to adapt their skills to rush-hour Bangkok or a gravel-track in rural Greece. Computers are less flexible. AI researchers have expended much brow-sweat searching for techniques to help them match the quick-fire learning displayed by humans. So far, they have not succeeded.

Another lesson is that machine-learning systems are brittle. Learning solely from existing data means they struggle with situations that they have never seen before. Humans can use general knowledge and on-the-fly reasoning to react to things that are new to them—a light aircraft landing on a busy road, for instance, as happened in Washington state in August (thanks to humans' cognitive flexibility, no one was hurt). Autonomous-car researchers call these unusual situations "edge cases". Driving is full of them, though most are less dramatic. Mishandled edge cases seem to have been a factor in at least some of the deaths caused by autonomous cars to date. The problem is so hard that some firms, particularly in China, think it may be easier to re-engineer entire cities to support limited self-driving than to build fully autonomous cars (see article).

The most general point is that, like most technologies, what is currently called "AI" is both powerful and limited. Recent progress in machine learning has been transformative. At the same time, the eventual goal—the creation in a machine of a fluid, general, human-like intelligence—remains distant. People need to separate the justified excitement from the opportunistic hyperbole. Few doubt that a completely autonomous car is possible in principle. But the consensus is, increasingly, that it is not imminent. Anyone counting on AI for business or pleasure could do worse than remember that cautionary tale. ■

A big stink on the brink

The risks from India’s rotten banks

A slow-motion financial crisis threatens the country’s economic future

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IMAGINE A CENTRAL bank tweeting that, yes, there are rumours of “certain” banks facing deposit runs but “there is no need to panic”. Would you feel reassured? That is the unenviable position Indians found themselves in last week as a financial storm rumbled on in the world’s fifth-biggest economy with no sign of the authorities getting a firm grip. In the latest fiasco a co-operative bank, PMC, is accused of fraud, prompting depositors to yank their cash out. Meanwhile shares in Yes Bank, a private lender, have collapsed by 40% in the past month as rumours swirl. These are not isolated incidents. Roughly a third of the financial system is on crutches or under suspicion. Dazed by the scale of the task, the government and the Reserve Bank of India (RBI) are dithering. Until they act, India’s economy will not perk up—and there is a danger of a full-blown crisis.

The origins of this mess go back to 2005. In the first phase conventional banks, which control about four-fifths of the system’s assets and are mostly state-run, lent too freely to infrastructure and industrial projects, sometimes ones backed by well-connected tycoons. The plight today is a continuation of the second phase: a boom-and-bust in lightly regulated shadow banks, which control the remaining fifth of the system. The danger grew in 2016 when the government temporarily abolished large banknotes, leading many people to deposit money in banks and mutual funds. These, in turn, used the windfall to make loans to shadow banks, which went on their own lending binge, often using the money to finance property projects.

Today the financial system is stuffed with bad debts. Perhaps a tenth of loans are dud, maybe more. The shadow banks are vulnerable because they use short-term debt (rather than ordinary deposits, which they are mostly restricted from raising) to fund long-term loans of their own. There is also an undercurrent of fraud and bogus accounting. In 2018 Punjab National Bank said that a diamond dealer had stolen $2bn from it. Later that year IL&FS, a big shadow bank with government links, collapsed. Credit-rating agencies have been giving high ratings to flaky firms. With suspicion rife, a handful of shadow banks face a severe funding squeeze, and the entire financial sector is wary of lending. As a result credit is growing at near its slowest pace in 20 years. The ripple effect has stalled building projects, starved wholesalers of loans to buy inventory and prevented farmers from borrowing to buy tractors and motorbikes.

The response of Narendra Modi’s government and the RBI has so far been halting. The government has repeatedly but belatedly pumped inadequate sums of capital into the state banks, and promised to merge some of them. On September 20th it slashed corporate taxes to try to revive animal spirits. The RBI, meanwhile, has cut interest rates five times this year. Presumably they hope that this will be enough to boost the economy, while the big state banks slowly regain their strength and the remaining well-run private banks, such as HDFC and Kotak, lend more freely.

The crisis, however, cannot be compartmentalised. Shadow banks have borrowed from bad banks which may have borrowed from good ones. Another collapse in one corner could easily cause panic elsewhere. Because the banks are in poor shape, the RBI’s interest-rate cuts are not being passed on to consumers and firms. Another lurch down in the economy threatens a new series of bad debts at the recuperating state banks. And there is a palpable sense that governance is broken. Bank boards, auditors, rating agencies and the RBI have all failed to stop the rot.

India needs a two-pronged clean up. In the short term the RBI should do another “stress test” of the banks, and test the shadow banks, too. The results should be made public. If state banks need capital they should get it. Some shadow banks will fail and should be wound up. The approach taken with IL&FS offers a template. It was put into a form of administration and creditors face a big haircut (although the process could be quicker). In the longer run, India should privatise its state banks so that they can escape control by politicians. Shadow lenders, meanwhile, should face the same prudential rules as banks. The RBI needs to overhaul its system of ongoing supervision. It used to be widely admired, but is starting to look like part of the problem.

This ought to be India’s moment. It has a big domestic economy and lots of entrepreneurs, oil prices are fairly low—helpful for a big importer—and multinationals are keen to shift their factories out of China. Cleaning up the financial system is a gigantic task. But until it is done India will not thrive. ■

Personal finance for pilfering potentates

How to hide a billion dollars

A guide for kleptocrats worried by foreign prosecutors

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SO YOU'VE STOLEN a billion dollars. That was the easy part. The country of which you are president may be poor, which is a pity, but it is also lawless, which creates opportunities. The auditors, police and prosecutors who should have slapped the hand you put in the treasury chose to kiss it instead. So your pockets are bulging with ill-gotten loot. There is just one snag: the world has grown less tolerant of kleptocrats.

Back in the good old days of the cold war, strongmen could be strongmen. When Mobutu Sese Seko, the late dictator of what is now the Democratic Republic of Congo, robbed his country into a coma, no one cared. (Apart from his subjects, of course.) When his household drained 10,000 bottles of pink champagne a year and Mobutu kept a Concorde idling on the runway of his tropical palace, his Western backers turned a blind eye, so long as he did not invite the Soviets into central Africa. Likewise, the Soviets overlooked the equally egregious thievery of their clients in Angola. And a kleptocrat in those days had no trouble finding places to park his squillions. Swiss bankers vied to offer him roomy vaults. Estate agents on the Côte d'Azur rolled out the gold-thread carpet.

Recently, however, Western governments have been confiscating looted assets and prosecuting those involved in corruption far beyond their borders (see Middle East & Africa section). This year America's Justice Department indicted a former finance minister of Mozambique and won convictions against several ex-Credit Suisse bankers over the embezzlement of $2bn in loans. Malaysia's former prime minister, Najib Razak, lost his job and his liberty after America revealed that he had $700m in personal bank accounts; American prosecutors are still pursuing his alleged money-launderer. Last month Swiss authorities auctioned off $27m-worth of sports cars seized from Teodorin Nguema Obiang, the unaccountably wealthy son of the president of Equatorial Guinea, a tiny oil-rich dictatorship. It was not his first brush with foreign law enforcement. In 2014 he had to hand over assets worth $30m after America's Justice Department said he had embarked on a "corruption-fuelled" shopping spree "after raking in millions in bribes and kickbacks". Everywhere, pilfering potentates and their progeny must be nervous.

So here are some steps they can take to safeguard their loot. First, stay away from social media. The younger Mr Obiang posed on Instagram in fancy cars and on private jets. That may have impressed his friends, but it also raised awkward questions about how he could afford such extravagant toys.

Second, avoid purchases so conspicuous that they make headlines. Kolawole Akanni Aluko, a Nigerian businessman accused of bribery, not only spent $80m on a superyacht—he also reportedly rented it to Jay-Z and Beyoncé for $900,000 a week. These (blameless) singers attract a certain amount of attention. Mr Aluko might have avoided unwelcome scrutiny had he bought a less blingtastic boat.

Third, keep an emergency stash close to hand. The late Robert Mugabe, who misruled Zimbabwe for three decades, always travelled with a suitcase of "coup money", in case he was ousted while abroad. Cash piles must be looked after, mind. A former ruler of Equatorial Guinea, Francisco Macías Nguema, kept a large portion of the country's foreign reserves in a bamboo hut in his garden. He forgot to waterproof the hut, alas, and much of his stash rotted.

One way to protect overseas assets is to claim they belong to the state. The younger Mr Obiang stopped France from selling his home in Paris by insisting it was owned by his country's embassy. His lawyers also say that a $100m superyacht seized by the Netherlands was a naval vessel. Prosecutors are mystified as to what military purpose might be served by the upper deck's jacuzzi. Another way to elide the distinction between public and personal property is to be royal. Mswati III, the absolute monarch of Eswatini (formerly Swaziland) lives like a king—and it's legal. Gulf royals were reportedly among the bidders for Mr Obiang's cars.

One final thought. How about ruling honestly? This is not as crazy as it sounds. Mo Ibrahim, a Sudanese-British telecoms tycoon, has endowed a $5m prize each year for an African president who governs well and retires when his term is up. You can live quite well on $5m. Yet for seven of the 12 years since the Ibrahim prize began, no worthy recipient has been identified. ■

Letters to the editor
On our climate change issue

On our climate change issue

Letters to the editor

A selection of correspondence

Print | Letters Oct 12th 2019

Our issue on climate change

Limiting temperature rises to 2°C above pre-industrial norms would still leave atmospheric carbon dioxide at well over 450 parts per million (ppm) ("What goes up", September 21st). We evolved, and until less than a century ago, lived, on a 300ppm planet. We need to return the Earth's climate to its pre-industrial state, without doing the same to our economy.

The UN recently hosted the first Global Forum on Climate Restoration. Entrepreneurs and climate scientists discussed the undoubtedly gargantuan challenge of removing and permanently storing around a trillion tonnes of carbon from the atmosphere by 2050, and presented technically viable ways to do this. Even if market-based approaches to remove carbon dioxide fail entirely, and they won't, a reasonable estimate is that it would cost 3-5% of global GDP for 20-30 years to return the atmosphere to 300ppm. As a comparison, ten years ago America diverted 3.5% of its annual GDP to prevent the financial system from collapsing. That felt like a good investment. So does this.

JON SHEPARD
Global Development Incubator
London

Your article on British offshore wind suggested that the technology remains expensive (" The experiment "). Yet the latest auctions produced a price of about £40 ($50) per megawatt hour, well below the current wholesale price of electricity. Offshore wind is now the cheapest way of producing power in Britain.

You also supported Dieter Helm's acerbic criticisms of British energy policy for directing subsidies towards particular technologies, such as offshore wind. The recent auctions are a spectacular rebuttal of Professor Helm's theory. It is precisely because Britain has protected offshore wind over the past 15 years that the technology has now become unbelievably cheap. It is often difficult for economists such as Professor Helm to recognise this, but active industrial policies can work.

Lastly, you repeated the conventional final attack on offshore wind, pointing out that it is intermittent. Other countries around the North Sea have woken up to this problem, usually focusing on various technologies for converting "power to gas" as a way of ensuring this intermittency can be managed at enormous scale. The hibernation of energy policy over recent years has held up progress, but my hypothesis is that Britain will soon conclude, like other countries, that using surplus power to make renewable hydrogen is the logical route forward. This hydrogen will then be used to generate power when electricity supplies are scarce from the North Sea.

CHRIS GOODALL
Oxford

Polluting cannot be free. A strong price on carbon will incentivise producers and consumers to reduce emissions and innovators to create low-carbon technologies. And returning all the funds raised back to the economy means little to no economic loss and a much healthier future. Though the politics are challenging, as advocates are up against a wall of money, the American House of Representatives is considering four bipartisan bills that do just this, and one, the Energy Innovation Act, has 64 co-sponsors.

JERRY HINKLE
Governing board
Citizens Climate Lobby
Coronado, California

You observed that most of the benefits from reducing greenhouse-gas emissions "will be accrued not today, but in 50 or 100 years." It is worth adding that societies reap meaningful and immediate benefits from transitioning away from fossil fuels. In a recent research paper, our team found that replacing fossil fuels with renewable energy yields substantial short-term benefits associated with cleaner air, improved health and fewer premature deaths, which exceed policy costs. We also estimated that these immediate benefits may be larger than the near-term gains from mitigating climate change. Societies, therefore, have ample reason to act on climate change now.

EMIL DIMANCHEV
Senior research associate

MIT Centre for Energy and Environmental Policy Research

Cambridge, Massachusetts

In your article on small island states and climate diplomacy, you failed to mention the effects of rising and shifting sea floor, and that volcanic islands can and do naturally sink ("Nothing so concentrates the mind"). Balanced reporting would merit at least a quick mention of these facts.

JOY SAVAGE D'ANGELO

Fort Worth, Texas

It is true that climate change is not just an environmental problem and cuts across all activities. Yet the recipe for economic growth from mainstream economists, including *The Economist*, disregards climate change. Yes, economics textbooks cover externalities or spillover effects, but these have not been integral to growth analysis. A search finds abundant climate studies, but less than 0.5% of the numerous growth articles over the past 50 years seem to factor climate effects.

That allows politicians such as Jair Bolsonaro, Brazil's president, to argue that environmental protection is inimical to growth, even as the emerging reality is the opposite. American policy, too, sees any deregulation, including policy that mortgages the environment, as pro-growth. Yes, environmental destruction may boost short-term growth, but the climate outcomes hurt long-term growth and welfare.

So, changing the conduct of growth economics is essential if we are to avert a climate catastrophe. Unless the economics profession stops ranking and rewarding countries based primarily on how much they deregulate and boost short-term GDP, the climate action that you rightly call for will continue to lag dangerously.

VINOD THOMAS

A former senior vice-president at the World Bank

Bethesda, Maryland

Climatologists are like economists. They repeatedly produce false predictions based on skewed statistics and erroneous models. Neither wholly understand their respective cycles. Climatologists want to twiddle the carbon-dioxide knob just as central bankers twiddle interest rates.

The Economist is fuelling peak-hysteria near the top of a climate bull market. The inevitable climate bear market will be more sudden, geologically, longer and colder than any climatologist can at present imagine.

JAMES HOLME

Bickenbach, Germany

Your newspaper has now shown itself to have joined the alarmist warmists. You have lost your way and attached yourself to the ranks of the activists. Very disappointing. In order to avoid misleading your readers you should rename your publication *The Alarmist*.

TONY POWELL

Niagara-on-the-Lake, Canada

As a longtime reader of *The Economist*, I have often been moved by the Obituary column, but I was astonished to find myself weeping over the death of the Okjökull glacier in Iceland, a response triggered as much by the beauty of the writing as the poignancy of the event. Later that day I called my broker and divested all my fossil-fuel holdings.

PAGE NELSON

Charlottesville, Virginia

Ukraine and impeachment
The backstory

The backstory to impeachment

From Paul Manafort to Donald Trump's fateful phonecall

How Ukrainians in a bind reach out to Americans on the make

Print | Briefing Oct 12th 2019

Editor's note (October 10th 2019): *Shortly after this report was published two people mentioned in it, Lev Parnas and Igor Fruman, were arrested at Dulles airport outside Washington, DC. They have been charged with funnelling foreign money to American political candidates and a pro-Trump election committee.*

VIKTOR YANUKOVYCH, out of office, found himself in a bind. Having become prime minister of Ukraine in 2002, he had expected to be elected president in December 2004. The official count in the election had borne out his expectation. But thousands of orange-clad demonstrators had subsequently taken to the streets of Kiev to protest that the tally had been rigged. The Supreme Court ordered a recount. The result was overturned.

Post-Soviet Ukraine was just 13 years old, and adrift. A home to hardline Communists and ardent nationalists alike in the 1980s, part of its territory long engaged with Europe, part stalwartly Russian, it had no real tradition of statehood. Oligarchs-in-the-making took advantage of that lack to carve up the country's considerable rents and assets. Some of these oligarchs went into politics; some cultivated politicians. All sought and bought protection from people with power in Russia, Europe and America. Ukrainian politics and foreign relations became an extension of the oligarchs' business interests. Its parliament became a market.

After the election of 2004 Mr Yanukovych's stock plummeted—which was bad news for Rinat Akhmetov. A coal and steel magnate based in Donbas, an industrial region in eastern Ukraine, Mr Akhmetov was one of the main sponsors of Mr Yanukovych and his Party of Regions. If they were to regain power, Mr Yanukovych would have to win the next election more or less fairly. That would mean overhauling his image. So Mr Akhmetov introduced Mr Yanukovych to Paul Manafort.

Mr Manafort thought he was on to a good thing. A consultant to Republican politicians in America, he also had a lucrative business tending to unsavoury overseas clients such as Jonas Savimbi, an Angolan guerrilla leader, and Mobutu Sese Seko, a Congolese dictator. He and his team had turned Mr Yanukovych, whose nickname during his short stints in prison when young had been *kham*, or "thug", from a Kremlin-backed bully into a self-made man with blue-collar roots. Charismatic would have been too much to hope for, but his tailored suits, Politburo hair and deliberate manner gave him a plausibly presidential demeanour. He seemed practical and solid, the salt of the earth.

The campaign Mr Manafort devised for this remade candidate used tactics he had first seen used in Richard Nixon's re-election campaign in 1972: exploiting cultural divisions and stoking grievances. Mr Yanukovych was portrayed as a defender of the Russian-speaking east against western Ukrainians who wished to force a new language and culture on them while exploiting their economic resources. He raged against the joint exercises Ukraine was holding with NATO in Crimea. When the American ambassador tried to get Mr Manafort to rein him in, he was rebuffed.

The election of 2010, which was pretty much above board, saw Mr Yanukovych become president. As such, he made Mykola Zlochevsky, a burly, shaven-headed tycoon, his minister for ecology and natural resources. In the early 2000s Mr Zlochevsky had been chair of the State Committee for Natural Resources at a time when companies he had started had been granted lucrative oil-exploration licences. These licences were cancelled under the new regime that came to power in 2005, though the cancellation was later overturned.

Oliver Bullough's book "Moneyland", which deals with money laundering, records that during Mr Zlochevsky's second stint in control Burisma, a company he had founded to consolidate his oil and gas interests, was granted nine production licences and saw its natural-gas production increase sevenfold. As Mr Bullough puts it, "There is a marked correlation between Zlochevsky's period in office and Burisma expanding. He is a classic example of how politics in Ukraine has long been business by other means."

Burisma was owned through various holding companies in Cyprus, and Mr Zlochevsky's lawyers have insisted that their client did not benefit from his own official decisions. But his experience after 2005 must have made him keenly aware that his fortunes might dip under another regime.

When that other regime arrived, it did so dramatically. Mr Yanukovych's victory in 2010 had wedged open the country's divides, unlocking the way to revolution, invasion and bloodshed. In 2014 he was overthrown and fled to Moscow, taking vast wealth with him. Russia, irked at having its man displaced by the "Euromaidan" uprising, responded by annexing Crimea and fomenting insurrection in the east.

A friend of my friends

Mr Zlochevsky, out of office, found himself in a bind. The new government wanted to get back the money siphoned off by Mr Yanukovych and his cronies, and enlisted the help of international authorities to that end. After Mr Zlochevsky tried to move $23m to Cyprus from a London account held with BNP, a bank, in March 2015, Britain's Serious Fraud Office froze his account. The SFO argued in court that there were reasonable grounds to believe Mr Zlochevsky made this money by breaking Ukrainian law. Of specific interest was $20m paid into the account by a company owned by Sergey Kurchenko, who handled money for Mr Yanukovych's family.

Hunter Biden thought he was on to a good thing. In 2014, Mr Biden was asked to join the board of Burisma, along with Devon Archer, his business partner, and Alexander Kwasniewski. Mr Biden is the son of Joe Biden, then vice president and Barack Obama's point-man on Ukraine; Mr Archer is a friend of the stepson of John Kerry, then America's secretary of state; Mr Kwasniewski used to be president of Poland. Mr Biden was reportedly paid $50,000 a month.

The purpose of expanding Burisma's board in this well connected way, it seems, was to buy Mr Zlochevsky protection; as well as the money-laundering case in London, he was also facing two investigations in Ukraine, one for tax evasion and one over conflicts of interest involving Burisma's licences. Mr Zlochevsky, who had fled Ukraine, also wanted leverage in his dealings with Petro Poroshenko, the oligarch elected president in May 2015.

If such protection was, indeed, Mr Zlochevsky's plan, it apparently worked. The prosecutor general's office failed to supply the SFO with the documents needed to keep his account frozen. At the end of the year someone there supplied Mr Zlochevsky's lawyers with a letter stating that he was not suspected of any crime in Ukraine. The judge in London released the $23m on the grounds that Mr Zlochevsky "was never named as a suspect for embezzlement or indeed any other offence, let alone one related to the exercise of improper influence in the grant of...licences".

Vitaly Kasko, who as head of the international department in the prosecutor's office had been trying to help the SFO, smelled a rat. So did America's ambassador to Ukraine, Geoffrey Pyatt, "Those responsible for subverting the case by authorising those letters", he said a few months later, "should—at a minimum—be summarily terminated." Anti-corruption activists in Ukraine argued that the Burisma case and other attempts to recover laundered loot failed because the government did not really want them to succeed. Oleksandr Onishchenko, a businessman and MP who is now a fugitive abroad, says Mr Poroshenko was far from dismayed when told that Mr Zlochevsky was supplying free natural gas to a glass works run by his right-hand man and might be willing to do more such favours. On a recording Mr Onishchenko claims to have made of this conversation, the president calls Mr Zlochevsky "a good guy" and sends him his greetings. Mr Poroshenko says this recording is a fake.

With Mr Poroshenko's credentials as an enemy of corruption in doubt, the American government helped to set up a new National Anti-corruption Bureau (NABU). It was ring-fenced from interference by Ukrainian officials and supervised by the FBI, which set up an office inside the new bureau. But it found its work blocked by Viktor Shokin, who Mr Poroshenko made prosecutor general in February 2015. Pressed by foreign ambassadors and Ukrainian activists, Vice-President Biden became part of an international campaign to remove Mr Shokin. "The office of the general prosecutor desperately needs reform," Mr Biden told Ukraine's MPs late in 2015; privately he told Mr Poroshenko that keeping Mr Shokin would cost him $1bn in aid.

My enemies' enemy

In April 2016 the president replaced Mr Shokin with Yuri Lutsenko. In 2006, as interior minister, Mr Lutsenko had launched an investigation into Mr Zlochevsky. After Mr Yanukovych returned to power in 2010, Mr Lutsenko was jailed in what appeared to be a political vendetta. When he became prosecutor general in 2016, he brought the tax evasion case against Mr Zlochevsky to a conclusion with a fine of $7.4m. The third case, about the licences, was passed to NABU, where it remains unresolved.

Activists and outsiders hoped that Mr Lutsenko would prosecute cases more vigorously than Mr Shokin had and co-operate more with Artem Sytnik, the fresh-faced head of NABU. Mr Lutsenko disappointed those critics, using his office to attack some of them, and worked to undermine Mr Sytnik and subvert NABU operations. Marie Yovanovitch, a career diplomat recently arrived in Kiev as America's ambassador, told him to stop attacking anti-corruption activists and former staff such as Mr Kasko, who had co-operated with the SFO in the Burisma case. Mr Lutsenko was not pleased.

Mr Lutsenko and Mr Poroshenko's faction pushed on with attempts to remove NABU's independence and fire Mr Sytnik. Things came to a head during a night of frantic trans-Atlantic calls in December 2017. In part because of pressure from the IMF, which was funding billions of dollars of Ukrainian debt, Mr Poroshenko backed down. Mr Sytnik remained in his job and NABU retained its independence.

Mr Lutsenko, in office but weakened and humiliated, found himself in a bind. So he looked to a powerful outsider for support: President Donald Trump's White House. Although this seemed to be on his own initiative, Mr Lutsenko rarely did anything without Mr Poroshenko's approval. The president, who had favoured Hillary Clinton in the American elections of 2016, was keen to patch things up with Mr Trump. The feeling was not mutual—but Mr Lutsenko was still of interest.

Rudy Giuliani thought he was on to a good thing. In his role as President Donald Trump's personal attorney he had made it known that he was interested in digging up dirt about Ukrainian support for Mrs Clinton, and any special favours which might have been done on behalf of Mr Biden. According to Mr Lutsenko, two of Mr Giuliani's other clients, Lev Parnas and Igor Fruman, got in touch with him at Mr Giuliani's behest in late 2017.

Mr Parnas and Mr Fruman are Ukrainian-American businessmen based in Florida. Mr Fruman owns a boutique hotel and a beach club in their native Odessa, as well as a bar in Kiev known for its professional escorts. Mr Parnas was once a stockbroker. The *Washington Post* has reported that, in 2016, a court ordered him to pay more than $500,000 to an investor in a never-made movie called "Anatomy of an Assassin"; according to court records Mr Parnas is still being pursued over the debt. Yet a complaint in front of America's Federal Election Commission says that Mr Parnas, Mr Fruman and shell companies with which they are associated have still managed to contribute over $400,000 to various Republican campaigns and organisations, including America First Action, a pro-Trump "superPAC".

Mr Lutsenko looked like pay dirt to Mr Giuliani. So did Mr Shokin, his predecessor, who was angry at having been denied a visa to visit his daughter in California, something he blamed on Ms Yovanovitch. On January 23rd 2019 Mr Giuliani had a phone call with Mr Shokin (Mr Parnas acted as interpreter). According to notes Mr Giuliani later provided to the State Department, Mr Shokin alleged that his investigations into Burisma were effectively terminated not because Mr Poroshenko thought he was a "good guy" but because of pressure from Mr Pyatt, the American ambassador, and Vice-President Biden.

Two days later Mr Giuliani met Mr Lutsenko. Again according to Mr Giuliani's notes, Mr Lutsenko produced a document from Latvia appearing to show transfers of several million dollars from a Burisma bank account, including $1.15m to Mr Kwasnewski and undisclosed sums to Mr Biden and Mr Archer. He also spoke of a payment of $900,000 to Rosemont Seneca Partners, a consultancy co-founded by Hunter Biden, in return for lobbying services by Mr Biden's father. On October 9th Andriy Derkach, a former member of the Ukrainian secret service who has now become an MP, repeated that allegation. Mr Derkach has close ties to Mr Lutsenko. There is no evidence that this claim is true.

On January 26th Mr Giuliani and Mr Lutsenko met again. This time, the talk was of Paul Manafort. After the downfall of Mr Yanukovych, a book that contained records of payments made from a slush fund was passed to the security services. In the spring of 2016 this "black ledger" reached NABU. Soon afterwards details of a payment to Mr Manafort for services for Mr Yanukovych were disclosed to the *New York Times*. The revelation led to Mr Manafort being fired from his position managing Mr Trump's campaign and contributed to his later imprisonment.

Mr Giuliani also noted a claim that Mr Sytnik of NABU had been secretly recorded by Ukraine's security service saying that he was keen to help Hillary Clinton's campaign. Mr Derkach now claims he has documents showing that NABU worked closely with the American embassy in 2017.

The presidents' men

In March 2019 Mr Lutsenko went public, telling John Solomon of *The Hill*, a political website, that Ms Yovanovitch gave him "stop lists" that kept certain people in Ukraine safe from investigation. Ms Yovanovitch was recalled to Washington the following month because, in Mr Giuliani's words, "she was part of the efforts against the president". The State Department dismissed this as an "outright fabrication".

The next month Mr Poroshenko lost the Ukrainian elections to Volodymyr Zelensky, a television comedian. Mr Parnas and Mr Fruman immediately contacted a member of Mr Zelensky's team to arrange a meeting between him and Mr Giuliani.

Mr Zelensky, newly installed in office, was in a bind. He had been elected on a promise to overhaul the corrupt system which was undermining Ukraine's prosperity and security (his government is currently investigating Mr Poroshenko and Mr Lutsenko). And he wanted money, weaponry and symbols of support such as state visits to help him face down Russia. But he did not want to be dragged into using his position to settle American political scores.

On May 9th, the *New York Times* reported that Mr Giuliani was on his way to Kiev. Keen to keep his distance, Mr Zelensky declined to meet him. On May 12th, Mr Lutsenko visited Mr Zelensky and urged him to see Mr Giuliani. "He said he had a number for Mr Giuliani and that Giuliani would connect him to Mr Trump," a person familiar with that meeting says. Again, Mr Zelensky declined.

Kurt Volker, America's special envoy to Ukraine charged with resolving the conflict in Donbas, tried to smooth the building tension ahead of a telephone call with Mr Trump. On July 7th he had a breakfast with Mr Giuliani. Later that day he texted Mr Giuliani to introduce him to Andriy Yermak, a top adviser to Mr Zelensky. A few hours later he texted William Taylor, the American representative in Ukraine, and Gordon Sondland, a Republican fund-raiser who had become Mr Trump's ambassador to the EU: "Had breakfast with Rudy this morning—teeing up call w[ith] Yermak Monday. Must have helped. Most impt [important] is for Zelensky to say that he will help investigation—and address any specific personnel issues—if there are any."

On July 25th, Donald Trump probably thought he was on to a good thing. He was about to call the neophyte president of a poor, embattled country—a country whose previous leaders had, in Mr Trump's mind, conspired to do him down, but which also might hold the key to smearing his possible adversary in the coming election and providing some justification for pardoning Mr Manafort. Mr Zelensky's weak position meant he had every reason to grant whatever favours Mr Trump might ask of him

A few hours before the call between the two presidents was scheduled to take place, Mr Volker texted Mr Yermak. "Heard from White House—assuming President Z convinces trump he will investigate/"get to the bottom of what happened" in 2016, we will nail down date for visit to Washington. Good luck!"

And so, at the end of a decades-long saga of reciprocal corruption, spiralling cynicism and abuse of office, Mr Trump picked up the phone. ■

Correction (October 14th 2019): The journalist at The Hill who was spoken to by Mr Lutsenko was John Solomon, not John Salmon as we originally wrote. Sorry

Oversight and impeachment
Wall of silence

Wall of silence

On impeachment, Congress struggles with an obstructive president

Unstoppable force meets immovable object

Print | United States Oct 10th 2019

GORDON SONDLAND, America's ambassador to the European Union (EU) and author of lawyerly texts denying "quid pro quo's of any kind" between Mr Trump and Ukraine's president, was due to testify before the three House committees on October 8th. That morning, in a tweet that showed he shared his ambassador's fondness for errant apostrophes, the president blocked Mr Sondland from appearing before "a totally compromised kangaroo court, where Republican's rights have been taken away." Pat Cipollone, the White House counsel, later broadened this recalcitrance. The executive branch could not "be expected to participate in" the House's impeachment inquiry, which he called a "highly partisan and unconstitutional effort". Where does that leave Congress?

As a matter of law, Mr Cipollone is wrong: the constitution gives the House of Representatives "the sole power of impeachment". Mr Cipollone complained that the president cannot cross-examine witnesses or see the evidence against him. That misunderstands the process. In an impeachment proceeding the House plays the role of a grand jury, evaluating evidence and weighing whether to indict. The president mounts a defence in the Senate trial.

Mr Cipollone has asserted that the lack of a full House vote to begin an impeachment inquiry renders the current process invalid. This has no basis in law or House rules. Nancy Pelosi, the House Speaker, may be playing politics in trying to ensure that Democrats from districts Mr Trump won do not have to cast a tough vote, but impeachment is a political process as well as a quasi-legal one. There are no rules that say Ms Pelosi needs backing from a floor vote to open an inquiry. Where Mr Cipollone is right is that support for the inquiry is partisan. But that is largely because many Republicans are now reduced to excusing conduct that before 2016 they would probably have deemed unacceptable.

In a civil or criminal trial, people who flout a court's instructions can be found in contempt, and either fined or imprisoned until they comply. This is not an option for those running the impeachment inquiry in the House. Congress has not detained anyone since 1935, when a Hoover administration official was held at the Willard Hotel. As fractious as American politics is today, Ms Pelosi dispatching the Capitol police to seize Mr Cipollone or Mr Sondland at the White House, possibly precipitating a physical confrontation between security forces, would make things worse.

Some Democrats have considered reviving Congress's powers of "inherent contempt" which, at least in theory, allow them to levy fines on recalcitrant witnesses. Adam Schiff, the House Intelligence Committee chair, suggested fines of $25,000 per day. That would solve two problems for the House, and appeals for two reasons. First, it would be quick, whereas obtaining penalties for civil contempt charges can require lengthy court battles. Second, criminal contempt citations require the Justice Department to prosecute, which, under William Barr, the attorney-general, it is vanishingly unlikely to do. But it is an untried strategy. The House would first have to establish rules, and provide contemnors with some form of due process. The House majority would almost certainly face a legal challenge if it invoked inherent contempt, limiting its capacity to change anyone's behaviour.

Democrats thus find themselves with a familiar dilemma. How should they exercise oversight when the White House refuses to follow the rules? One option would be to move swiftly to an impeachment vote and make the stonewalling part of an obstruction charge. Yet Democrats would rather take more time in the hope of swaying public opinion, which seems to be moving their way (see Lexington). If they impeach the president on what sounds like a technicality, and before conducting a full inquiry, it would be easier for Senate Republicans to defend him.

That may explain the White House's strategy. Reasoning that the House will probably vote to impeach eventually, why not get it over with now? As soon as the House votes to impeach, control of both the procedure and the news cycle will shift from Ms Pelosi and House Democrats to Mitch McConnell and Senate Republicans. By the time voters head to the polls next year, impeachment would be old news. And it will have been more than a year since the president's lawyer affirmed in writing that seeking intervention from a foreign government in an American election "was completely appropriate". ■

Alley-oops

How not to do business in China

The Communist Party posterises the NBA

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SOMEHOW DARYL MOREY must not have been fully briefed on the most-followed but least-discussed rule of doing business in China: do not say anything that might reflect negatively on the Communist Party. On the morning of October 5th in Tokyo, Mr Morey, the general manager of the Houston Rockets, a National Basketball Association (NBA) team heretofore loved by millions of Chinese fans, ignited a furore in China by tweeting a seven-word message in support of protesters in Hong Kong: "Fight for freedom", he wrote. "Stand with Hong Kong." In response to the tweet, which Mr Morey would later delete, the Communist Party showed its willingness to use market power to constrain speech beyond China's borders—which in turn is hardening resistance in America to China's influence.

Chinese nationalists circulated the image from Twitter (which is blocked in China) on Chinese social media, and angrily asserted that Mr Morey was challenging China's sovereignty over Hong Kong. China's consulate in Houston issued a statement that China was "deeply shocked" and urged the Rockets to "correct the error". The Chinese Basketball Association—chaired by Yao Ming, China's greatest player and a former Rocket (helping explain the massive popularity of the team in China)—declared its "strong opposition" to Mr Morey's tweet and said it would stop working with the Rockets.

CCTV, the state broadcaster, and Tencent, an internet conglomerate that streams NBA games, announced they would not show Rockets games. Sponsors cut ties with the team. E-commerce sites stopped selling Rockets kit. The official NBA store in Beijing, the largest outside North America, was instructed by the authorities to remove all Rockets merchandise from the shelves, according to a salesman there (with the exception of Yao Ming jerseys). *People's Daily*, the party's mouthpiece, accused Mr Morey of being "pro-separatist". The controlling owner of the Brooklyn Nets, Joe Tsai, a Taiwan-born billionaire who made his fortune at Alibaba, a Chinese e-commerce giant, published an open letter suggesting boundaries for acceptable speech about China. He implied that Mr Morey had endorsed a "separatist movement" in Hong Kong, which Mr Tsai called a "third-rail" issue. All "1.4bn Chinese citizens stand united when it comes to the territorial integrity of China", Mr Tsai wrote. "This issue is non-negotiable."

China is by far the NBA's most important international market, with as many as 500m people watching at least one NBA game last season. NBA executives and players quickly tried to react as many businesses with a big China audience have done in the past, by distancing themselves from the perceived offence. Tilman Fertitta, the owner of the Rockets, said that Mr Morey did not speak for the team. Backtracking, Mr Morey later said that he "was merely voicing one thought, based on one interpretation, of one complicated event". James Harden, the Rockets' superstar, whose popularity in China increases the value of his endorsement deals, apologised in a television interview. "We love China," he said. The NBA issued a statement that it was "regrettable" that Mr Morey had "deeply offended" the league's fans in China. A Chinese version of the NBA's statement went further, saying the league was "extremely disappointed" by Mr Morey's "inappropriate remarks".

Self-censoring to make money in China is a long-standing business practice. The most obvious example is Hollywood, where studios steer clear of any topics in their films that would upset Chinese authorities, so that they can maintain access to the world's second-largest market. But virtually all foreign businesses operating in China have long self-censored in a more subtle, pernicious way, by never speaking publicly about any issue the Communist Party deems off-limits. Business leaders know they are expected to keep silent about the internment of as many as 1m Uighurs in Xinjiang (where the NBA operates a training academy, opened in 2016).

The Morey episode shows it is getting trickier for businesses to navigate between expectations in America, where outcry is growing over China's authoritarian tactics, and the ever-tougher demands of China under Xi Jinping. Adam Silver, the NBA's commissioner, having taken flak over the NBA's spineless initial response, clarified his support for free speech, saying "the NBA will not put itself in a position of regulating what players, employees and team owners say." That may be true for the NBA, which has a tradition of supporting free speech for its stars. It also still earns most of its money in America. But China's fierce reaction to Mr Morey's tweet is certain to induce more self-censorship by executives in the future. And when they choose not to speak at all, few will take note. ■

Down the tracks

A ride along Chicago's red line

Life expectancy varies by 30 years from one end to the other

Print | United States Oct 10th 2019

SEVERAL PASSENGERS in one carriage of an "L" train, rattling south on the underground line to Chicago metro station, are unmistakably bourgeois. A grey-haired woman squints at a book of 501 French verbs. Opposite, a bespectacled man reads a study of Arctic peoples. Some seats on, an artist doodles on his pad.

Many well-heeled occupants get off the Red line—a rail service running north-south for 23 miles—at Streeterville, a district where signs of prosperity abound. As an advertising gimmick, a luxury car adorns the L-station roof. At a farmers' market, installed beside a contemporary art museum, shoppers browse for micro-greens, organic beef and gluten-free tamales. A violinist there explains she busks to save for college. Dollar bills fill her case.

Streeterville has another distinction. Public-health researchers suggest that a baby born here can expect to live for an average of 90 years, the highest life expectancy in Chicago. That is 30 years longer than an infant born in the most blighted parts of Englewood, farther south along the Red line. No city in America has a bigger gap.

Return to the train and much changes the farther south you ride. Passengers are younger, less ostentatiously set on self-improvement. A guard in a stab-vest, his hand on a canister of pepper spray, steps in. He confides that he is tracking a suspect. Reports of crime on the L system doubled from 2015 to last year; violent cases rose by 89%, to 447. This year is worse, he says, and "you can't ask why any more."

He tells his own story of being assaulted when off-duty, and says he would deploy "a guard in every car" if he could. He leaves at Roosevelt station, and a boisterous group steps in. A woman accuses another of being "a crackhead", provoking shrieks of laughter. A pair of young men move to let an elderly passenger sit down.

Here the Red line runs outside, giving glimpses of a changing city: brick pagoda-roofs of Chinatown; high walls of the White Sox baseball stadium; warehouses and ex-factories of a former industrial zone. Men pace the carriages hawking green-and-white packets of cigarettes. The city grows noticeably poorer.

In the south passengers step out to exhaust fumes and noise. Their stations are squeezed between a dozen lanes of roaring motorway traffic. Leave with them and you can spend an afternoon in depopulating Englewood, tracing a loop between the 63rd and 69th stations, seeing a crumbling city that is strikingly different from the prosperous one 20 minutes to the north.

A few landmark buildings have been built at City Hall's behest: a large new campus for a high school, a newish mall that includes a Whole Foods and a Starbucks. Elected officials hope these will spur more redevelopment, but that has not come yet. Many streets are notable for empty lots—where property has been demolished—or for dilapidated and boarded-up houses.

On a few porches people gather. A main thoroughfare has a row of closed churches and open liquor shops where men congregate. Signs on the "Cadillac 4-in-1 Food Market" announce it has been "black-owned for 35 years", but its door is buckled and the building is empty.

On one corner a resident in a yellow high-vis vest, Melvin, says he is hired by the school system to protect children walking home from "any violence going on, any drug activity." He praises most of Englewood's locals as "great", and says he has heard only one gunshot in a year on the job. Yet he says things change after dark. Youngsters suffer from "torn-down neighbourhoods, abandoned buildings that are drug-infested" and from guns.

What does he make of the gap between life expectancy in Streeterville and here? "As crazy as it sounds, it is true," says Melvin. "Children up north are not faced with what they face here," he says, meaning shootings. Police have counted 1,600 violent crimes, including 50 murders, in Englewood and West Englewood in the past year, a far worse rate than most places.

Lorna Thorpe at NYU Langone Health, a medical centre affiliated with New York University, helped to create the "City Health Dashboard", which produced the 30-year estimate. She has applied public-health and other data from federal sources to census tracts inside 500 American cities. This allows fine-grained comparisons between the cities and between city neighbourhoods for dozens of factors, including obesity, binge-drinking, smoking, childhood poverty, health insurance and reported rates of mental distress.

Ms Thorpe thinks many of those could contribute to the three-decade gap. But the most powerful "strong correlation", she says, is between low life-expectancy and extreme racial segregation. Chicago remains exceptionally divided on racial lines. African-Americans make up 95% of the population in parts of Englewood, compared with just 2% in Streeterville. Segregation is associated with differences between neighbourhoods in income, poverty, marriage rates and more.

Rob Paral, a demographer, agrees. The differences in life expectancy between rich, white northern districts and black southern ones are mostly a reminder that Chicago never broke up its racial "ghettoes", he says. Poor and black residents were shuffled to the south when the city demolished public housing in the 1960s and 1970s. Now black folks are being squeezed again from places like Englewood—its population is just 25,000, nearly 40% smaller than in 2000—as people flee violence, poverty and broken housing, often leaving the city entirely. ■

Sextualism

SCOTUS grapples with the meaning of sex

Will the court's most solidly conservative majority in years protect gay and trans employees?

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HISTORY WAS made at the Supreme Court on October 8th. The word "transgender" made its debut in an argument and the chief justice repeatedly used the pronoun "they" to describe an individual. Under discussion was Aimee Stephens, formerly Anthony Stephens, who had been fired from her job as a funeral director in Michigan after announcing she would start living as a woman. Her boss, a conservative Christian who holds that biological sex is "an immutable God-given gift", felt he could not condone what he considered a physical impossibility by allowing Ms Stephens to wear frocks to work. He also thought that the sight of a man dressed as a woman would discombobulate grieving customers. So he fired her. After an appeals court ruled in Ms Stephens's favour, her boss took his case to the Supreme Court.

The case has received so much attention that it has at times threatened to overshadow the first gay-rights cases the court will consider since it ruled in 2015 that gay marriage is a constitutional right. The same day, the court heard arguments in the case of Gerald Bostock, who says he was sacked as a social worker in Georgia after officials learned he played in a gay softball league, and Donald Zarda, a sky-diving instructor in New York, whose lawyers claim was fired after he reassured a female customer, to whom he was strapped for a dive, that he was homosexual. Mr Zarda, who died in 2014, won his case at an appeals court; Mr Bostock lost.

For gay and transgender employees across America the stakes in these cases, which the court is likely to rule on by the spring, could barely be higher. Despite successive attempts, Congress has declined to pass a federal law protecting workers from discrimination on the grounds of sexual orientation or identity. Fewer than half of America's states have such legislation. Research has found that gay and trans Americans report significantly higher rates of being treated badly at work and fired than their straight or non-transgender colleagues. An amicus brief filed by 206 businesses, including Amazon and Wells Fargo, in support of the cases before the court, argues that the absence of legislation makes it hard for businesses to recruit and retain the best employees.

XY bother

Eliding gay rights with transgender rights can jar. Sexual orientation and identity are essentially different, though they sometimes overlap. But the cases heard at the Supreme Court this week all hinge on whether the "sex" bit of Title VII of the Civil Rights Act of 1964, which bans employment discrimination on the grounds of "race, colour, religion, sex, or national origin," protects such workers. Lawyers for all three argue that it does, because they would not have been fired were it not for their sex. Ms Stephens says she would not have been sacked had she been born female; lawyers for Messrs Bostock and Zarda argue that their attraction to men was considered a problem only because they were men.

The authors of the Civil Rights Act manifestly did not have gay and transgender workers in mind when they added "sex" to their list of banned grounds for discrimination. In 1964 gay sex was still illegal in most states and transgender Americans mostly kept quiet. But a textualist reading of Title VII—that is, one that focuses on the words of laws rather than the intent with which they were written—suggests that "sex" does indeed protect gay and transgender employees. That is supported by a ruling by the champion of textualism, the late Justice Antonin Scalia. In 1998 he wrote that a male worker could sue for harassment by other men because whereas "male-on-male sexual harassment in the workplace was assuredly not the principal evil Congress was concerned with when it enacted Title VII...statutory prohibitions often go beyond the principal evil to cover reasonably comparable evils."

The cases are further bolstered by another, older precedent. In 1989 the justices sided with a female executive denied a promotion for being too "macho". The court ruled that stereotyping—expecting workers to conform to the conventions of their biological sex—was a form of gender discrimination under Title VII. It would not take a giant leap of logic to conclude that discrimination against gay and transgender people is predicated on sex stereotyping—people should be attracted to the opposite sex and conform to the sex they are assigned at birth—and is therefore illegal.

Yet the Supreme Court never rules without an eye to the wider politics of such cases. During the hearings on October 8th, Chief Justice John Roberts, who could cast a swing vote if the justices vote along ideological lines, said he was worried a ruling in favour of gay and trans employees would leave religious employers inadequately protected. Justice Neil Gorsuch, an ardent textualist, suggested that "when a case is really close" it might be better to leave decisions that would cause "massive social upheaval" to Congress.

His questioning about single-sex bathrooms, an issue that has roiled America in recent years, suggests that he considers Ms Stephens's case to be especially vexed. Conservative Christians are not the only Americans who consider biological sex to be immutable. YouGov, *The Economist*'s pollster, asked a sample of 1,500 adults to imagine they were meeting someone for the first time who was born male but identifies as female. Half (44%) considered such a person to be male, while half (44%) thought she was female. The rest preferred not to say. Some worry that a ruling for Ms Stephens could lead to the erasure of sex-specific rules at work, such as those governing the provision of single-sex bathrooms.

Transgender activists are often too quick to dismiss such fears. Responding to a question from Justice Sonia Sotomayor about how the law should respond to women who do not want to share bathrooms with people who look a lot like men, a lawyer for the American Civil Liberties Union, which is representing all three gay and trans plaintiffs, said this was not the question before the court. It could address it, he added, when it arose in a future case.

He also said that the available evidence so far showed "no upheaval". Given that several states have already passed laws protecting trans employees from being fired, this is a more convincing response. The fear about shared bathrooms in part reflects how popular acceptance of transgender rights lags behind that of gay rights. That is not surprising. According to data from the Williams Institute, a think-tank at UCLA, there are around ten times as many gay, lesbian or bisexual Americans as there are trans ones. Gay marriage has largely been accepted because most Americans know a gay person; fewer have a transgender acquaintance.

Mr Gorsuch is right that such questions would be better hammered out by lawmakers who, unlike Supreme Court justices, are elected by the people. There, much will depend on the outcome of next year's elections. If the Democrats flip the Senate they may pass the Equality Act, which would ban discrimination against gay and trans Americans in public and commercial life. This passed the House in May, but stands no chance of becoming law before 2020. In the meantime, gay and transgender Americans await the justices' decision. ■

Fix your hair up pretty

Atlantic City deals itself another bad hand

Four of the past nine mayors have been arrested for corruption

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FRANK GILLIAM, Atlantic City's mayor, solicited donations to a non-profit youth basketball club he co-founded. He promised the money would go to helping underprivileged children. Instead he defrauded contributors of $87,000, which he spent on designer clothes, expensive meals and trips. He pled guilty in a federal court on October 3rd to fraud and resigned from office hours later. His disgrace barely registered among the city's residents. "Oh, we have corrupt politicians," said Matthew Hale, a political scientist at Seton Hall University in South Orange, of the city's mindset. "It must be Tuesday."

Mr Gilliam is the sixth mayor since the 1970s to leave office in disgrace. Four of the past nine mayors have been arrested for graft. In 2007 a third of the nine-member City Council pled guilty to receiving bribes. This follows more than a century of political bosses, many of them corrupt, associating with mobsters, shaking down constituents and businesses as well as controlling everything, including who gets a job.

When elected in 2017 Mr Gilliam was dogged by allegations of campaign-finance fraud. A judge dismissed that complaint in 2018. In November he was involved in a fist-fight outside a nightclub at the Golden Nugget casino. The state declined to press charges. In December the FBI and the IRS raided his home. Perhaps the most surprising thing about Mr Gilliam's downfall was that it resulted from plain old theft.

Right from Atlantic City's beginnings "corruption was organic," says Nelson Johnson, a former judge and author of "Boardwalk Empire: The Birth, High Times and Corruption of Atlantic City", which inspired an HBO series of the same name. The city is in a lovely spot on New Jersey's shore where the Lenni-Lenape tribe spent the summer months for centuries. Originally conceived by a local doctor to be a health resort, the island flourished on the promise of a "naughty good time at an affordable price," says Mr Johnson.

Louis "the Commodore" Kuehnle, ran the city from 1890 to 1910. Under his watch brothels, gambling dens and speakeasies operated openly. The only time the police intervened was when someone was late with a payment. He eventually went to jail for election fraud. His successor Enoch "Nucky" Johnson ran the city and everything else. After three decades he was dethroned for tax evasion.

Atlantic City's fortunes declined after the second world war, as widespread car ownership opened up other possibilities. Two mayors were arrested for extortion in the early 1970s. Some of the city's glamour came back after gambling was legalised in 1976, bringing in millions of fast dollars. "There was a mismatch between the money in the city and the size of the city itself (the population is 38,000)," says Bryant Simon, author of "Boardwalk of Dreams."

Despite promises to keep gambling clean, politicians kept getting into trouble. Mayor Mike Matthews was arrested in 1983 for extortion. "Frankly, greed got the better of me," he said during his sentencing. His successor, James Usry, the city's first black mayor, took bribes and broke campaign-finance law. In 2007 Bob Levy resigned as mayor after disappearing for a spell. He later plead guilty to lying about his military record to inflate his veteran benefits.

Reformers have a hard time and do not tend to stay in office for long. By the time Don Guardian, a Republican and technocrat, became mayor in 2014, the city had lost its gambling monopoly. Casinos were closing and the city was running out of money. Despite his best efforts, the state took over the city. Mr Guardian lost his re-election bid to Mr Gilliam. And city politics settled back into old habits. ■

Lexington

Institutional conservatives would condemn Donald Trump

Republicans probably will not

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AMERICANS WERE treated to the novel sight of Donald Trump's Republican colleagues deserting him in droves this week. Even Mitch McConnell had had enough of Mr Trump's latest dereliction of "American leadership"—which Lindsey Graham, usually one of the president's staunchest defenders, declared "just unnerving to its core". They were protesting against Mr Trump's decision to abandon America's Syrian Kurdish allies, not the foreign-policy scandal for which he will probably soon be impeached: his effort to coerce Ukraine into launching a bogus corruption investigation into Joe Biden. Even so, such an impassioned uprising against Mr Trump suggested to some that his Republican firewall may not be as solid as is generally assumed.

There is little reason to think that. Republican senators have criticised Mr Trump's foreign policies before, even as they have excused his rule-breaking closer to home. And though, as many have noted, there is bad news for Mr Trump in public opinion —always the likeliest predictor of political change—it is so far too modest to augur a dramatic shift. Polls suggest a big rise in support for impeaching the president among Democrats, a significant one among independents, and a modest uptick among Republicans. That is ominous for Mr Trump's electoral prospects; having never had a 50% approval rating, he cannot afford to lose voters. But it is not grounds to imagine many Republican senators deserting him in the impeachment trial that now looks inevitable.

The heat Mr Trump took from his party on the Kurds therefore does not suggest his hold on it is weakening. Rather it helps indicate why, after many presidential misdeeds, it remains so strong.

Implicit in most criticism of Republicans' acquiescence to Mr Trump is an assumption that it is tactical—that they would behave differently unconstrained. They are said to be opportunists who suffer the president's rough edges because they love his policies. They are said to be cowards, who fear a condemnatory tweet or primary challenge. And some—such as Mr Graham, a national-security hawk—are said to have made nice with Mr Trump to remain influential on a cherished issue. This is all fair enough, yet it is not the full story. As the Kurdish episode illustrates, Republican politicians dislike a lot of the president's policies, are not always intimidated by him, and no one can expect to influence him for long.

The fervour Republicans such as Mr Graham display in their defence of Mr Trump—even after he has admitted most of the wrongdoing in Ukraine he stands accused of—also suggests something more than tactical. Notwithstanding his shaken core, the South Carolinian, once an eloquent proponent for impeaching Bill Clinton, proceeded to dismiss the apparently stronger case against Mr Trump as dangerous left-wing nonsense: "They're about to destroy the nation for no good reason!" Some see in this doubling down by Mr Trump's defenders a desperate effort to avoid facing up to their party's debasement. Republicans "have now dug themselves into a position that they can't leave without admitting that they sold out morally," suggests Jonathan Haidt, a (centrist) social psychologist. Another explanation, conversations on and off the Hill suggest, is that even in their secret hearts Mr Trump's Republican defenders object to his abuses much less than their critics suppose.

The most generous explanation for this is the one they offer: that Mr Trump's rule-breaking is mostly hot air. When Marco Rubio dismissed the president's invitation to China to investigate Mr Biden as being "not a real request" he was representing that view. And, to be sure, a president who ponders shooting the legs from under illegal immigrants or nuking hurricanes or buying foreign countries often strains credulity. Yet given the damage Mr Trump has actually inflicted on norms and institutions—as documented in the 448-page Mueller report and nine-page Ukraine whistleblower's complaint, neither of which many Republicans admit to having read—this is not a defence that withstands scrutiny. It is an example of the moral contortions politicians are especially good at executing, as Mr Haidt has also shown, to reach a desired position.

The other big Republican contortion involves believing that, whatever Mr Trump has done, Democrats have done worse, or would do if they succeeded in their dastardly plot to steal power from him. This fundamental conviction among Republicans—almost the party's animating principle—predates Mr Trump, enabled his takeover and is even more damaging than he is.

The danger of such extreme right-wing partisanship is its endless capacity to turn standard political grudges—against Democrats' hypocrisy on executive overreach, for example, or the media's liberal bias—into an apologia for more egregious rule-breaking. Partisan Republicans accuse their opponents of doing the same thing, and offer examples to prove it. But just as the right has played an outsized role in driving partisanship generally (a dynamic termed "asymmetric polarisation"), so its rule-breaking is more conspicuous and arguably worse. The Democrats' record on gerrymandering is dire; Republican attempts to suppress non-white voter turnout are a terrible stain. They also hint at a gloomily defensive apprehension, which has no counterpart on the ascendant left, that a Republican Party backed by a shrinking minority of mostly white voters cannot win power by fair means.

Contortion extortion

It seems many Republican voters have already settled on that conclusion—though they would put it slightly differently.

Shortly after Mr Trump's election, two in three agreed with the statement that America needed a leader "willing to break some rules if that's what it takes to set things right." Mr Trump's current standing with his party suggests even more would agree with it now. When articles of impeachment against Mr Trump are presented to them, Republican senators will essentially be asked whether they do, too. Their answer will decide more than the president's fate. It will determine whether theirs is now the party of rule-breaking. ■

Canada's election
Pocketbooks and the planet

Pocketbooks and the planet

Climate change dominates Canada's election

Opinion polls say it will be close

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LAST TIME Canadians had a general election, in 2015, many felt it was a struggle for the soul of the country. It pitted Stephen Harper, a cantankerous Conservative from the oil-producing province of Alberta who had governed for nearly ten years, against Justin Trudeau, the handsome dynast in charge of the Liberal Party. To his fans Mr Trudeau's victory heralded a return of Canadian values—tolerant, open, progressive—that Mr Harper had abandoned.

The election to be held on October 21st is not like that. Slip-ups and scandals have dulled Mr Trudeau's sheen. He urges voters to "choose forward", which could mean "don't dwell on my mistakes" as well as "let me build on the progress I've made." His main rival, the Conservatives' Andrew Scheer, is affable but quickens no pulses. His campaign combines pocketbook promises with put-downs of Mr Trudeau (he's a "high-carbon hypocrite" because he campaigns using two aeroplanes). Pundits grumble that the campaign, like "Seinfeld", an American sit-com, is "about nothing".

In some ways that is a good thing. Unlike many other democracies, Canada is not fighting its election on the dangerous ground of identity and culture. Mr Scheer has not picked a fight over immigration and race, as some analysts feared he would. He accepts immigration at today's levels, while wanting to be tougher on asylum-seekers walking across the border from the United States. Last year Canada admitted at least 321,000 new permanent residents, equivalent to nearly 1% of the population. Mr Scheer is sceptical of gay marriage (he once said in Parliament that it was like counting a dog's tail as one of its legs), but has no plans to challenge its legality. The election's Seinfeldian quality may vindicate Mr Trudeau's central political thesis: that boosting the middle class is a good way to fend off populism. Both the main candidates are now peddling tax cuts for the middle class. If he wins, Mr Scheer would spend less freely than Mr Trudeau but is unlikely to depart radically from the course Mr Trudeau has set.

Except in one crucial respect. The candidates' biggest area of disagreement is over the environment. Mr Scheer says his first priority as prime minister will be to scrap the national carbon-price floor agreed on by the provincial and federal governments. He says Canada will hit its target for reducing emissions of greenhouse gases—down by 30% from 2005 levels by 2030—by other means. A "national energy corridor" would carry oil from Alberta and his home province of Saskatchewan to the Atlantic and Pacific coasts. Mr Trudeau, by contrast, has stepped up his ambitions for Canada in the fight against climate change, pledging to cut its emissions to "net zero" by 2050. So the election's main consequence may be to determine whether Canada remains credible as a global cheerleader in the campaign against climate change.

Mr Trudeau has other boasts. In his four years in office Canada became the first big country to legalise recreational cannabis. It passed laws to allow medically assisted suicide. His government has skilfully handled President Donald Trump. Along with Mexico it negotiated a successor to the North American Free Trade Agreement and persuaded the United States to drop tariffs on steel and aluminium.

It kept its biggest promise: to help the middle class and "those aspiring to join it" by cutting taxes and boosting benefits. This included a transfer to families of up to C$6,600 ($5,000) a year per child (see chart). Mr Trudeau's priorities for his next term include another middle-class tax cut and a ban on assault weapons (though Canada has much less gun crime than across the border).

With this record, Mr Trudeau should be racing to re-election while dispensing advice to other leaders on how to soothe middle-class discontents and achieve liberal goals. But his mistakes, coupled with the high expectations he raised, have made his campaign more of a slog than a sprint.

Trouble began when he failed to keep a promise from the last campaign to change Canada's British-style electoral rules. These award a seat in Parliament to the candidate who wins most votes in a riding (constituency), even if that is not a majority. This "first-past-the-post" system favours big parties. A decision in February 2017 to scrap electoral reform "was the first unveiling that Justin Trudeau was not Jesus after all", says Richard Johnston of the University of British Columbia.

It was not the last. In August Canada's ethics commissioner scolded him for leaning on the justice minister last year to drop a prosecution for corruption of SNC-Lavalin, an engineering firm based in Quebec, a province vital to the Liberals' electoral prospects. Then pictures emerged of Mr Trudeau as a young man wearing black- and brownface, embarrassing the world's most "woke" head of government.

Mr Scheer has capitalised on this, telling voters the prime minister is "not as advertised". His other big message is that a Conservative government will help Canadians "get ahead", mainly by cutting taxes and fees. A "universal tax cut" will lower the rate on the lowest income bracket from 15% to 13.75%. Mr Harper's boutique tax credits, for children's sport and taking public transport, which were axed by the Liberals, will be reinstated. National museums will be free. Some of the money to pay for all this will come from a 25% reduction in foreign aid. The Conservatives promise to help homebuyers by easing mortgage stress tests for banks, which were brought in to cool an overheating housing market.

Their promise to scrap the carbon tax combines this "affordability" agenda with enthusiasm for oil. Under the Liberals, provinces that do not have their own carbon-pricing schemes must accept the federal one. This sets a price floor of C$20 a tonne, which will rise by C$10 a year until 2022. All the money raised is returned to the province. Four provinces—Manitoba, New Brunswick, Ontario and Saskatchewan—are subject to the federal scheme, and Alberta will be from January. Mr Scheer's plan to replace it is a hotch-potch of regulations and incentives. Few specialists think it will result in Canada meeting its Paris promise.

How green you are

On this issue, most Canadians share Mr Trudeau's alarm rather than Mr Scheer's complacency. But the Greens and the left-leaning New Democrats are also appealing to climate worriers. And the goodwill Mr Trudeau may have earned from environmentalists was reduced by his decision to buy a pipeline that carries petroleum products from Alberta to Canada's west coast and to back its expansion.

Mr Trudeau's plan, like Mr Scheer's, falls short of what is needed to achieve the Paris goal, let alone eliminate net emissions. Planting 2bn trees, Mr Trudeau's new pain-free idea, will not accomplish that. Still, he has laid a foundation on which he can build, if re-elected, in part by continuing to raise the carbon-price floor beyond 2022.

Polls say each of the two main parties has the backing of a third of the electorate. Most of the rest is split between the New Democrats and the Greens. Mr Trudeau may have the edge because many of Mr Scheer's votes are bunched in the oil-producing western provinces. Perhaps a tenth of voters will make up their minds at the last minute, says Darrell Bricker of Ipsos, a pollster. In a close fight, they may be decisive. Their choice may depend not on how they feel about Canada but how they feel about the planet. ■

Bello

Peru's president opens Pandora's box

His dissolution of Congress was not a coup, but could destabilise the country

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IN THIS CENTURY Peru has stood out from much of the rest of Latin America for two reasons. First, thanks to free-market policies, its economy has grown much faster. Whereas 55% of the population were poor in 2001, today only 21% are. Second, despite this rapid progress, polls show that Peruvians are unusually scornful of their politicians and their democracy. Yet political stability has been preserved.

It is now threatened. In July the president, Martín Vizcarra, locked in a power struggle with an opposition-controlled congress, proposed a general election (in which he would not stand) a year early, next April. But a congressional committee rebuffed that idea. On September 30th Mr Vizcarra controversially dissolved the Congress, calling an election for a new one for January.

This was not a coup, as more excitable opponents claim. The courts and other bodies of state are functioning normally, as are the media and a permanent committee of the dissolved congress. Mr Vizcarra's action was wildly popular. Many of his opponents in congress were corrupt and self-serving, as well as obstructive. But the president's fait accompli is constitutionally questionable. It may come to be seen as marking the end of Peruvian exceptionalism.

The precarious political balance was first endangered by the election in 2016, won by just 41,000 votes (out of 17m) by Pedro Pablo Kuczynski, a former banker. His opponent, Keiko Fujimori, who had won a majority in congress, never accepted defeat. Though she had few ideological differences with the government, she set out to bring it down. After Mr Kuczynski was forced to resign over corruption allegations, Mr Vizcarra, the vice-president, took over. Ms Fujimori is in jail, under investigation (though not charged) for illicit campaign donations from Odebrecht, a Brazilian construction firm. Her supporters consider it a case of partisan injustice.

Under Peru's semi-parliamentary constitution the president can dissolve congress if it twice denies confidence to his cabinets (it had done this once to Mr Kuczynski). The conflict boiled over when congress exercised its power to choose new members of the constitutional tribunal, to which Ms Fujimori is appealing. Relying on a broad interpretation of the constitution, and with congress seemingly poised to impeach him, Mr Vizcarra chose to make it an issue of confidence. "Everyone played at the edge of the abyss, with great irresponsibility," says Martín Tanaka, a political scientist at the Catholic University in Lima. The tribunal may rule on Mr Vizcarra's actions, but is likely to take at least three months.

Ms Fujimori's father, Alberto, ruled Peru as an autocrat from 1990 to 2000. He slew inflation and the Shining Path terrorist movement, but left a legacy of systematic corruption and a country politically divided. *Fujimorismo* represents something deep in Peruvian society: popular capitalism, the informal economy and the idea that rules are to be manipulated rather than respected. Partly under its influence, political parties have been hollowed out and turned into vehicles for private interests.

Rather than working with congress, Mr Vizcarra sought popularity by championing anti-*fujimorismo*. His supporters are jubilant. But without the glue of presidential candidacies, the new congress may be unruly. As part of an attempt last year to reform political and judicial institutions through a referendum, Mr Vizcarra courted popularity with a ban on legislators serving consecutive terms. Far from solving a problem, that created one. Peruvians could already throw out the dross, and often did. The new rule will deprive the new congress of experience.

Peru's economic miracle was fading anyway. Since 2013 growth has slowed sharply. To revive, it needs help from government. Several big mining and irrigation projects are stalled. Mr Vizcarra has blocked one mine, and has proved a poor administrator. The risk now is that politics harms the economy.

There are no easy answers to Peru's conflict of powers. In the 1960s a similar stand-off ended with the president being ousted by a military coup. At least Peru today has been spared that. In many ways, the *fujimorista* majority in congress invited its own demise. But by blundering into what some consider an abuse of presidential power, Mr Vizcarra has thrown into question the rules of Peru's political game. And he has set a precedent which may be copied by rulers whose intentions are far worse.

Looters v Lenín

Ecuador falls into chaos after the president cuts fuel subsidies

Lenín Moreno is keen to get his country back on a solid economic footing

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PRESIDENT LENÍN MORENO is facing his biggest crisis since he was elected two and a half years ago to clean up the mess left by his populist predecessor, Rafael Correa. The country is in turmoil. The president's decision to rid the country of cherished but wasteful fuel subsidies has provoked nationwide riots and looting. Shops, agricultural estates and government offices in Quito, the capital, have been ransacked. A curfew has been imposed in areas close to government buildings and airports. Mr Moreno felt obliged to move his government to the port city of Guayaquil—and to declare a state of emergency. The situation is scarily volatile.

Meanwhile, prices at the pump have surged. Furious taxi drivers and bus drivers went on strike, blocking hundreds of crossroads. When their ring-leaders were arrested, even angrier protests erupted, egged on by trade unions, left-wing activists and students. Cuenca, the country's third city, is being supplied by airlifts. Petroamazonas, a state oil company, has been forced to stop production at three oilfields, reducing national output from 550,000 to 385,000 barrels a day.

Broadly speaking, the strife was prompted by Mr Moreno's decision to comply with the terms of the IMF in order to win an injection of $4.2bn, 4% of GDP. This is needed to put Ecuador's economy back on a solid footing after a decade of mismanagement under Mr Correa, a radical socialist who admired Hugo Chávez, the former president of Venezuela. Since coming to power, Mr Moreno has been moving cautiously ahead. But this month he took the risk of slashing the fuel subsidies (except for liquefied gas) that have cost the treasury $60bn in the past four decades.

A recent study by the Inter-American Development Bank says that the subsidies benefited mainly the better-off. Moreover, much of the fuel was smuggled to Ecuador's neighbours, Colombia and Peru, where official prices have been far higher. Mr Moreno knew his decision—by presidential decree—would provoke outrage. No previous government had dared to do it.

His administration had been slow to finalise its package of tax and labour reforms. So the IMF has commended Mr Moreno for his audacity in taking the subsidy-cutting decision by decree. Some economists compare him favourably with Argentina's president, Mauricio Macri, who has proved just as unpopular while enacting similar reforms more timidly. Mr Moreno has also decided to take Ecuador out of OPEC, the oil-producers' club, in the hope of increasing exports, when and if the rioters calm down or have been squashed.

To soften the hardship that many Ecuadoreans will suffer from the inevitable jump in transport fares and other prices, Mr Moreno has promised to increase welfare payments to poor families from $50 to $65 a month and to raise the threshold for eligibility to benefit nearly 5m of Ecuador's 17m people. He also intends to reduce duties on mobile phones and computers. The middle class has so far been happy with his reforms.

His chief political antagonist is his predecessor, Mr Correa, who is calling for early elections and says the president is reaping what he sowed. But Mr Correa has his own troubles, since he may soon face charges of corruption and illegal campaign financing during his time in office. He is in self-imposed exile in Belgium. He is also blamed by Mr Moreno for stirring up the violence during the protests—allegedly in cahoots with his friend Nicolás Maduro, Chávez's despotic successor.

Mr Moreno is determined not to suffer the fate of two previous presidents, who were overthrown thanks to riots, in 2000 and 2005. His team has quietly begun to negotiate with an influential organisation of indigenous people, known as CONAIE. Some university, church and UN figures are mediating.

Much hangs on how the unrest plays out. Mr Moreno's hope is that he will weather the storm and enable Ecuador to follow the example of reform set by Chile or Uruguay, rather than fall back into another decade of instability like the one that preceded the rise of Mr Correa. ■

Privilege in South Korea
One country, two systems

One country, two systems

The president promised South Koreans a meritocracy

Which is why they are so incensed about the scandal engulfing the justice minister

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IN AN EARLY scene in "Parasite", a hit South Korean film, a young woman from a poor family forges a university-enrolment certificate for her brother. He is about to apply for a job tutoring a girl from a rich family and hopes that the false credential will improve his chances. But when he shows up to the interview the girl's mother barely glances at it, telling him she trusts him because he was recommended by her daughter's previous tutor—his only posh friend, who has left to study abroad.

Even more than in most countries, academic credentials are valuable for getting ahead in South Korea. But the scene captures another truth: that if you know the right people, your exam results don't matter as much. The two siblings in "Parasite" (pictured above, desperately trying to catch a free wi-fi signal) milk that insight for all it is worth, before things inevitably unravel. The film, which won the top prize at the Cannes film festival this year, also struck a chord with South Koreans: in a country of 52m, cinemas have sold 10m tickets for it since it was released at the end of May.

The resonance of a satirical film about inequality is hardly surprising. Moon Jae-in, the president, promised to make South Korea "fairer" when he was elected in 2017, after his predecessor was impeached (and later given a long prison sentence) for using her authority to help a friend's child get ahead, among other abuses. Yet over the past couple of months a nepotism scandal has engulfed Cho Kuk, Mr Moon's new justice minister. Before Mr Cho was appointed, it emerged that his daughter, now in her late 20s, had received some unusual benefits during her studies. Among other things, she allegedly received generous scholarships despite twice failing her exams at medical school, and was listed as the primary author of an academic paper while still in secondary school, even though she had only completed a two-week internship at the lab where the research in question was conducted (which happened to be run by a friend of her mother's). Mr Cho, who has apologised to young people for causing "disappointment" but has said he will not resign, has been charged by Mr Moon with reforming the prosecutors' office, to make sure it does not go soft on well-connected crooks.

For many South Koreans, the story carries echoes of the scandal that brought down Park Geun-hye, the previous president, whose closest confidante persuaded a university to change its admissions criteria to admit her daughter. Outraged students, in particular, have been protesting against Mr Cho's appointment. "I don't mind the system being competitive, but it's the hypocrisy that's so galling," says Lee Jong-bae, who is campaigning to reform university admissions. "They promised us a fair and equal society and instead we keep having these scandals that show us that privilege is passed on and you can never succeed unless your parents did." His disillusionment is typical: nearly two-thirds of South Koreans under the age of 30 believe that they are unlikely to move up the social ladder. Six years ago, it was less than half.

As bad as it seems

They have cause to be pessimistic. The social class of children is more closely tied to that of their parents in South Korea than in any other country in the OECD, according to a study published last year. Data from the education ministry show that the percentage of students who receive financial aid at the best universities in Seoul was barely half the national average, suggesting that a large majority of their students are from well-off families.

The problem is not exclusive to South Korea, says Lee Cheol-sung of Sogang University. "Privilege plays an important role in educational attainment everywhere." The recent revelation that some rich families in America had secured places for their children at prestigious universities through fraud and bribery caused widespread outrage. But such scandals prompt particular anger in South Korea, he argues, because of the country's rigid labour market, which offers few opportunities for those starting out. "It's a systemic problem—there are all these old people with high salaries who are impossible to get rid of, so, to keep paying them, firms avoid hiring young people or only give them irregular contracts."

The official youth unemployment rate reached 10.4% this summer. But that does not include those so discouraged that they have stopped looking for work, and those who undertook further studies to put off looking for a job. If these groups are taken into account, some economists reckon, the true unemployment rate for young people may be as high as 25%.

Mr Moon is trying hard to level the playing field. His government offers generous subsidies to companies that employ young workers, is encouraging employers to convert part-time contracts into regular jobs and pays a monthly stipend of 500,000 won ($420) to some youngsters from poor backgrounds who are unable to find work. It has banned discriminatory hiring practices, too, such as asking for parents' names and titles on application forms, and tightened rules for lawmakers who want to employ relatives.

The government is also drafting legislation to criminalise the hiring of ghostwriters or consultants to buff up university applications, a practice which for many epitomises the unfair advantages of the rich. Those who can afford it spend tens of thousands of dollars on such services. Such extravagant and blatant efforts to secure undue advantage in university applications are so common that they have become the subject of a popular television drama, “Sky Castle”. In one episode, a rich father buys a model pyramid to remind his sons of the structure of society. Some South Koreans say the show is so true to life they cannot bear to watch it. ■

More Mr Nice Guy

New Zealand tries to live up to its welcoming reputation

It will admit more African and Arab refugees—but still not that many

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"THEY ARE us," said Jacinda Ardern, New Zealand's prime minister, of the 51 Muslims, many of them immigrants, who were murdered by a white nationalist in Christchurch in March. She has positioned herself as a leader "with a bit of heart". So it was embarrassing that her centre-left government had kept a policy that all but excluded any refugees from Africa and the Middle East. The government has announced that it will amend the rules in question, which are "the very definition of discrimination", according to the immigration minister, Iain Lees-Galloway.

They were inherited from the conservative National Party, which surreptitiously ordained in 2009 that refugees from the Middle East and Africa could come to New Zealand only if they had relatives living there already. Few did, so their numbers dwindled, even though New Zealand technically allocated 28% of its total intake of refugees to the two regions. Over the past nine years it has accepted just 187 people from the entire continent of Africa—fewer than arrived in the single year before the policy came into force, according to Murdoch Stephens of Massey University.

Politicians had defended the policy on the basis that it gave priority to people from countries nearer to New Zealand. Over the past decade, 60% of refugees have come from Asia and the Pacific. But official documents show that the government was motivated by "broad security concerns" as well. The rules were racist and Islamophobic, says Guled Mire, an activist who campaigned against them.

Ms Ardern's Labour Party might have changed the rules sooner, but its populist coalition partner, New Zealand First, wanted to keep them. It has now been talked into raising the quotas for Africans and Middle Easterners to 15% of the total apiece. Ms Ardern's government is also lifting the cap on the total number of refugees New Zealand admits each year from 1,000 to 1,500.

Advocates for refugees say New Zealand should do more. Even relative to its population of 4.8m, the number of asylum-seekers it lets in is tiny. Australia, despite ferociously guarding its borders against unauthorised migrants arriving by boat, lets in close to 20,000 refugees through official channels annually—more than twice as many per person as New Zealand will under the new rules.

What is more, New Zealand has also resolved to show no quarter to "boat people"—even though no people-smuggling vessels have ever been discovered in its waters. In this year's "well-being" budget, the government allocated NZ$25m ($16m) to discouraging any from ever attempting the journey.

A DJ saved my life

Thailand takes unusual steps to improve sex education

It wants to bring down one of the highest teen-pregnancy rates in South-East Asia

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ONLY IN DESPERATE times do governments enlist the help of teenage disc jockeys. Thailand's ministry of social development must be in a panic: it has hired more than 500 of them. Its desperation stems from the teenage-pregnancy rate, which has risen even as the overall birth rate has dropped. Thailand has one of the highest teenage-pregnancy rates in South-East Asia (see chart). Hence the DJs, who will promote safe sex on the radio.

That is not the government's only initiative to stop teenagers becoming mums. It is also sending health-ministry officials to lecture students about "young love". It has added sex-education questions to standardised exams. And in 2016 it passed the Prevention and Solution of the Adolescent Pregnancy Problem Act, which gives all adolescents the right to free contraception. The goal is to slash the number of children born to teenagers by a third by 2026.

Supichaya Singhakasem, who had a baby at 18, says she received sex education at school in Bangkok, but it was unenlightening. (She attracted a large online following, of both fans and detractors, after posting photos of herself in school uniform holding her baby.) Her experience is typical: teachers tend to focus on anatomy and deliver clinical lectures rather than practical advice, says Beena Kuttiparambil, who works for the United Nations Children's Fund (UNICEF) in Thailand.

UNICEF favours online sex ed. Such schemes have raised awareness of the birds and the bees in Cambodia and Hong Kong. Thais are avid netizens, spending an improbable ten hours online each day, according to the government. Digital platforms provide direct access to teenagers, rather than relying on parents and teachers, who are often reluctant to discuss sex.

UNICEF has launched Love Care Station, a website through which young people can seek anonymous, one-on-one advice on sexual health. Several companies have released apps that provide some sort of sex ed, too. Some are explicitly informative; others are cloaked in entertainment. The premise of Judies, a Thai video game downloaded more than 720,000 times, is that condoms are life-saving shields for humans against aliens.

Thailand was once considered a paragon of sexual education. In the 1990s it stemmed an incipient epidemic of HIV. Nearly everyone can get hold of contraception, but 12% of 15-19-year-olds cannot.

Prayuth Chan-ocha, the coup-leader-turned-prime minister, supported the adolescent-pregnancy law. Yet he believes that equality for women would "make Thai society deteriorate" and has compared scantily clad females to unwrappedsweets. Earlier this year a small political party wanted a Netflix show, "Sex Education", to be banned. The party reasoned that it is safe for Western teenagers to watch such lewdness, but that Thailand's young are at greater risk, because they "haven't learnt the topic correctly". ■

A tale of two cities

Singapore stands to gain from Hong Kong's troubles

But the island-state has some awkward parallels to contemplate

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WHATEVER VIEW is taken on the mayhem in Hong Kong—righteous rebellion or obscene rioting—it is a disaster for the territory's economy. And if one place stands to benefit from Hong Kong's troubles, it is that other self-governing, Chinese-majority, financial, commercial and shipping hub in East Asia: Singapore.

The two places have always seemed to have much in common. Both are commerce-friendly. Thanks to light-touch regulation and efficient, uncorrupt bureaucracies, Singapore comes second and Hong Kong fourth in the World Bank's ranking of 190 countries for the ease of doing business. Both cities once prided themselves on their adherence to the rule of law and the low level of violence on the streets.

On all these counts, the events of the past four months have dented Hong Kong's reputation. Many businesses have been forced into unscheduled closures because mass demonstrations—or in recent days, the suspension of much of its metro system—have kept staff and customers away. As protests have degenerated into street battles, tear-gas, petrol bombs and vandalism have made some parts of town physically hazardous. Hong Kong has sometimes looked closer to anarchy than to the rule of law.

Some data are already available indicating the short-term impact of the unrest. In August the number of tourists entering Hong Kong fell by 39% overall compared with the same month last year. The number of mainland-Chinese tourists fell by 42%. Singapore, by contrast, saw an annual increase in tourists from China of 4% in August. Mainland China accounts for 21% of tourists visiting Singapore, but nearly 80% of visitors to Hong Kong.

Some evidence has emerged that people are shifting their money as well as their holidays. An analysis by Goldman Sachs of data for August showed a modest net outflow from bank accounts denominated in Hong Kong dollars, and an inflow into Singapore-dollar accounts. The bank estimated that up to $4bn of deposits may have flowed to Singapore from Hong Kong.

The rich in Hong Kong and the rest of China have long found Singapore attractive. They like to invest in property there, sometimes as a possible bolthole. Since the beginning of 2017, mainland Chinese buyers have acquired more than 1,000 private homes in Singapore, despite a 20% stamp duty charged to foreigners.

The bigger picture, even before the recent upheaval, has been of a gradual displacement of institutional financial activity from Hong Kong to Singapore. Hong Kong's financial industry suffers from competition both from mainland Chinese cities, notably Shanghai and Shenzhen, which are not hampered by its tormented relationship with the central government, and from other big centres in the region that are fully outside China, such as Singapore, Sydney and Tokyo.

Already, Singapore has a lead in asset-management, with $3.4trn under management at the end of 2018 compared with $3.1trn in Hong Kong. Even (or perhaps especially) for wealthy Chinese who have managed to move capital out of the mainland, Hong Kong may appear uncomfortably within China's reach. The worry is that Hong Kong will lose its edge in other activities, too, such as investment banking and equities trading. The withdrawal by Hong Kong's stock exchange on October 8th of its takeover bid for the London Stock Exchange was symptomatic of the strategic bind in which it finds itself. The danger will intensify if Hong Kong's present troubles inject lasting poison into its relations with China, which is a big source not only of customers and capital, but also commercial perks, such as the special trading link between the stockmarkets of Hong Kong and Shanghai.

Singapore and Hong Kong have long offered rival political models. Singapore, put crudely, is an illiberal democracy; Hong Kong a liberal autocracy. One has a freely elected government but strict laws limiting, for example, public protest and some political debate. The other has a chief executive "elected" by a few hundred officials, a partially elected and weak legislature, but robust traditions of freedom of speech and assembly. Singapore has been pointing, discreetly, to its relative stability. On October 4th the foreign ministry advised Singaporeans to "defer non-essential travel" to Hong Kong.

The *Straits Times*, a pro-government paper, would have felt no embarrassment about its story on a ban on rallies in Singapore in support of the protesters in Hong Kong, on a day of solidarity demonstrations in a number of cities worldwide. The headline read, "Anti-totalitarianism day: No permits for Singapore assemblies". One protester in Hong Kong, apparently a Singaporean, sparked a fiery debate on social media with a photo of himself holding a placard reading: "Don't let Hong Kong be like Singapore, where people live in fear."

Pro-government commentators in Singapore were quick to condemn him. Even many critics of the government thought he was exaggerating. But, hard though it is to gauge public opinion, a survey in July suggested that 75% of Singaporeans sympathised with the protesters in Hong Kong.

Writing last month in the *Hong Kong Free Press*, an online journal, Kirsten Han, an independent Singaporean journalist, guessed that the percentage has probably fallen sharply since then. Leslie Fong, a former editor of the *Straits Times*, wrote in the *South China Morning Post*, a Hong Kong paper, of the sorrow many of his compatriots feel "at the sad spectacle of a city smothering itself in full global view".

Many Singaporeans, Ms Han noted, believe the argument that Hong Kong's leaders have been making, that the protests are really about economic gripes, such as unaffordable housing, rather than politics. That ignores the genuine frustration of many in Hong Kong at a political system in which only certain voices seem to be heard. It is a frustration that some in Singapore, despite its very different system, also feel. ■

Banyan

The struggle of Asian women not to be abused

The speaker of Nepal's parliament has been arrested. Few other powerful Asian men are held to account

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IN SEPTEMBER A woman called police to tell them that the Speaker of Nepal's parliament, Krishna Bahadur Mahara, had just drunkenly assaulted her in her flat. When, according to local media reports, she later withdrew her allegation in the face of threats and pressure, everything seemed to be following the usual South Asian script. Men, especially powerful ones, rarely have to answer for their actions. Then the UN and foreign embassies put out a statement urging the government to take a stand on violence against women. Within days, Mr Mahara had stepped down. This week the police arrested him.

Whether this case will count as progress in the abysmal treatment of women in his part of the world will not be clear for some time. Violence against women need not hold back a man going places. A tally in India last year found 48 members of parliament or state assemblies accused or convicted of violent crimes against females. They included members of parties run by women.

In South Asia the mistreatment starts in the womb, with the selective abortion of girls. It continues after birth. Girls are likelier to die before the age of five or drop out of school. Many marry before they are adults or are beaten by their partners. In the five years to 2015 over 40,000 Indian women died in rows over dowries. That is more than the combined deaths over the same period from conflict in Kashmir, insurrection in the north-east and the Naxalite rebellion.

Laws and social attitudes have evolved, but not enough. The brutal gang-rape and murder in 2012 of a student in Delhi galvanised India's middle classes, but the rape of women and girls in villages attracts little attention.

Most sex crimes everywhere go unreported, so all statistics about them should be treated with caution. But for what it is worth, the UN says Asia and the Pacific have the worst rates of violence against women, with two in three women experiencing it in their lifetime.

Discrimination is rampant. This year Indonesia's Supreme Court found a former teacher guilty of "violating decency" by making a lewd recording. She had taped her boss making sexually explicit comments to her, hoping to prove that he was harassing her. Her ordeal ended only with a presidential pardon. Female police officers and army recruits are sometimes required to submit to outrageous physical inspections to "prove" their virginity.

In China abusive marriages are common, and hard to escape (see article). Activists against harassment are themselves harassed by the state. In Cambodia women's safety is not helped by the media. A third of television dramas depict physical, sexual or emotional abuse of women. Such problems are not confined to poor countries. South Korea's K-pop industry has been roiled by a series of cases in which women were drugged and raped. Then there are the thousands of spycams detected each year in women's lavatories and changing rooms, for which hardly anyone is prosecuted. Recently, a hospital worker killed herself after discovering that a video of her changing into her scrubs had been widely distributed. Reported sex crimes, including child rape, are up sharply in Bangladesh, though this might simply reflect a greater willingness to report such things.

Across Asia women are finding a voice. In Bangladesh a #MeToo-style movement is growing in the country's garment factories (though the movement's leaders still struggle to convince victims to file complaints with the police). In January lawyers in Pakistan launched an online portal called Ab Aur Nahin ("Time's up") offering pro bono help for victims of harassment.

In the Philippines women have taken to social media and the streets to complain about President Rodrigo Duterte's frequent jokes about rape and groping—a rare case of people standing up to the strongman. And in South Korea more women are speaking up against powerful, violent men in government, business and entertainment.

They are also, in a "corset-free" movement, challenging the country's rigid beauty standards, exemplified by employers' expectation that women should be heavily made-up at work and, at some firms, not even wear glasses. The emergence in South Korea of an aggressive, mainly online force of young men who believe that such movements are proof of the oppression of men is an indication of how long and how hard the battle for security, let alone equality, will be for Asian women.

Domestic violence
No escape

No escape

In China, courts deny women divorces in the name of "social harmony"

Even if their husbands beat them

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THE BEATINGS were so brutal that Dong Fang (not her real name) was left partially deaf, and her daughter needed three stitches in her hand. Not long ago, China's courts would probably have ignored such an assault, because the attacker was both Ms Dong's husband and the girl's father. Luckily for the victims, however, the country had recently enacted a domestic-violence bill. This enabled Ms Dong to obtain a restraining order from a court in Chengdu, the south-western city where she lives. Local media praised this as an example of the new law in action. Later came the shock. The same court rejected Ms Dong's petition for divorce. It reasoned that the marriage was still on a "very firm" foundation and the husband should be given "a chance", the judge told a newspaper in Beijing.

Ms Dong's plight is common. The law on domestic violence, which took effect in March 2016, aims to protect women. But it is also intended to "promote family harmony and social stability". Judges often consider this more important than women's well-being. A study of 150,000 divorce cases filed between 2009 and September 2016, more than two-thirds of them by women, found the new law had done little to help female victims. When people file their first petition for divorce (many have several tries), judges are more likely to agree if the plaintiff is a man. They are usually unswayed by claims of violence. "For abused women, courts are the problem, not the solution," says the study's author, Ethan Michelson of Indiana University.

China's leader, Xi Jinping, is a champion of tradition. He describes families as the "cells" of society (mention of Mr Xi's divorce from his first wife in 1982, after only three years of marriage, is taboo). Officials fear those cells are decaying as marriage rates fall and divorce rates soar. Last year more than 10m couples tied the knot and nearly 4.5m undid it. This is partly because, for many people, divorce has become much easier. Before 2003 it needed approval from an employer or community leader. Now, if both partners agree, they can quickly unmarry at a local civil-affairs bureau.

But the one-in-six cases that end up in court are complicated. Last year two-thirds of them were rejected at the first hearing. Domestic violence has been a legal ground for divorce and damages since 2001. But abused spouses often remain trapped. Sometimes judges refuse to approve divorces for the sake of their own jobs. Performance targets often involve finishing a certain number of cases. As citizens become more litigious, caseloads are growing fast. For judges, saying no to a divorce is usually quicker than arranging one.

Some judges also fear that the anger of an aggrieved party may lead to violence. So when a man threatens to murder his wife—or the judge—if a divorce goes through, courts often prefer to keep the marriage together. Poor odds of success in highly contentious divorce cases dissuade women from attempting divorce in the first place, says Leta Hong Fincher, the author of "Leftover Women: The Resurgence of Gender Inequality in China".

Possibly helped by public attention to her case, Ms Dong eventually got her divorce in June, two years after the beating that temporarily damaged her hearing. "Whether or not to permit a divorce should be based on whether feelings between husband and wife have been ruptured," the court said. In this case, it ruled, they had been. The court said each should have one of the couple's two houses, and compensate the other for any difference in value.

But in another twist the judge refused Ms Dong's application for 50,000 yuan ($7,010) in damages from her ex-husband. The court agreed she had suffered violence, but not with "serious consequences".

Such rulings are common, says Xin He of the University of Hong Kong. Judges often allow a divorce while dismissing charges of domestic violence, thus allowing the husband to avoid any penalty. As a result, says Kwai Ng of the University of California San Diego, "the courts have become an unreliable guardian of the lawful rights and interests of women." Ms Dong still has some faith in the system: she has filed an appeal. She expects a ruling by January.

The passage of the domestic-violence law was a breakthrough. Activists had been campaigning for one for two decades. Even so, Mr He points out flaws. The bill does not treat domestic violence, including marital rape, as a criminal offence. Getting a restraining order requires strong proof that a threat is posed. The penalty for violators is light: a fine of up to 1,000 yuan or 15 days in jail. In the law's first 33 months, courts granted more than 60% of requests for such orders. But only 5,860 women applied for them, a tiny fraction of the number of victims. The state-backed All-China Women's Federation estimates that one in four wives in China suffers domestic abuse—probably an underestimate. Ms Dong, who is a university lecturer, believes her financial independence helped her. "Those who are weaker see no hope," she says. Online commentators on Ms Dong's case often argue that "to stay safe, don't marry and don't have children", says her lawyer.

Since Mr Xi came to power in 2012 he has stressed the importance of the rule of law. But he has also emphasised the judiciary's subordination to the Communist Party. So judges are inclined to interpret the law in ways that please it. In 2016 the supreme court instructed courts how to handle trials involving family matters. Its words echoed the party line: "The settlement of family disputes concerns not only the happiness of individuals and families, but also social harmony and stability and the advancement of civilisation."

Meanwhile Mr Xi has been waging a ruthless campaign against human-rights activists, including those campaigning for better protection of women. Though he has called for an end to "all forms of violence against women", he is not making it easy. ■

Emergency brake

A draconian law invoked by Hong Kong is unlikely to restore calm

But some protesters are rethinking their tactics

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"WE ARE INDEED in an occasion of serious danger," said Hong Kong's leader, Carrie Lam, when she announced her decision on October 4th to invoke the Emergency Regulations Ordinance, a colonial-era bill—disused for more than 50 years—allowing the government to impose sweeping curbs on civil liberties. Mrs Lam only announced one new restriction: a ban on the wearing of masks during protests. But thousands of demonstrators defied the edict. Widespread violence broke out, paralysing transport. A new cycle of escalation may have begun.

Mrs Lam's belief that the mask ban will have a "deterrent effect" may prove wrong. But her description of the problem was close to the mark. "Protesters' violence has been escalating and has reached a very alarming level in the past few days," she said. Indeed it has. On June 12th, shortly after the unrest began, young protesters wept after the police fired rubber bullets at them. They have since become battle-hardened (see Chaguan). Once they limited their targets to government buildings, spraying them with slogans and throwing stones and other projectiles at them. More recently they have been attacking businesses and bystanders who oppose their views. Once a café run by someone deemed pro-Communist would have been covered in Post-it notes. These days it might have its windows smashed.

Just a few days before announcing the mask ban, Mrs Lam had suggested she was aware that invoking the emergency bill might not work. She said she had to assess "whether such laws would backfire on an already chaotic society, or worsen our already damaged reputation in the international community." Her now-abandoned caution was well-founded. Within hours of her edict being issued, protesters (mostly masked) vented their anger on the territory's rail network, which they accuse of aiding police by shutting down stations to hinder demonstrators' movements. The protesters flooded some stations with water and lit fires in others. That night, for the first time in 40 years, the whole network was suspended, leaving many people stranded. Many stations stayed closed all weekend. Some remained shut even after Hong Kongers went back to work on October 8th after a long weekend.

It was not all mayhem. Tens of thousands of people marched peacefully, also wearing masks. Only a few dozen were arrested for donning them, suggesting that enforcement is a problem. Mrs Lam insists that she has "no plans" to invoke the emergency bill again, but many Hong Kongers believe she may be tempted to use it to declare a curfew or control the use of instant-messaging apps that are often used to organise protests. Such measures would be sure to provoke defiance.

But some residents wish protesters would change their tactics. They would like an end to the disruption of transport and the violence that makes it difficult for some people to leave home or go to work. The movement's extraordinary scale and persistence has relied on the tolerance shown by moderates towards radical action, including the throwing of petrol bombs. Recently, however, many moderates have been saying that the "frontline fighters" should back off. Some worry that more violence will give officials an excuse to postpone next month's district-council elections, in which the pro-democracy camp expects to do well. They also fear that it will erode overseas support for the protesters (such backing has infuriated many people in China; see article).

But some radicals are itching for trouble, including on October 16th when the Legislative Council will meet for the first time since July. There the government is expected to withdraw the draft bill that triggered the unrest, which would have allowed criminal suspects to be extradited to the Chinese mainland. But the legislature, dominated by pro-government politicians, is likely to endorse the face-mask ban. It will be another day of tension. ■

Chaguan

Tiananmen veterans view Hong Kong's crisis with fatalism

They have seen history made before, at a terrible price

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HAN DONGFANG learned the hard way that the Communist Party of China will shed blood to enforce its will. As an activist during the democracy protests of 1989, he stood in a rumour-swept Tiananmen Square in early June and assured fearful comrades that, as a former soldier turned railway electrician, he was sure that the People's Liberation Army would never shoot fellow Chinese. Still haunted by that mistake, he felt alarm in September 2014 at the sight of democracy activists from the Occupy Central movement blocking streets in Hong Kong, his home in exile. Hurrying to the Occupy protests, Mr Han sat beside the youngsters and urged them to see reason. Stop blocking traffic, he advised, you are giving the police, or worse, Chinese soldiers waiting unseen in their Hong Kong barracks, an excuse to attack.

Jump forward to 2019, and a new generation of radical activists is all but daring China's rulers to send troops onto Hong Kong's streets, and, by spilling blood, show China's true nature. Whether they are trampling the Chinese flag, vandalising metro stations, attacking policemen or brawling with gangsters loyal to the party, hard-core protesters have brought a furious, burn-it-all-down energy to a movement once notable for its moderation. The first big marches, in June, belonged to a more innocent age, when Hong Kongers strolled peacefully in their hundreds of thousands to oppose a law that would expose them to the mainland's justice system. Some sang hymns or collected water bottles for recycling.

Today, the risks of provoking those in power are greater than ever. Hong Kong's police officers—visibly exhausted and embittered after 17 weeks upholding the authority of the territory's despised political leaders—stand ready to club, tear-gas and arrest anyone they deem a threat, while repeatedly turning a blind eye to violence by pro-Communist thugs. Hong Kong's military garrison has been reinforced with thousands of soldiers and paramilitary police from the mainland, answerable to the hard men in Beijing.

Mr Han has much to lose. Hong Kong's Western-style freedoms have not just offered him a haven. They allow him to run China Labour Bulletin, an organisation that campaigns for the rights of workers on the mainland. Yet for all that, he finds himself rethinking his advice to Occupy protesters to remain moderate. "During Occupy, I felt my experience in Tiananmen Square counted," Mr Han says. He now thinks his words of caution were "just bullshit" and an arrogant, "dinosaur kind of thinking". He says today's youngsters are much wiser about the party than he was 30 years ago. When youngsters declare themselves proud Hong Kongers who feel nothing for China, they are using their city's political and civic freedoms to define themselves and deny their Chinese identity, he marvels. Turning-points in history are not always rational, or good, or bad, he ventures. They just are.

Mr Han's new fatalism is revealing, and reflects a wider shift in public opinion. Though recent acts of violence by protesters dismay many, polls suggest that Hong Kongers are angrier still with the police and government, whose job is to uphold order and the law impartially. In the meantime, even those who oppose radical actions by protesters concede that moderation has not brought many rewards. Asked how this confrontation may end, Mr Han says that, though it may sound cruel to some, "How it ends no longer matters. What matters is that it already began." Either China can offer real democratic reforms to Hong Kong, he says, or it can use force and risk a crisis that will shake China and its periphery.

The Reverend Chu Yiu-ming was in his 40s when he witnessed the murderous suppression of the Tiananmen protests. Five years ago Mr Chu, a Baptist minister from Chai Wan in eastern Hong Kong, preached non-violence and quoted Martin Luther King as he co-founded the Occupy movement. Convicted of public-order offences for his role in that, Mr Chu, 75, only escaped prison on grounds of his age and public service. In an interview at his church he talks of sleepless nights worrying about youngsters on the streets today who are being arrested on charges of rioting, which could land them in prison for ten years. Yet he says that even "frontline fighters", as more radical protesters are known, enjoy support from across society. "When people face a life-threatening situation, it is natural to think of self-defence," he says. Sometimes sacrifices are needed to defend freedoms, he adds, recalling the church's past support of uprisings against dictatorships in the Philippines, East Germany and Poland. Hong Kongers are not trying to topple the party, he believes. They just want "one country, two systems" to mean that Hong Kong's government is answerable to its people. Asked if he fears another Tiananmen, the priest quotes a message from an intermediary familiar with President Xi Jinping's plans for Hong Kong: "No bloodshed, no compromises".

If accurate, that message suggests the party is preparing for a war of attrition. Sadly for China's rulers, the situation may be too unstable for that. Today's levels of police violence and political repression disgust many Hong Kongers, but are not brutal enough to deter protesters. Put another way, the crisis must either get better quickly thanks to bold government concessions, or much worse.

Hong Kong is never going back to how it was

Wang Dan, who was a student leader on Tiananmen, knows which outcome he expects. Reached in Washington where he now lives, he calls himself "extremely pessimistic". Hong Kongers are asking for democracy, a demand which party leaders will reject, Mr Wang notes. “Both sides do not have space to yield. I can’t see a possible solution.” Beyond the ranks of the most radical protesters, a striking number of youngsters express confidence that China would never dare set troops on them, because the costs to the country’s reputation would be too high. Veterans of 1989 know better. That is why their support for Hong Kong’s young sounds more like a tribute to courage than a prediction of success. The old-timers have seen history made before, and it was cruel. ■

Turkey invades Syria
Green light, go

Green light, go

Turkey launches an attack on northern Syria

The long-feared clash will have consequences across the Middle East

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AFTER YEARS of threats, it took Turkey mere days to strike. On October 9th the Turkish armed forces began bombing parts of north-east Syria. Controlled by a Kurdish-led militia, the region had been an American protectorate until just days before, when President Donald Trump abruptly decided to abandon it. Turkish troops are now moving into Syrian towns, backed by local rebels under their command. The nascent offensive will have implications far beyond Turkey's intended 30-kilometre-deep "safe zone" inside Syria. It will displace hundreds of thousands of people, complicate an already-chaotic war and offer the jihadists of Islamic State (IS) a chance to regroup.

President Recep Tayyip Erdogan of Turkey says his aim is "to destroy the terror corridor which is trying to be established on our southern border". In other words, he wants to oust the Kurds from their Syrian statelet. The main Kurdish force, called the People's Protection Units, or YPG, gained control of the area while fighting with America against IS. That created an intolerable situation for Turkey, because the YPG has close ties with the Kurdistan Workers' Party (PKK), a separatist group that has fought the Turkish army for 35 years.

As Turkey advances, the fighting will probably grow bloodier. Civilians have begun fleeing towns under bombardment. The incursion could displace many of the 750,000 people living along the border. But Kurdish fighters deprived of American support are unlikely to want open conflict with the larger Turkish army. The YPG is already talking of cutting a deal with Bashar al-Assad, Syria's dictator, that might see them relinquish some autonomy in exchange for the regime's protection.

The fighting risks benefiting IS, which has been kicked off the territory it once held, but which is resurgent, says the Pentagon. Operations against the jihadists have reportedly stopped. The Kurds, reasonably, say they have other priorities. They are still holding tens of thousands of IS detainees and their families in camps like Al-Hol, home to some 70,000 people who live in increasingly desperate and unsafe conditions. America says the IS prisoners will become the responsibility of Turkey. But Mr Erdogan's proposed safe zone does not include Al-Hol. And Turkey does not have a good record when it comes to jihadists. Many first reached Syria by taking advantage of lax Turkish border controls. On October 10th President Donald Trump tweeted that America had taken custody of the most notorious prisoners and moved them out of the country—a tacit admission that Turkey was not up to the job of holding them.

In general, though, Mr Trump has cleared the way for Turkey. On October 6th he announced that he was withdrawing the 100 or so American troops in northernmost Syria. They had been in the awkward position of standing between a NATO ally, Turkey, and a reliable partner, the YPG. The open-ended deployment of American troops in Syria (who, in total, number about 1,000) frustrates Mr Trump. He tried to withdraw all of them in December. That decision (announced, naturally, on Twitter) prompted his defence secretary, James Mattis, to resign.

His equally abrupt decision this month blindsided American officers, to say nothing of the Kurds, and was followed by more erratic behaviour. Mr Trump argued America owed the Kurds no lasting loyalty since they "didn't help us in the second world war". In fact, the Kurds fought under allied command in Albania and Greece. As for Turkey, in the space of 48 hours he all but endorsed the Turkish operation, threatened Turkey with sanctions should it cross his unspecified red lines and then praised its contribution to NATO.

The Pentagon worries about how the limited withdrawal in the north will affect the rest of its deployment in Syria. As the Turkish army advances, backed by rebel groups that are not terribly fond of America, it will grow ever harder to protect American troops stationed elsewhere. What began as a limited pullout may end with America abandoning all its positions.

In a rare split with the president, Republican lawmakers joined their Democratic colleagues to condemn the move. Lindsey Graham, a Republican senator close to Mr Trump, introduced a bill to sanction Turkey's leaders, armed forces and energy sector until it withdraws troops from Syria. Turkish officials who thought they had a deal with Mr Trump were left puzzled and fuming. "We don't see only a single US any more, but many voices coming from different interest groups," says Mesut Hakki Casin, an adviser to Mr Erdogan.

Apart from Turkey's own Kurds, and some liberals, most Turks are likely to cheer the offensive. Opposition parties tend to defer to Mr Erdogan whenever he invokes national security. He suffered a setback earlier this year when his Justice and Development party lost control of Turkey's biggest cities in local elections. Success in Syria could offset the damage.

Most Turks are also likely to back Mr Erdogan's plan to flood the areas now under Kurdish control with some of the 3.6m Syrian refugees living in Turkey. Opinion polls show mounting levels of resentment towards the guests. Since the start of the year, Turkey has sent thousands of them back to Syria. Mr Erdogan says the 30km "peace corridor" his army plans to create would be a magnet for up to 2m refugees. This is either delusional or a euphemism for forced resettlement. Sending mostly Arab refugees to a region populated mainly by Kurds risks fanning tensions and future conflict.

On paper the Turkish offensive seems simple enough, an attempt to deny territory to a hated foe. But capturing and holding hundreds of kilometres of territory will be a costly and perhaps bloody slog. The fighting could force a flood of refugees into Iraq, which has its own problems. And by giving Syrian rebels a new foothold in the north-east, it will complicate matters elsewhere in Syria, where Russia and Iran are trying to help Mr Assad consolidate control. Almost nine years into a conflict that reshaped the Middle East, there is still no end in sight. ■

Streets of fury

Iraq's government seems powerless to halt protests in the Shia heartland

More than 100 people have been killed, as economic and political frustrations erupt

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MILLIONS OF SHIAS will walk to the holy city of Karbala this month, ending the annual mourning period for Hussein, grandson of the Prophet Muhammad, who was killed 14 centuries ago. But Iraqi pilgrims will also wail for the 110 people, all Shia, whom their government has killed during recent protests. The authorities have imposed curfews, switched off the internet and arrested hundreds. Nevertheless, many Iraqis say that after Karbala they will walk to Baghdad, 105km away, to confront their rulers.

In recent years the government has been buffeted by uprisings in Sunni areas and a separatist push by the Kurds. But unrest in the Shia south, the government's heartland, could prove its greatest challenge. What began as small rallies by unemployed graduates and unhappy street vendors has mushroomed. The government's violent response has brought thousands onto the streets. They complain, as ever, of too few jobs, poor services and rampant corruption. Western diplomats wonder whether Adel Abdul-Mahdi, the 77-year-old prime minister, in office only for one year, can regain control.

There have been big protests before. In 2016 thousands of Iraqis stormed the then-fortified Green Zone, the seat of government in Baghdad, demanding economic and political reforms. But little progress has been made. Despite increased oil revenues and relative peace after years of civil war, the government has been unable to deal with high poverty rates or with youth unemployment of around 25%. War-torn areas remain in ruins. In recent days Mr Abdul-Mahdi has unveiled several measures, such as land distributions and increased welfare payments. He vows to tackle corruption and punish those responsible for the violence. But few Iraqis believe he will keep his promises.

The problem, in part, is the design of the government. After toppling Saddam Hussein, Iraq's former dictator, in 2003, America wanted to prevent another strongman from emerging. But the new set-up has allowed parties based on ethnicity and sect to dominate. They dish out government jobs to loyalists and treat ministries like cash machines. The prime minister, himself beholden to the Shia factions that appointed him, is in no position to take on his colleagues. Protesters accuse politicians of plundering Iraq's oil wealth. "It goes on mansions for their families in London," says a demonstrator in Hilla, south of Baghdad. Ironically, many are now calling for a return to strongman rule.

Economic and political frustrations are at the heart of the protests, but anger has also been directed at Iran, which is seen as having undue influence over the government. The dismissal of Abdul-Wahab al-Saadi, a popular army commander, brought many of his southern tribesmen out in protest. They believe he was ousted for trying to root out corruption in the army, particularly among Shia militia groups with close ties to Iran. Some of those same groups are now thought to be leading the violent response to the protests. "Out, out Iran. Set our country free," chant the protesters, some waving placards with Mr Saadi's face.

America is making little effort to counter Iranian influence. The State Department evacuated hundreds of diplomats in May, after receiving intelligence that Iran (or its proxies) might attack American interests in the region. It accelerated the pullout in June, after attacks on a site used by international oil companies and on Iraqi bases where American troops are stationed. Once the world's largest, America's embassy in Baghdad now has just over a dozen diplomats, says a foreign observer. They rarely leave the compound.

In the past, Shia protesters listened to the clergy in Najaf, a holy city in the south. But Grand Ayatollah Ali al-Sistani, the chief cleric, is losing his authority as arbiter between the government and the masses. His Friday sermons appealing for moderation on all sides meet with derision. "The clergy aren't siding with the people," says a protester in Basra. "They're living on government money." Muqtada al-Sadr, a firebrand cleric who previously spoke for the dispossessed, also appears to be losing his sway. His nationalist party, Sairoun ("Marching to Reform"), won the most seats in parliamentary elections last year. But since joining the government Mr Sadr has spent much of his time in Iran. Protesters say he has been co-opted.

Officials admit that they are running out of options. "There's no magic solution," says Mr Abdul-Mahdi. Protesters throw Molotov cocktails and torch the branches of Shia political parties. Officials say they have come under fire. Some talk ominously of Iraq going the way of Syria, where protests descended into civil war, and where the government is beholden to Iranian-backed Shia militias. Iraq's young democracy, no stranger to tumult, may be facing its most dangerous moment yet. ■

War wounds

A violent election in Mozambique threatens a hard-won peace

Conflicts old and new have dashed hopes of a free, fair and peaceful vote

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ON OCTOBER 7TH Anastácio Matavele left a training session for election observers in Xai-Xai, the capital of Gaza province in southern Mozambique. Matavele, an experienced observer, was chased in his car by men allegedly belonging to a specialist police unit, who then shot and killed him. Authorities were already struggling to explain how the electoral roll in Gaza, a stronghold of FRELIMO, the ruling party, came to have 300,000 more names on it than there are adults in the province. Now they must explain whether the state murdered a warden of Mozambican democracy.

Matavele's death is just the latest cause for concern ahead of elections on October 15th. These are the sixth presidential and parliamentary votes since the end of the civil war, which ran from 1977 to 1992. They will be among the most violent, says Zenaida Machado of Human Rights Watch, an NGO. Campaigning is taking place against the backdrop of two conflicts: one old, the other relatively new.

The old is between FRELIMO and RENAMO, former guerrilla fighters who are now the main opposition party. After 1992 the end of civil war gave way to a mostly peaceful impasse, whereby FRELIMO kept control of the state, which it has persistently looted, while leaving RENAMO with enough support and fighters to retain influence. But in 2013-14, and again in 2015-16, RENAMO resumed attacks so as to extract more concessions from the ruling party.

A peace deal was signed between the two sides in August. In exchange for laying down its arms RENAMO received pledges of jobs and pensions for its ageing fighters, as well as an agreement to devolve power to provinces, whose governors will henceforth be indirectly elected, rather than appointed by the president. Negotiators hoped that the deal would be the prelude to peaceful elections.

That has proved naive. Since RENAMO gave it a scare in elections in 1999, FRELIMO has been accused of rigging votes, including those it might have won anyway. Although President Filipe Nyusi will retain power in the presidential race, elections to the national assembly will be close. RENAMO is hoping for victory in five of the ten provincial votes. FRELIMO's share of the vote has slipped in the past four elections (see chart); many expect it to use any means necessary to slow its decline.

Evidence of chicanery is growing. Opposition presidential candidates have been stopped from holding rallies in some areas. Thousands of election observers have been prevented from registering. Victims of Cyclone Idai, which struck in March, have reportedly been told that if they vote for the opposition they will not get food aid. Dozens of journalists and pro-democracy activists have been harassed, assaulted and detained in recent years. Some, like Matavele, have been killed.

Then there is the second, newer conflict looming over the ballot. In Cabo Delgado, a province in the far north-east, a poorly understood Islamist-linked insurgency has terrorised local people since 2017. It has also led to an influx of private security firms to protect the installations that will tap vast offshore reserves of natural gas. This year 184 people have died in attacks, estimates Jasmine Opperman, an analyst.

Mr Nyusi claims the situation is under control. It is not. Violence has increased since election campaigning officially began on August 31st. On September 23rd ten people were killed in a single attack, which also saw the local FRELIMO office set on fire. The army is "totally ill-equipped", says Ms Opperman.

The discovery of gas ought to be great news for Mozambicans, 62% of whom live on less than $1.90 per day (adjusted for purchasing power). But there is nothing in FRELIMO's record to suggest that the proceeds will be evenly shared. Nor is there much sign of peaceful democracy. ■

Money to burn

Kenya's demonetisation was unexpectedly orderly

Even if it led to squabbles over a dead president's picture

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WHEN KENYA announced in June that it would issue new 1,000 shilling ($10) notes and destroy the old ones to fight corruption, many predicted chaos. India's efforts to do the same by "demonetising" rupees in 2016 led to riots, deaths and a dent in economic growth.

Few doubted the need for Kenya to do something: corruption and tax evasion are pervasive. Tax revenue as a share of GDP has slipped steadily since 2014 to less than 16%, which is less than half of the average of countries in the OECD. The central bank hoped that by abolishing the old notes it would flush out criminals and well-heeled tax dodgers when they brought out large sums of hidden cash to exchange for the new notes.

But critics fretted that the plan would hurt the poor, many of whom live deep in the countryside, and the millions of Kenyans who do not have bank accounts. "My aunties and grandma in the village have had challenges trying to get the new notes," says Peter Ndegwa, a taxi driver in Nairobi. "They've been conned by being issued fake currency." Traders were also hit when businesses in Uganda and Tanzania sniffed at Kenyan notes.

Even their design caused controversy. Activists took the central bank to court, arguing the notes were unconstitutional because they featured an image of Jomo Kenyatta, Kenya's first president and the father of the current president, Uhuru. This seemed to violate a constitutional ban on banknotes showing the "portrait of any individual". After a review of dictionary definitions the court ruled that since the image showed his feet it was clearly a sculpture and not a portrait, which would have shown him only from the "bust or head upwards".

At least Kenya learned from India by giving people four months to change their money (in India the old bills became invalid overnight and people had just 50 days to exchange old bills for new). Yet this may also have allowed time for crooks to launder their money. Many rushed to buy dollars. Others handed over wads of cash for new cars. By the time the deadline had passed, the authorities were able to identify only a few thousand suspicious transactions for further investigation.

The central bank declared a success, saying that 96% of the old notes had been handed in. But teething pains continue. "The new notes don't fit in the parking meters," grumbles Anstes Agnew, a visitor from Rwanda who got stuck in the airport garage. "You have to go on a hunt and hoard the old notes."

Catch me if you can

African kleptocrats are finding it tougher to stash cash in the West

The days of brazen looting and laundering have passed

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LIGHT-FINGERED tyrants are looking back wistfully. In past decades they could stash their illicit wealth in the West. Friendly lawyers, banks and middlemen were on hand to park the loot. Sani Abacha, the military dictator who ran Nigeria in the 1990s, deposited billions of dollars in banks across the rich world, no questions asked. Western governments often seemed equally unfussed. Valéry Giscard d'Estaing, a former president of France, attended soirées in chateaux owned by the late Emperor Jean-Bedel Bokassa of Central Africa. Mr Bokassa would slip his guest diamonds to thank him for France's support.

Such brazenness is becoming a bit harder to get away with. Anti-corruption campaigners and muckraking journalists have busied themselves trying to uncover stolen assets. Western governments, tired of seeing aid money stolen, have toughened up money-laundering and bribery laws.

On September 29th Swiss authorities auctioned a fleet of sports cars seized from Teodorin Obiang, son and heir apparent to the president of Equatorial Guinea. The $27m raised is to be returned to Mr Obiang's benighted people. Days earlier San Marino confiscated €19m ($21m) from accounts linked to Denis Sassou Nguesso, the president of Congo-Brazzaville.

Yet so much has been pilfered from Africa that tracking it all is tricky. Chatham House, a British think-tank, estimates that $582bn has been stolen from Nigeria alone since it won independence in 1960. Britain's International Corruption Unit says its investigations have led to the confiscation of £76m ($117m) in laundered loot since 2006. Another £791m has been frozen worldwide thanks to its work. Yet that barely makes a dent in the £100bn of illicit funds which Steve Goodrich at Transparency International, a watchdog, reckons enters Britain every year. "Seizures are still the exception," says Jason Sharman, an expert in international corruption at Cambridge University. "Dirty money still gets through most of the time."

The best way to hide and move stolen wealth is to set up a raft of anonymous shell companies and bank accounts. Questionable payments linked to Mr Sassou Nguesso's son passed through Cyprus, Poland, Portugal, Spain and Switzerland, Global Witness, another watchdog, reported in August. The EU is trying to make this sort of thing harder by forcing member states to publish registers disclosing the beneficial owners of companies.

Britain has introduced another innovation. Unexplained Wealth Orders allow courts to order "politically exposed persons" to explain why their assets are so much larger than their salaries back home. The first was issued last year.

Yet tough laws do not work unless everyone imposes them. "If there is a gap, then the money-launderers will find it," says Max Heywood, Transparency International's global advocacy co-ordinator.

Willing and effective implementation is vital. Some surprising places, such as Switzerland and Jersey, have grown more robust in this regard. But America leads the way. The Kleptocracy Asset Recovery Initiative at the Department of Justice has seized stolen loot not just in America, but abroad. "The US is aggressive in enforcement," says Matthew Axelrod, a former DoJ official now at Linklaters, a law firm. "Penalties are very high and prosecutors are insulated from political interference."

Europe lags behind. Its law-enforcement agencies are often under-resourced. Investigators struggle when dirty money is held in several countries. Britain has spearheaded the International Anti-corruption Co-ordination Centre, created in 2017. Its head, Rupert Broad, says pooling intelligence has led to the arrest of five senior officials in four African states.

The most important thing, campaigners say, is to take steps to stop dirty money arriving in the first place. Banks are becoming better at reporting dodgy deposits. Purveyors of luxury goods are less alert. Boat dealers in the Netherlands are supposed to flag suspicious purchases. But of 40,959 suspicious-activity reports to Dutch authorities in 2015, just three came from yacht-dealers, Transparency found.

African states also complain that little of what is recovered is ever sent back. America, Britain and Switzerland have had some success. More than $1bn seized from Mr Abacha's bank accounts has been returned. But many African states have not helped their cause, often because thieving politicians are still in charge. When Switzerland returned $500m of Mr Abacha's money, most of it disappeared again. The World Bank has programmes to guard against such things, but some Western states remain wary, and rightly so.

James Ibori, a former governor of Nigeria's Delta State, served a prison sentence in Britain after admitting to plundering $79m from the public purse. His lawyers have managed to frustrate efforts to repatriate most of the funds frozen in his British bank accounts. Displaying a cheerful shamelessness, Mr Ibori is again active in Nigerian politics. In August Ifeanyi Okowa, the state's present governor, called Mr Ibori "a true patriot" and praised him for his "uncompromising posture on…good governance". There are surely better ways of showing that Africa is doing its bit than heaping plaudits on a felon. ■

Poland
PiS at the polls

PiS at the polls

In Poland, big handouts and gay-bashing win votes

The ruling Law and Justice party looks unstoppable

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POLAND HAS a president and a prime minister. But Jaroslaw Kaczynski, the leader of the nationalist Law and Justice (PiS) party, is its true ruler. From party headquarters on Warsaw's Nowogrodzka, above a pool club, PiS has moved Poland in a strikingly illiberal direction since coming to power in 2015. At parliamentary elections on October 13th, PiS is offering voters lavish handouts, social conservatism and what Mr Kaczynski calls the fight for "Polish dignity". Liberals loathe the party's tactics and much of what it stands for, but polls suggest that PiS is on track for a remarkable re-election win.

Four years ago the party took Poland by storm. It defeated the centrist Civic Platform, which had governed since 2007, and became the first party to be able to govern the country without the need for a coalition since the overthrow of communism in 1989. Within weeks, it had moved to place the public television broadcaster and the constitutional tribunal in the hands of sympathisers, triggering a lengthy dispute with the European Commission over the rule of law. Later, it tried to overhaul the Supreme Court by lowering the retirement age for its judges, forcing around one-third of them to retire early (under pressure from the EU, this change was later reversed). Some of PiS's changes echo ones introduced in Hungary by its prime minister, Viktor Orban, who shares its disdain for EU restraints. What sets Poland apart from other countries is the "comprehensiveness and cumulative effect of the ways in which liberal democracy is being undone", argues Wojciech Sadurski, of the University of Sydney, in a new book "Poland's Constitutional Breakdown".

Many Poles don't much care. PiS has successfully appealed to people who feel left behind by economic and social changes since 1989, especially outside big cities. After coming to power, it lowered the retirement age, then 67, to 65 for men and 60 for women, despite a rapidly greying population. It introduced a monthly handout to parents of 500 zloty ($127) per child after the first, extended to all children this summer. In the run-up to the elections, it has dished out money in all directions, including a one-off extra pension payment for the elderly, exempting workers up to the age of 26 from income tax and, from October 1st, lowering the income tax rate from 18% to 17%. It promises almost to double the minimum wage if re-elected. The party "might not be a knight on a white horse", but it is working hard, says the narrator in a PiS campaign video aimed at young voters, which contains an uncharacteristic reference to Tinder, an online dating app.

Uncharacteristic because the party also presents itself as the protector of the traditional Polish family. A future opposition government would be dominated by forces that want "the radical destruction of the moral and cultural order" in Poland, warned Mr Kaczynski (pictured) in an interview with a conservative television channel owned by a Roman Catholic priest, on October 2nd. Portraying refugees from the Middle East as a danger to national security helped PiS win the election in 2015. This time, Mr Kaczynski has identified a new threat: an "attack on the family" by gay people. Backed by the Roman Catholic church, its traditional ally, PiS has tapped into conservative attitudes, especially opposition to adoption by same-sex couples. Homophobic rhetoric has surged. A pride march in the eastern city of Bialystok on July 20th was attacked by thugs who threw stones, firecrackers and bottles.

The opposition has struggled to respond. Three-quarters of Poles oppose gay adoption, polls suggest, and Civic Platform does not even dare to back gay marriage. After failing to agree on a broad coalition, the anti-PiS parties will contest the election as three blocs: centrists led by Civic Platform, agrarians, and the left, made up of the old social democrats plus Wiosna (Spring), a progressive party founded earlier this year by a gay-rights campaigner. Lacking a charismatic leader, Civic Platform supporters look to Donald Tusk, who served as prime minister from 2007 to 2014. Some hope that he will challenge Andrzej Duda, the PiS-backed incumbent, for the presidency next year after his term as president of the European Council ends next month. He has not revealed his plans, which will depend on the results.

The economy has counted in PiS's favour. It grew by 5.1% last year, thanks to an increase in domestic consumption and investment, though it is forecast to slow to 4.4% this year and 3.6% in 2020. Wages have risen and unemployment is 3.3%, one of the lowest rates in the EU. Companies have tried to plug the labour shortage with foreign workers, mostly from Ukraine. The government says it can cover the cost of its new welfare policies by improving tax collection and cutting administrative costs. It has proposed a balanced budget for 2020, the country's first in three decades.

Despite facing surgery on his knee after the elections, Mr Kaczynski, who turned 70 in June, has campaigned around Poland, handing out promises. The technical side of governing is managed by Mateusz Morawiecki, a former bank boss, whom Mr Kaczynski promoted to prime minister in December 2017. Polls put PiS far in the lead; one this week gives it 43% of the vote, compared with the centrists' 28%. With the left's 14% and the agrarians' almost 8%, the fragmented opposition would have roughly 50% of the vote, but PiS would still have a majority in the Sejm, the lower chamber of parliament. Voters face “a fundamental choice between two worlds”, Mr Kaczynski told an interviewer (a priest wearing a cassock) on October 2nd. His world seems to be winning. ■

A firmer fort

America pours a thousand more troops into Poland

The Poles know how to handle President Trump

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LAST YEAR Poland made an audacious bid to coax Donald Trump into permanently placing an American armoured division on its soil, offering $2bn and naming rights. “Fort Trump”, as it became known—jocularly at first, then more formally—is now firming up. In June America said it would send 1,000 troops to join the 4,500 already in Poland. On September 23rd Mr Trump agreed with Andrzej Duda, Poland’s president, where these would go.

It is not quite the mammoth tank force that Poland wanted, but it is a win nonetheless. Five years ago the American troops in Poland could all fit on a bus. Now thousands will be spread across six sites. “Poland has joined today the small group of countries where US troops are permanently stationed,” boasted the country’s defence ministry. There will be a division headquarters in Poznan, a squadron of Reaper drones in Lask, a helicopter brigade and special forces in Powidz and more special forces in Lubliniec.

The troops in Poland serve as a tripwire. If Russia were to invade, it would have to kill Americans first, quickly pulling in the superpower. But the new forces will also be useful in circumstances short of all-out war. Lieutenant-General Rajmund Andrzejczak, Poland’s army chief, says that the drones and “low profile” special forces are especially helpful for spotting and countering murkier “hybrid scenarios”—a reference to techniques Russia has honed in next-door Ukraine, such as the use of cyber-attacks, disinformation and soldiers who don’t wear identifiable uniforms.

Mr Duda hopes this is just the start. America and Poland are now haggling over a seventh site for another American armoured brigade combat team, a unit that can include over 100 tanks and armoured vehicles. America would like it to sit west of the Vistula river. Poland would prefer it in the south-east of the country, pointedly closer to Russia. The “real deal” would be a full-blown defence co-operation agreement, says Michal Baranowski, head of the Warsaw office of the German Marshall Fund, an American think-tank.

Mr Duda has honed the art of speaking to Mr Trump in the languages he understands best: flattery, money and loyalty. Poland has gone on a spending spree for American arms, signing over $11bn-worth of deals for rocket launchers, Patriot air defence systems and F-35 warplanes. On September 3rd it asked to buy 185 Javelin anti-tank missiles and five Hercules transport aircraft. Poland is not only one of the handful of allies that hits the NATO target of spending 2% of GDP on defence, but also plans to raise that to 2.5% by 2030.

For Poland, the purpose of this build-up is clear. Russia is “definitely very, very aggressive”, says General Andrzejczak. He points to its military exercises and challenges to Polish airspace using drones. For Mr Trump, it is more personal. Why, he was asked, had he sent troops? Was it because of the Russian threat? “No, I don’t think so at all. I think it’s just because we have a president of Poland who I like, who I respect.” ■

Hopes unfulfilled

Portugal's Socialists fail to win a majority, but will still form the next government

But António Costa will still be prime minister

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ANTÓNIO COSTA put on a brave face for his speech after Portugal's general election. The prime minister's centre-left Socialist Party (PS) won almost 37% of the vote and 106 seats in parliament, 20 more than it took four years ago. But that still left it ten short of a majority.

"Voters want the current political solution to continue," he told cheering supporters in Lisbon in the early hours of October 7th. "This time with a stronger PS." Continuing the current solution means another four years of a minority government depending for its survival on the support of the radical left.

This was not the solution Mr Costa, something of a hero to Europe's much-diminished centre-left, had campaigned for. In a thinly disguised appeal for a majority of his own, he repeatedly warned that Portugal could find itself in a similar stalemate to neighbouring Spain if the far left gained more leverage over mainstream socialists. Spain is heading for its fourth general election in four years after fruitless coalition talks between centre-left socialists and Podemos, a left-wing party.

In the event, voters neither gave Mr Costa the outright majority he wanted nor the far left any greater influence. Instead they punished the centre-right opposition, giving left-of-centre parties a combined majority of 27 in the 230-seat parliament, up from eight previously. Mr Costa appears to have read the public mood well in not campaigning openly for an absolute majority; too many Portuguese associate his party with abuses of power and corruption. That is likely to be little consolation, however, as he faces weeks of delicate negotiations to put together a second version of his pact with the anti-capitalist Left Bloc and the hardline Communist Party.

His task has been complicated by a greater fragmentation of parliament, with three new parties taking one seat each and a small left-leaning environmentalist and animal-rights group winning four, up from one previously. Catarina Martins, the Left Bloc's leader, said Mr Costa could "choose stability" by negotiating a government programme with her party, or negotiate for its support "budget by budget, year by year". The Bloc, which took 10% of the vote, retained its 19 seats. The Communists, smarting from the loss of five seats from their previous tally of 17, have ruled out entering into a second formal pact with the PS.

Renewing a pact with the far left could prove tricky for Mr Costa, however, as Europe braces for a global downturn amid tariff wars and the fallout from Brexit. Having come to office in 2015 vowing to "turn the page on austerity", he has since recast himself as a champion of fiscal discipline. After enduring one of the worst economic crises since the global financial calamity of 2008, Portugal is now growing robustly.

The left-wing parties will press for concessions on labour laws, public spending, public-sector pay and state pensions. However, Mr Costa now needs to strike a deal with only one of those parties, rather than both of them, as before, in order to survive any confidence vote or pass a bill or a budget. The parties on the left that had "made it their goal to prevent the PS from winning an absolute majority", Mr Costa said, "now have a bigger responsibility to bring about a stable outcome." ■

An enemy within

France is shaken by the murder of four police officers

Alarming details emerge about a bloody killing

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THE KILLINGS themselves were shocking. On October 3rd four police officers were knifed to death at Paris police headquarters by one of their colleagues. What has emerged since is more sinister. The perpetrator, who was shot dead at the scene, was a suspected jihadist who had access to classified police intelligence files.

France has been shaken by the revelations. Mickaël Harpon was a 45-year-old French computer technician from Martinique, employed since 2003 at the intelligence service within the Paris police headquarters. He enjoyed high-level security clearance, which was renewed in 2008 and 2013. His job gave him access to a mass of intelligence data, including personal contact details of police officers and of individuals under surveillance, some of which have subsequently been found on a USB key in his possession. The prosecutor has opened an inquiry into an act of terrorism.

On the morning of the killings Harpon, a convert to Islam, exchanged with his wife 33 text messages "of an exclusively religious nature, ending with *Allahu akbar*", said the prosecutor. He then left his office to buy a kitchen knife and an oyster knife in a nearby shop. Returning to work, he fatally stabbed three victims in the office and attacked two more on the staircase, one of whom survived.

Arriving on the scene, Christophe Castaner, the interior minister, declared that Harpon had "never shown the slightest warning sign" during the time he worked at police headquarters. He had no criminal record, nor was there any sign of concern about him in his work files. It emerges, however, that colleagues were worried. Harpon had voiced approval of the *Charlie Hebdo* terrorist attacks in Paris in 2015. More recently he adopted traditional dress to go to mosque and refused to shake the hands of female colleagues. He had contacts, said the prosecutor, with Salafists, a radical Islamist movement. "It is very serious, scary," says François Heisbourg of the Foundation for Strategic Research. "There is no precedent for this: a jihadi mole at the heart of an intelligence service whose basic job was to keep tabs on terrorists."

How could such an individual have gone undetected? Battered by bloody terrorist attacks in 2015 and 2016, France has put in place a system designed to detect radicalised people, which was expanded last year. It includes a grid of warning signs, such as a change in dress or behaviour, which are supposed to trigger an alert. The system yields some success. According to a parliamentary report in June, 12,809 people are on a watch list as a result. Such lists are used to help screen recruits to sensitive public services. In 2018, of the 10,840 queries concerning applicants to the police force forwarded to the national security inquiry service, five were judged problematic. It also keeps watch on employees. There are currently around 30 cases concerning suspected radicalisation within the police force and gendarmerie.

Such procedures are not fail-safe. Colleagues who voiced concerns about Harpon declined to submit written complaints. It is not clear why. A culture of solidarity? A fear of stigmatising Harpon, who was partially deaf? Mr Castaner this week recognised "dysfunctions" in the system. An inquiry is under way. Opposition leaders called on him to resign. The affair leaves many questions unanswered—and a fresh sense of vulnerability in France. ■

Charlemagne

A thaw in EU-Russia relations is starting

Undeserved détente

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MOSCOW MIGHT as well have drafted the script of Donald Trump's leaked call to Volodymyr Zelensky on July 25th. In it, Ukraine's president endorsed criticism of his European partners and seemed open to a deal by which his country would disclose information damaging to Joe Biden, a possible electoral rival to Mr Trump, in return for aid in its struggle against Russia's military incursions. The transcript reinforced Moscow's lie that Ukraine is a decadent Western satrapy.

Friends of Ukraine need not worry too much about the call. Plenty of European leaders, after all, humour Mr Trump on the phone. But Ukrainians and their allies ought to worry about something else. A partial thaw in EU-Russia relations, produced not by the ramblings of an inexperienced Ukrainian president but by long-term geopolitical shifts, is under way.

On paper, that seems improbable. Russia's annexation of Crimea, its invasion of south-eastern Ukraine and its shooting down of an airliner there in 2014 have forged a European consensus in favour of imposing and maintaining sanctions on Moscow. Brokered primarily by Angela Merkel, these measures still hold together the spectrum of countries and opinions that ranges from doves like Italy to hawks like Poland. Russian-backed forces continue to breach the ceasefire in eastern Ukraine and recently seized Ukrainian ships in the Black Sea. The incoming European Commission is uncompromising on Russia. Ursula von der Leyen, its president, is a keen transatlanticist. Josep Borrell, the EU's next foreign-policy chief, told the European Parliament only this week that in his view sanctions on Russia should continue. Pro-Russian political forces in the EU are stumbling, and recently left the governments of Austria and Italy.

Actions speak differently, however. In June Russia was readmitted to the Council of Europe, an institution close to the EU that monitors human rights, after five years of suspension. As president, Mr Zelensky has resumed Ukrainian-Russian prisoner-swaps and has prompted protests on the streets of Kiev by moving towards a model for power-sharing in the country's east that makes hefty concessions to Russia. Such moves free western Europeans to contemplate a new detente. Emmanuel Macron, the French president, is urging a thaw in relations with Moscow, including a summit to resolve the Ukraine crisis, and told his diplomats in August that "Europe will disappear" if it fails. German firms are renewing their pressure on Mrs Merkel, and have been keen to build Nord Stream 2, a big new gas pipeline from Russia. Germany recently sent its business minister to the St Petersburg summit, Russia's main economic forum, for the first time since 2014. German authorities are making little fuss about the killing of a Chechen exile in Berlin in August. EU diplomats are speculating about a coming relaxation of sanctions. The wheels are turning.

Politically, the EU and Russia are as unreconciled as ever. Russia has shown almost no deference to European demands. Its undeserved readmission to the Council of Europe created the dangerous precedent of rehabilitation without reform. But the two sides are converging nonetheless, because another force is at work. Big, long-term, transcontinental shifts are pushing Russia and Europe back together.

One shift is that the transatlantic relationship is faltering. Europe and America no longer feel they can rely on each other to the extent that they could in the past. Mr Trump has proved an unreliable ally, which is perhaps why more and more Europeans talk about the need for "strategic autonomy". Any such thing is a long way off. The London-based International Institute for Strategic Studies recently estimated that the EU would need to invest between $288bn and $357bn to be in a position to win a limited land war with a power like Russia. But now Europeans are starting to hedge their bets. Standing up to the Russians made sense in the Obama era, when America credibly underwrote a tough European line, but Mr Trump's attitude to Russia and Ukraine is unclear. At the UN last month, the president blamed Russia's military action on his predecessor and encouraged the two countries to sort out the problem between themselves. The departure of two crucial Europe-America links—Britain, which is leaving the EU, and Mrs Merkel, who is in the final phase of her German chancellorship—only widens the Atlantic rift.

Another driver is the rise of China. Europeans fear that China and Russia are edging towards the formation of a new bloc that will dominate Eurasia. Mr Macron's pivot to Russia is in part intended to stop it from slipping into China's grasp. It is better, he argues, to make some concessions to solve the Ukraine issue and restart relations with Moscow than to let the world's largest country by land mass fall into Beijing's orbit.

The Middle East factor

Yet some European diplomats suspect that Mr Macron's true concerns are closer to home. He realises, they say, that Europe's security depends on stopping the likes of Islamic State and that this requires the help of Russia, whose grip on the Middle East is tightening. It is a credible argument. Russia has steered the Syrian war and co-opted Iran and Turkey in the process. America is now pulling out of Syria's north to let Turkey take charge and suppress pro-Western Kurds. A Europe that needs a stable Middle East needs Turkey. And a Europe that needs Turkey, today needs Russia.

A widening Atlantic, a rising China and crisis in the Middle East are pushing Europe and Russia together. This may be understandable, but it is also very risky. The countries wedged between western Europe and Russia—from Poland to the Caucasus—

are understandably alarmed by hints of a thaw. European support for Ukraine matters as a symbol to the world that liberal democracies will always find allies in the EU. The EU is a world power. Its actions set standards. ■

Northern Ireland
The place with no government

A rudderless region

Northern Ireland reaches 1,000 days without a government

What happens in a place with no one at the helm?

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FANS APPROACHING the Oval football stadium are greeted by a tall, dark-green stand. From seats at the top, supporters of Glentoran FC get a view of the gantry cranes of Belfast's shipyard. But the rest of the stadium is much smaller, and at two ends there are no stands at all, giving the ground a peculiarly lopsided feel. The concrete is chipped, parts of the stadium are rusting and the crowd is occasionally drowned out by a plane landing at the airport next door. A banner provides a reminder of better days: "Money can run out," it proclaims, above black and white images of local heroes, "but legends last for ever."

If Northern Ireland had a government, money might be more plentiful. Glentoran had been awaiting ministerial approval for a new £10m ($14m) stadium when the region's devolved executive collapsed in January 2017. The stadium is one of a long list of projects—from a north-south electricity connection to the publication of gender pay-gap data—that have been put on hold in the absence of ministers. The executive was suspended after a precarious power-sharing arrangement between the Democratic Unionist Party (DUP) and Sinn Fein fell through. Since then, various attempts to bridge the gap have failed, with the parties irreconcilable over issues including gay marriage, abortion and the Irish language. On October 6th the region reached 1,000 days without a government.

When countries like Belgium and the Netherlands go without a government during coalition negotiations, they appoint a caretaker one, points out a recent report by the Institute for Government (IFG), a London-based think-tank. The same is not true in Belfast. The lack of leadership comes at a sensitive time, with Northern Ireland the main sticking point in Brexit negotiations (see article). Cross-border institutions established under the Good Friday peace agreement in 1998 have been put out of action, impeding communication between Northern Ireland and the Republic, says Jess Sargeant of the IFG. Meanwhile, the absence of a government in Northern Ireland has given the DUP something of a monopoly over the debate in Westminster, she adds, since Sinn Fein MPs don't take their seats on republican principle.

With the Stormont Assembly not operating, no legislation has been passed. The British government has introduced new laws only when essential, such as for budgets. But Westminster's backbenchers have not been as reticent. In July MPs hijacked a piece of procedural legislation to add amendments compelling Northern Ireland to allow same-sex marriage, begin to legalise abortion and to make payments to victims of the sectarian Troubles of 1968-98. These changes will be imposed if the devolved government is not restored by October 21st, which few expect to happen.

Civil servants have had to be considerably less bold. Last year the Northern Irish high court overturned a plan to build an incinerator on the edge of Belfast, on the basis that a minister had already rejected the proposal, thus setting a limit on what bureaucrats could do in the absence of politicians. Afterwards, Westminster passed a law allowing Northern Irish government departments to make decisions in the "public interest" if they had to. But the civil service has not been able to act in areas where the public interest is unclear, such as raising tuition fees or increasing public-sector pay.

Even where there is political consensus, change has been difficult to achieve. Outrage has been noisiest over the failure to respond to an inquiry into historical abuse in children's homes, youth detention centres and other institutions. In 2017 the inquiry recommended offering compensation to victims, which has not happened. Unlike in England and Wales, legislation has not yet been passed to speed up criminal trials or to tighten the law on domestic abuse, despite the Northern Irish government's stated intention to do both before it fell.

Civil servants are acutely aware of the delicate role they must play. "A typical meeting with a politician, if I'm being absolutely frank, is them complaining about the things we've done and complaining about the things we haven't done," says one. In places where reforms had been set out by the executive before it collapsed, like those to reshape the health system, bureaucrats have some leeway. Most departments have no such luck, however.

This is unfortunate in a region where public services are already in bad shape. According to the Nuffield Trust, another think-tank, a person in Northern Ireland is at least 48 times as likely as one in Wales to wait a year or more for health care. The education ministry has estimated there are 50,000 surplus school places in Northern Ireland, equivalent to a sixth of all places (closing schools is hard because of religious segregation). Infrastructure is poor and the economy relies on public-sector jobs. Even at the best of times, local officialdom does not seem up to the job, says Deirdre Heenan of Ulster University.

In the absence of a government, it is difficult for the civil service to be held accountable unless someone takes it to court. The Northern Ireland Audit Office, a statutory watchdog, has continued to publish reports and senior officials have become more media-friendly ("It's not the most comfortable thing in the world for a grey-suited civil servant," admits one). But ministers cannot be asked questions, committees do not sit and Westminster has done little to keep tabs. With relatively little scrutiny of policies by outside institutions, this leaves a vacuum.

Sir Jonathan Phillips, a former head of the British government's Northern Ireland Office, has said that leaving the European Union without a deal would probably require bringing back direct rule from Westminster, owing to the volume of decisions that would have to be taken. Few would welcome that. Yet there is little hope of a return to devolved government any time soon. Problems will continue to mount as the civil service struggles to keep things going, putting more strain on the Good Friday agreement that has stood for more than two decades. Not everyone is upset about the stagnation, however. The Oval is old and needs a lot of work, admits David Brownlee, a 53-year-old Glentoran fan, as he approaches the stadium before a Friday-night match against Cliftonville FC. "But I love the wee ground as it is." ■

Die another day

As Brexit talks founder, yet another delay looms

Next week's European summit was supposed to discuss a deal. Instead it will debate another extension

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NOBODY SHOULD have been surprised when the European Union objected to Boris Johnson's Brexit plan, proposed on October 2nd. After all, the proposal resiled from previous British promises that there would be no customs border between Northern Ireland and the south, and it also planned to hand the hardline Democratic Unionist Party a four-yearly right to veto the arrangement. Dublin was unhappy with the plan, as were Northern Irish public opinion and most business leaders. So what were the prime minister's real goals?

One may have been to stake out a tough position in hopes of luring a fed-up EU into a compromise closer to his terms. Yet unless Mr Johnson moves much further, this looks increasingly unlikely to work. Hence a second goal that became clear this week: to heap the blame for forcing a no-deal Brexit on intransigence in Brussels. A message to the *Spectator* magazine from a Downing Street source claimed that Leo Varadkar, the Irish taoiseach, had reneged on earlier promises to back the deal. This was followed by an implausible assertion that Angela Merkel, the German chancellor, had told Mr Johnson that any deal was now "essentially impossible".

The EU has been alert to such tactics ever since Mr Johnson became prime minister in July. On October 8th Donald Tusk, president of the European Council, demanded an end to "this stupid blame game". The British government continues to insist that Brexit will happen on October 31st, "do or die", and is even planning to mint 3m commemorative coins for the occasion. Yet the EU believes that Mr Johnson is now legally bound by the Benn act, passed by Parliament last month, to ask for an extension if, as expected, he gets no deal at the European Council summit on October 17th and 18th.

Indeed, unless Mr Johnson gives a lot more ground, the summit is likely to devote most of its time to debate over another extension, not over a deal. Mujtaba Rahman of the Eurasia Group, a consultancy, reports that on this the mood around the EU is calm, not fretful. There is no serious talk of anyone blocking an extension, despite brazen threats in London that Britain will disrupt EU business and even limit future security co-operation if a delay is granted. The only issues are how long the extension should be and what justification to cite for giving it.

The odds are that, as suggested by the Benn act, an extension will be offered until January 31st, though some are talking of March or even next summer. And the justification will be so that Britain can hold some democratic event—most likely the election that Mr Johnson badly wants, but, if not, conceivably another referendum. Downing Street has said it will summon MPs to Westminster for a rare Saturday sitting the day after the Brussels summit to debate future options.

The EU knows that Mr Johnson wants to fight an election under the banner of "the people versus Parliament", and perhaps even on a straight promise that, if he secures a majority, he will at once take Britain out with no deal. But by irredeemably splitting his Conservative Party, such a promise may prove impossible to keep. Eventually, Brussels expects Britain, whether or not still led by Mr Johnson, to have to come back to the negotiating table with a more accommodating approach. Hence its serenity in an otherwise chaotic week. ■

Psephology

The perils of polling Britain's coming election

Pollsters agree on one thing: the next election is exceptionally hard to gauge

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IN DOWNING STREET polls can trigger delight or despair, depending on which one its occupants look at. One pollster, Opinium, suggests the Conservatives are sitting on a handsome 15-point lead. Survation, a rival outfit, gives the Tories a lead of just three points, within the margin of error. Others are scattered between these extremes (see chart). The potential outcomes range from a hung parliament to a stonking Conservative majority. Someone is calling it badly wrong. Why has British politics become so hard to predict?

For starters, voters are more politically promiscuous than they used to be. In the elections of 2010, 2015 and 2017, only half of voters supported the same party each time, according to the British Election Study, which has looked at every general election since 1964. About four out of ten voters switched parties in 2015. When the next election came in 2017, just two years later, one in three changed. By comparison, between 1964 and 1966 only 13% of voters did.

When voters change their minds they often dabble with smaller parties, which makes things more unpredictable still. Voters see the likes of the UK Independence Party and the Greens as a fling, rather than the start of a long-term relationship. Between 2015 and 2017, 78% of UKIP voters defected. Among the Greens, nearly all did, with 88% of the party's 2015 voters deserting it in 2017. Tracking these voters as they bounce around the political spectrum is a nightmare for pollsters. On top of this, new cleavages on everything from social liberalism to the future of the union to Brexit now compete with the traditional left-right economic divide.

This newfound love of switching party is not taking place against a calm political backdrop. A series of electoral shocks has blown British politics off its steady course, explains Jane Green of Oxford University. First came a steep increase in immigration. Then the financial crisis. After that, Britain got its first coalition government since the second world war. Scotland had an independence referendum in 2014, before the Brexit referendum arrived in 2016. Voters are dazed.

Another shock may be coming. At the end of this month Britain could leave the European Union with a deal, fall out without one or, most likely, delay its exit yet again. This buffet of options provides another problem for pollsters. Asking people how they would vote after, say, a no-deal Brexit, or an extension granted after a case in the Supreme Court, is akin to asking someone what they will want for dinner in six weeks' time. Their tastes may be the same, but the circumstances are close to unknowable.

Asking people how they will vote in the future may be difficult, but so is trying to make them honest about who they backed in past. At the start of the 1990s, pollsters had to contend with "shy Tories", people who would not admit to backing the Conservatives outside the privacy of the voting booth. Now they must deal with "shameful Labour", people who say they did not vote for Jeremy Corbyn's party in 2017, when in fact they did. To work out where voters are heading, pollsters need an idea of where they are coming from.

A big range of results is not necessarily a bad thing. Few pollsters predicted David Cameron's majority in 2015. Back then, the problem was one of "clustering", with polling companies reluctant to be outliers. Now they are more ready to stand by their results, even at the risk of being wildly wrong. After all, "it isn't science", points out Kevin Cunningham, a pollster who lectures at Technological University Dublin. But it is more complicated than it used to be. Sir David Butler, the 94-year-old doyen of Britain's pollsters, who studied every British election between 1945 and 2005, summed up the mess: "I have never felt more totally confused." ■

Protection racket

British fury as an American cites diplomatic immunity over a fatal crash

Diplomats don't always get away with it—unless they represent a superpower

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THE IDEA that diplomats should enjoy protected status in their host country is an ancient one, and the consequences of violating the custom can be bloody. The Mongols destroyed whole cities in response to the mistreatment of their envoys. In Britain, Parliament passed an act preserving diplomats' privileges in 1708, following a fuss over the arrest for debt of Russia's man in London. The young United States passed a similar act in 1790. Today diplomats everywhere and their families are protected under a convention signed in Vienna in 1961.

But immunity was not designed for the sort of incident that has now caused outrage in Britain and friction with its biggest ally. On August 27th a teenage motorcyclist, Harry Dunn, was killed in a collision with a Volvo near an American intelligence base in Northamptonshire. The car's driver, Anne Sacoolas, who had reportedly arrived in Britain only recently with her diplomat husband and three children, was allegedly driving on the wrong side of the road. At first, it seems, she co-operated with police—but then fled the country with her family.

Mr Dunn's parents have been appealing for her to return so that their son's death can be properly investigated. They say they are prepared to travel to Washington, DC, to make their case. The prime minister, Boris Johnson, has said he does "not think that it can be right to use the process of diplomatic immunity for this type of purpose". President Donald Trump promised his government would "speak to [Ms Sacoolas] and see what we can come up with so there can be some healing." But he accidentally flashed his briefing notes which read, "the spouse of the US Government employee will not return to the United Kingdom".

Dodgy uses of immunity—to avoid anything from parking fines to charges of sexual abuse—hit the headlines from time to time. Driving offences crop up quite often. And diplomats do not always get away with it. In 1997, for example, Americans were outraged when a Georgian diplomat claimed immunity after causing a pile-up in Washington that killed a 16-year-old girl. Georgia lifted his immunity and he was jailed.

Will British anger have any impact? America does not want to set a precedent. And it may want to keep a lid on the case if Ms Sacoolas's husband was indeed a spy. Ms Sacoolas herself has reason to stay away: a possible prison sentence if she were convicted. Scarpering may be understandable, but it doesn't stop the sense of injustice she leaves behind.

Power and protest

How the anarchists of Extinction Rebellion got so well organised

The climate-change rebels have been reading up on management theory

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EXTINCTION REBELLION is back—and this time it's political. The environmentalist group, which brought parts of central London to a halt for 11 days in April, has shifted its focus to 12 sites around Westminster, where its members began blockading thoroughfares on October 7th. With its makeshift buildings, meditation sessions and all-night dance marathons, the group has transformed Britain's political centre. As dozens of mothers staged a mass "nurse in" with their babies on Whitehall, across town at Smithfield meat market a candlelit vigil was held for "all the animals who lost their lives". Protesters plan to stay put for a fortnight.

The police, who were caught off-guard in April, are this time better prepared. Some 580 arrests were made in just the first 48 hours, more than half the total made during the April rebellion. Over 80 tonnes of equipment have been seized. Grant Shapps, whose Department for Transport had protesters superglued to its doors, nonetheless complained that officers were just "standing around the edges".

They have their work cut out in policing what has become a formidably well organised protest group. Whereas the Occupy movement, a similar outfit, became bogged down in cumbersome "people's assemblies", Extinction Rebellion (XR) has adopted an approach called holacracy, a management theory developed in 2007 by Brian Robertson, an American software engineer. Holacracy claims to spread power across employees by ditching traditional management hierarchies in favour of semi-autonomous "circles". In XR's case, this amounts to what are in effect franchises of the main brand, which plan and carry out their own protests, following a loose set of rules set out by the main group. "The majority of the protests that happen this week I won't know about," says Sam Knights, one of the group's strategists.

As well as making the group more nimble, this has helped it avoid the internal divisions that often hamper protest movements. It helps that XR does not ask its members for a joining fee. Funding comes from the likes of Radiohead, a rock band, and Aileen Getty, an oil heiress. XR claims to have spent £1m ($1.2m) on this fortnight's protests alone.

Holacracy or not, hierarchies persist. In July a report by Policy Exchange, a right-leaning think-tank, identified two powerful groups within XR, known as the Anchor Circle and the Rapid Response Team (the latter has apparently since been replaced by a Political Circle and Organisational Circle). The report claimed that people in these steering groups had beliefs "rooted in the political extremism of anarchism, eco-socialism and radical anti-capitalist environmentalism", in contrast to the diverse views of XR's members.

XR has tried to keep its public messaging moderate, deleting some of the overly political tweets that occasionally slip out on its Twitter account ("This movement is the best chance we have of bringing down capitalism," read one in April). Nonetheless, those protesters chanting, "This is what democracy looks like," might be surprised to learn that their group is being run in a not entirely democratic way. ■

Running on empty

As cars ditch fossil fuels, how can governments tax motorists?

Expect more taxes on congestion as levies on fuel yield lower revenues

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MOTORING TAXES raise nearly £40bn ($49bn) a year, or about 5% of Britain's total tax revenue. Nearly 70% of that comes from duty on fuel, levied partly to deter consumers from using too much of the stuff. Yet as drivers take the hint and switch to electric and hybrid vehicles, the government faces a problem in the form of falling tax revenues. Economists are therefore rethinking how to tax motoring in a low-emissions future.

On October 8th the Institute for Fiscal Studies (IFS), a think-tank, warned that over £33bn could all but disappear as cars become more fuel-efficient or go electric. Revenue from fuel duty has already dropped from 2.2% of GDP in 2000 to 1.3% today (partly because duty has fallen in real terms). This decline is expected to continue as the government aims for "net zero" carbon emissions by 2050.

Ministers could simply raise money by taxing other things, of course. But taxes are also a way of discouraging behaviour that imposes costs on society, and driving has plenty of these. Beyond emissions, they include accidents, noise and congestion. The latter is much the biggest, accounting for 80% of motoring's total cost to society, according to the IFS. Last year British drivers wasted an average of 178 hours in traffic, costing them £1,317 each in time that could have been spent on work or leisure. The cost to the economy was £7.9bn, according to INRIX, a transport analyst.

To ease congestion—and raise some cash—the IFS recommends taxing drivers for entering busy areas. Drivers already pay a fee of £11.50 to enter a 34-square-kilometre zone in central London during peak times (see chart). This is estimated to have reduced congestion in the city by 20-30%. Other places have come up with even more sophisticated ways to tax drivers. In Singapore they are charged for where and when they go, their movements tracked by a gadget fitted in their car. Cities in Sweden charge motorists for entering different zones, with fees varying depending on the time of day. As taxes on fuel dry up, expect more levies on congestion.

The root of all fun

Cash-strapped English cathedrals become temples of enjoyment

Mini-golf, helter-skelters and film-showings help historic places of worship to balance the books

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FROM CERTAIN spots in the north of England, you can half-close your eyes and imagine yourself in a medieval theocracy, where pilgrimage routes, mighty monasteries and the tombs of saints define the landscape. One such place is Durham, where a 1,000-year-old place of worship towers over the narrow streets of a small university town.

As one of the best-loved of England's 42 Anglican cathedrals, it attracts not only the devout but history buffs, movie-goers (it has featured in the "Harry Potter" films and the "Avengers" series), fans of choral singing and Asian globetrotters who count the number of UN-protected heritage sites they have seen. A handful, including devout Catholics and Orthodox, come to venerate the remains of Saint Cuthbert and the Venerable Bede, the forefathers of English Christianity. But even in this fairly successful enterprise, maintaining the hallowed stone fabric is a perpetual struggle.

Durham is not among the eight cathedrals that charge an entrance fee. But the 700,000 people who visit every year are urged, in multilingual signs, to make a contribution of at least £3 ($3.70). This year-old appeal has increased visitor offerings by a third. Well-informed and polyglot guides explain the cathedral's history and drive home its need for money. But with a payroll of 131 full-time-equivalent staff, supported by 750 volunteers, and a creaking fabric to maintain, neither the contributions of visitors nor the amounts offered by worshippers are anything like enough to cover running costs. Nor can an exhibition of medieval treasures, costing £7.50 to view, or a shop or a café, fill the gap. Only by ever more ingenious devices, ranging from cultural and recreational events to corporate sponsorship and flashy appeals to fund specific repairs, are cathedrals managing to stay in business.

Andrew Tremlett, the dean of Durham cathedral, reckons his institution has kept the right balance between ancient dignity and 21st-century opportunism. When the "Avengers" film was being shot, the 350 people involved were required to fall silent several times a day when services were held. Whatever the disruption to worshippers, the filming enabled 150m people to enjoy footage of the ancient stonework.

Other cathedrals have dreamed up even more eccentric ways to make use of the vast, numinous spaces under their control. An injunction by Archbishop Justin Welby, the head of the Anglican church, to "have fun in cathedrals" is being taken very literally. As a summer attraction, Rochester cathedral tucked a miniature golf course inside its soaring Norman arches. In Norwich, a helter-skelter was installed. This supposedly allowed visitors a closer look at a cleverly sculpted roof, but it was mainly a bit of entertainment, for grown-ups as well as children. Lichfield cathedral won higher marks for a light show entitled "Space, God, the Universe and Everything", which involved transforming the entire floor into a lunar landscape.

Through the eye of a needle

Durham, like other ancient temples including Salisbury and Winchester, is ultimately saved by its handsome endowments, including property holdings whose value has ballooned. These rising asset values allow the cathedrals to run a deficit in their current spending. Durham's accounts for the latest financial year, published this week, show that its unrestricted-funds account (that is, money that is not tied to a particular purpose) ran an "unsustainable" shortfall of nearly £1m. But net assets have risen from £66m to £76m, and clerical whimsy seems to be doing well. The cathedral restaurant wins praise for its "mouthwatering array of puddings", prepared for a display of "divine desserts".

For all their ingenuity, about half the Anglican cathedrals are under serious financial strain, as was revealed by an inquiry prompted by an acute crisis at Peterborough cathedral in 2016, which led to a round of lay-offs and the resignation of the dean. As a general rule, the newer the cathedral, the worse its financial problems.

One example is Guildford, south of London, a red-brick structure completed only in 1961. Being in a prosperous area is a mixed blessing, its masters find. A couple of years ago it came close to closure, after plans to sell off land for development were rejected by well-organised locals who feared the loss of green space.

A new system of governance for cathedrals is likely to come into force next year, after winding its way through the Church of England's decision-making process. It will aim to reduce the risk of financial disasters like the one at Peterborough, while allowing cathedrals to exploit their assets.

The Charity Commission, which regulates most other non-profit bodies, will gain a share of responsibility for cathedrals. The bodies which advise deans, known as chapters, will be expanded to include more lay people with financial expertise. But the task of regulation will be shared with the Church Commissioners, a discreetly powerful agency which manages the Church of England's assets and pays for some cathedral staff. On some matters the Church Commissioners are likely to take a broader view of a cathedral's remit than the rule-bound Charity Commission.

The task, church insiders say, is to give free-ish rein to imaginative projects while curbing recklessness. As Mr Tremlett puts it, "The best cathedrals have been a story of excellence, innovation and creative learning, and we do not want a system of governance which quashes that." ■

Bagehot

The sad decline of Thatcherism

The ideology that has animated the Conservatives since the 1980s is at war with itself

Print | Britain Oct 12th 2019

ON OCTOBER 7TH a flock of Thatcherites made their way to Banqueting House to celebrate the publication of the third and final volume of Charles Moore's biography of the great prime minister. The heavens rained cats and dogs. Extinction Rebellion protesters blocked the Mall with makeshift encampments and drumming circles. Rumours of the failure of the latest round of Brexit negotiations filled the air. But nothing could deter our intrepid heroes from feasting on champagne and canapés.

Boris Johnson was the most intrepid of the lot. He had to make the journey from Downing Street by underground tunnel to avoid being assaulted, verbally if not physically. He praised Mr Moore, his former boss, for displaying the lust for accuracy that is the mark of a great *Daily Telegraph* journalist. He praised Thatcher for being right about Europe. And he advised the pierced and tattooed "crusties" in the streets to buy the book and learn about the feminist and green warrior who changed the world for the better.

There is no doubt that Mr Moore's three-volume biography, 22 years in the making and almost 3,000 pages long, is one of the great political works of our time. Mr Moore has secured his position in perpetuity as the archbishop of Thatcherism. But whether the faith that he presides over survives as anything more than a set of empty incantations is more questionable.

Thatcherism combined four elements: support for free enterprise; assertive nationalism; a commitment to strengthening the state by using quasi-market mechanisms to increase efficiency; and a belief in Victorian values, in the form of hard work and civic responsibility, which both tempered and underpinned the belief in enterprise. These four principles were accompanied by an establishment-bashing, "they don't like us, we don't care" attitude.

This anti-establishment attitude remains strong. Some ultra-Brexiteer Tories are happy to damage both the Crown and the courts in their determination to take Britain out of the European Union. But what was once a coherent philosophy has decomposed into its component parts, many of which are decomposing in their turn. "Priti Patel", the unimpressive home secretary, "is all we have left of a once-mighty intellectual movement," jokes one minister, as he helps himself to another sliver of salmon sashimi.

Some of Thatcher's ideas have become so mainstream that they are no longer distinctive. Using market mechanisms to improve the operation of the state has been adopted by so many different countries and parties that people forget its origins. Other ideas have become shop-soiled. In the wake of the financial crisis it is impossible to argue that deregulation is the answer to everything. Still others, like restoring Victorian values and creating a property-owning democracy, have failed. The proportion of people who own individual shares has halved since the early 1980s and among the young the rate of home-ownership has plunged. And some Thatcherite ideas have even backfired. Thatcher contributed to Britain's problem of over-centralisation with her war on local government, and poisoned the well of privatisation by selling off natural monopolies in ways that favour investors over customers. In Tony Blair's day, Thatcherites reconciled themselves to opposition by arguing that they had forced Labour to come to terms with capitalism. Today the Labour Party is run by people who spent the 1980s arguing that Michael Foot was insufficiently left-wing.

The biggest problem with Thatcherism is that its two most important components—belief in free enterprise and belief in nationalism—are at war with each other. Thatcher was a nationalist who believed that the best way to reverse Britain's decline was to unleash the spirit of enterprise. Freed from the burden of rules and regulations, entrepreneurs would restore Britain to its 19th-century glory. But a striking number of the businesses that took advantage of the free market were foreign. Britain is now the Wimbledon of global capitalism, more successful at hosting world-class players than producing them.

The battle between business and nationalism is at its most intense with Brexit. Thatcher was the architect of the single market, which tilted the EU towards liberalism. But in her later years she became increasingly critical of the European project and fanned the flames of Euroscepticism, first with her Bruges speech of 1988 (when she warned of a "European superstate") and then with a fusillade of behind-the-scenes interventions. The tension she stoked is now tearing the Tories apart. Some self-identified Thatcherites argue that the EU is the world's biggest free-trade area and that a retreat to narrow-minded nationalism would be a disaster. Others say that the EU is a restraint on trade and that national sovereignty would allow Britain to be more global. And still others maintain that Britain needs to put up barriers in order to "take back control" of its destiny. Most big companies oppose Brexit. But some buccaneering capitalists are its biggest cheerleaders.

Iron turns to rust

The war over Thatcher's legacy looks as if it will shift her party in a decidedly un-Thatcherite direction. Her Conservatives were all about dynamism and shaking Britain out of its comfortable ways by embracing risk. Some of that spirit remains with the Brexiteers. But to get Brexit done, the party is being forced to woo voters whose overriding desire is for security. The great theme of the recent Tory conference was providing reassurance—putting more bobbies on the beat, building more hospitals, raising the minimum wage and otherwise spraying money all over the place. The target voter is no longer the upwardly mobile striver but the left-behind northerner, and "get on your bike" has been replaced by "climb aboard your mobility scooter". Thatcherism has not just decomposed. It is in danger of giving birth to its opposite. ■

Listen to an interview with Thatcher's biographer, Charles Moore

We’re hiring a journalist to write about British politics

Print | Britain Oct 12th 2019

We’re hiring: *The Economist* is looking for a staff correspondent to cover British politics. Journalistic experience is not necessary. Please send a CV and unpublished article of up to 600 words on British politics to britainwriter@economist.com by November 3rd. More details can be found at economist.com/britainjob

Pseudomeat
Fake moos

Fake moos

Plant-based meat could create a radically different food chain

Meat no longer has to be murder

Print | International Oct 12th 2019

A JOURNALIST WALKS into Honest Burgers, a small chain of restaurants in Britain. Mindful of the carbon emissions that come from raising cows, he orders a plant-based burger. It tastes convincingly beefy, at least when encased in a brioche bun and loaded with vegan Gouda and chipotle "mayo". He asks where this wondrous environmentally friendly virtueburger was made? Sheepishly, staff inform him that the patty—supplied by Beyond Meat, a California-based company—has been flown in from America.

To be fair, Beyond Meat has plans to begin production of its foods in the Netherlands. The company's expansion is just one sign of a step-change in the demand for foods aiming to replace meat on people's plates. A niche business is becoming mainstream. Startups and established food conglomerates are hungry for a share of a rapidly growing market for plant-based meats—foods that mimic the taste, texture and nutritional qualities of meat, without a single animal in sight.

At the moment, the market for meat substitutes is tiny. Euromonitor, a market-research firm, estimates that Americans spend $1.4bn a year on them, around 4% of what they spend on real meat. Europeans also chomp through about $1.5bn-worth of meatless meat a year, but this is 9-12% of what they spend on animal flesh.

Euromonitor expects the market for meat alternatives in both Europe and America to double by 2022. Analysts at Barclays, a bank, estimate that global sales of alternative meats could grow from 1% of the total market for meat to 10% over the next decade.

No bones about it

If so, the implications are vast. Until recently, the only way to make meat was for an animal to eat a plant and then be killed. Now, with better technology, it may be possible to create radically different, animal-free food chains. And boffins are constantly improving what bogus burgers taste like.

Demand for plant-based meat is driven by a combination of environmental, ethical and health concerns. Raising animals for meat, eggs and milk is one of the most resource-intensive processes in agriculture. According to the UN's Food and Agriculture Organisation, it generates 14.5% of global greenhouse-gas emissions. Globally, demand for meat from animals is shooting up as people in developing countries grow richer and can afford to feast on flesh. In rich countries, by contrast, an increasing number of people say they would like to eat fewer animals. They may even mean it.

Nearly two-fifths of Americans who described themselves as carnivores told a survey by Mintel in February that they wanted to add more plant-based foods to their diet. Some call themselves "flexitarians": not wholly vegetarian or vegan, but anxious to reduce their meat consumption nonetheless. Young people are the most fervently flexible. Around a third of those under the age of 35 in Britain told a poll by Mintel in September 2018 that they wanted to cut the amount of meat they eat, compared with less than a fifth of older people.

Partly because of this, demand for meat substitutes has grown by 37% in America in the past two years and by 30% in western Europe. Beyond Meat and Impossible Foods, another plant-based food company in Silicon Valley, have entered the market. Impossible has raised $700m in private funds; its backers include Bill Gates. Since Beyond Meat went public in May its valuation has more than quintupled, to $8.4bn.

Many of these companies look to plant-based milks as a precedent. The market for these took off in the mid-2000s, recalls Matt Ball from the Good Food Institute (GFI), a non-profit group in Washington, DC, that monitors and promotes awareness of plant-based meat. That owes something to canny marketing. In 2002 Dean Foods bought Silk, a soya-milk brand, and insisted that it was placed next to cows' milk on supermarket shelves. That made consumers think of it as just another variety of the white stuff you pour on cereal, rather than a weird product for people with allergies.

Plant-based milk—including almond, oat and hemp—now accounts for about 15% of retail milk sales in America and 8% in Britain. Over the past year nearly two-fifths of American households bought alternative milks. Often they do so alongside dairy products; in a poll by Ipsos-MORI 38% of American consumers said that they guzzle plant-based milk, but only 12% did so exclusively. The others were flexitarian, drinking both moo juice and the nutty or beany variety. In Britain 20% of people surveyed by Mintel glugged such products, but only a third of those did so because of an allergy or intolerance. The rest said the new milks were healthier or more ethical.

Children of the Quorn

Meatless meat has been around for a while. In 1901 John Harvey Kellogg, the inventor of the cornflake (which he hoped would make people less keen on sex), was granted a patent for protose, a "vegetable substitute for meat" made of wheat gluten and peanuts. For a long time, however, the market for pseudomeat was small, and the incentive for making it tasty was accordingly modest. This is perhaps why so many early veggie burgers had the taste and the texture of heavily salted woodchips.

Today's alternative-meat makers are more ambitious. They aim to outcompete the conventional meat industry. Their scientists are designing plant-based meats that taste a lot like the real thing.

What makes meat taste like meat? The full sensory experience of eating a slab of meat starts when the constituent proteins, fats and sugars within it interact during cooking. Apply heat and the amino acids and sugars react. The meat goes brown and releases dozens of volatile molecules that give it its flavour and odour in a process known as the Maillard reaction. Afterwards, as the meat is eaten, the bite, texture, umami flavour and melting fats combine to give meat-eaters an experience that they know as "meaty".

Each new entrant to the market has tried to recreate these sensations of meatiness as closely as possible. Their products are generally based around a source of plant protein such as soya, wheat or legumes, which are then combined with a range of fats, colours and flavourings. The soya-based burger from Impossible Foods, for example, also contains haem, an iron-rich molecule that exists in living things to help proteins carry oxygen. Haem gives beef its reddish colour. It helps to create a meaty aroma and flavour once the meat is cooked. In the Impossible Burger, the formulation uses leghaemoglobin. This occurs naturally in the roots of soya but is made for Impossible Foods using genetically modified yeast.

Beyond Meat's burger is made from proteins that come from peas, mung beans and rice, and is laced with beetroot to give the patty a reddish hue and the ability to "bleed" when bitten. It also contains specks of coconut oil and cocoa butter that give the burger a marbling when cooked, akin to the fat in a beef burger.

Many plant-based food firms hope one day to make pseudomeats that even more closely resemble animal muscle itself. This is tricky. To get the texture of their plant-based burgers and nuggets right, manufacturers use a process called extrusion, in which the mixture of ingredients is pushed through a small hole to create meat-like fibres. However, real animal muscle tends to have more complex structure than anything extrusion can achieve.

Most of these companies argue that their products are healthier than animal meat. Some claims are more convincing than others. A plant-based burger tends to provide the same number of calories as a similar-sized slab of beef. Plant-based meats contain no cholesterol, have less fat and more fibre and vitamins. They also avoid the increased risk of colorectal cancer that, according to the World Health Organisation, is linked to eating a lot of processed red meat. However, they also tend to contain more salt and less protein.

A big difference between meat and plant-based products is that the latter are continually improving. Since they are designed from scratch, manufacturers can keep tweaking the recipes to make each bite yummier or more nutritious. Whereas meat firms constantly search for ways to raise animals more efficiently, pseudomeat makers adapt and refine the product itself. Like the software-writers of Silicon Valley, their recipes are never complete.

From the moment Impossible's burger was released, the company began gathering feedback. Consumers told the company they wanted a burger with a better "bite" and they wanted to be able to grill it themselves without it falling apart. Impossible also wanted to reduce the amount of salt and saturated fat while adding more protein. The Impossible Burger "2.0", released earlier this year, replaced wheat protein with soya, which had the added advantage of making the burger gluten-free. Future iterations are planned. Researchers want to make the burgers juicier, so they do not become dry when cooked beyond medium. "The cow is not going to taste better," says David Lipman, the chief scientist at Impossible Foods. But plant-based meats will.

High steaks

Atze Jan van der Goot at the Food Process Engineering Laboratory at Wageningen University has been working with a Dutch firm called the Vegetarian Butcher (a pioneer in the plant-meat industry). Their latest invention can create muscle-like structures and textures within slabs of plant-based meats using a device called a Couette cell. This consists of two concentric cylinders, one of which rotates around the other while the ingredients are sandwiched in between. By exerting force on the proteins in the mixture, the ingredients lengthen into fibres and wind around one another. The result is a gelatinous red slab of plant meat that contains long, thick, elastic muscle-like fibres which look and flake apart like pulled pork or beef. Dr van der Goot's team has shown that when grilled, cuts from this "muscle" can sizzle, brown and give off aromas like a steak.

From an environmental perspective, the new meats are surely better. Rearing and slaughtering animals is an inefficient way to produce food, says Bruce Friedrich of the GFI. Most of the energy that goes into making a cow is used as it walks around, digests food and grows the non-edible bits of its body such as bones and hooves.

As yet, rigorous environmental assessments of plant-based meats are rare. But both Impossible Foods and Beyond Meat have commissioned independent researchers to carry out life-cycle analyses of their products. Their findings are encouraging. "The main message is very clear—the two plant-based burgers represent very large, often ten-fold, savings in the environmental burdens of food consumption," says Ron Milo, a biologist who studies sustainability at the Weizmann Institute of Science in Israel. "These savings are true for greenhouse emissions, land use and water use." (See chart.)

Such greenery appeals to the young, the urban and the wealthy. However, to make a difference to the planet, meatless meat needs to be on billions of plates, not just millions. Over the past two years both Beyond Meat and Impossible Foods have worked with chains such as Burger King, Dunkin' and Kentucky Fried Chicken, making sure that their brands feature prominently on menus. The Impossible Burger is also served in the British Airways first-class lounge in New York; the Beyond Burger, in business class on some Virgin Atlantic flights. (Before they start feeling smug, passengers should bear in mind that eating plantburgers on a flight is not a meaningful way to offset the carbon emissions of a transatlantic journey.)

Selling alternative meat in restaurants allows customers to try it in a setting where they are less price-sensitive, says Justin Sherrard of Rabobank, a Dutch lender. A bigger test, he says, will be how these patties fare in supermarkets, where shoppers watch pennies.

Hoping to mimic the success of plant-based milks, Beyond Meat insisted that its products were placed in the same refrigerated aisles in supermarkets as its animal-based competitors—a condition that Whole Foods, a supermarket chain, acceded to in America in 2016. Sainsbury's, a British supermarket, now stocks plant-based meat in the meat aisle.

Price, however, is still a problem. According to analysts at Bernstein, a research firm, a Beyond Burger retails at $11.50 per pound in supermarkets, compared with $7-9 for posh meat patties. On September 20th Impossible Burgers made their debut in America's supermarkets, retailing for around $12 per pound. But competition should lower those prices. Consumers' appetite for plant-based meat is bound to attract new entrants with cheaper offerings.

For its part, Beyond Meat hopes that as it ramps up production, prices will fall. Peas, the main source of protein used in its burgers, are in plentiful supply worldwide, thanks to an import ban in India last year. But getting them from the field to the plate has been tricky. The protein is extracted by firms such as Puris or Roquette and then transformed into burgers by Beyond Meat. Bottlenecks in the pea-protein supply last year delayed the firm's launch in Europe. Limited production capacity prompted it to fly patties to Europe from its only plant in America (hence your correspondent's peripatetic patty at Honest Burger in London). Only more recently has production capacity risen to meet demand. Beyond Meat's new Dutch plant will help. Puris has teamed up with Cargill, one of the big four grain traders, to expand capacity. Roquette is investing €500m to do the same.

Smaller firms that specialise in ingredients for plant-based food have started to spring up, and more established ones, such as Ingredion, are moving into this space too. Its researchers are investigating whether other crops, such as yellow peas and fava beans, can make good meatless meat. They are also hoping to breed new varieties of soya and wheat. Earlier this year Motif Ingredients, a startup created by Gingko Bioworks, a biotech firm in Boston, raised $90m to develop specialised ingredients for plant-based products. Jon McIntyre, Motif's boss, aims to make flavourings and other additives (to improve texture or bite, say) by inserting specific DNA sequences into the genomes of yeast. Fermenting that yeast will then produce their desired products. Both companies hope that their products will help even the smallest firms to create their own plant-based meats from scratch.

Plant-based-meat firms are ramping up their research and development departments. Producing Impossible's burger has involved countless experiments and prototypes, since 2011, to identify which proteins could best bind the patty together or to understand the ratios of the various ingredients needed to produce a meaty flavour. Mr Lipman, the chief scientist, boasts that his company's offices contain the tools of a modern biotech lab. All this costs money.

Big food producers are getting involved. Kraft, an American firm, funds an incubator that invests in "disruptive" food brands. Unilever, a big conglomerate, bought the Vegetarian Butcher last year for an undisclosed amount. When it comes to R&D, Niko Koffeman, one of the founders of the Vegetarian Butcher, says that Unilever will invest as much as is needed to make the company the "world's biggest butcher".

None of these developments has escaped the attention of traditional meatpackers. Tyson Foods, a large meat processor based in Arkansas, was an early investor in Beyond Meat. In June it joined the fray more directly, launching a range of plant-based "chicken" nuggets and "blended" burgers, made with both plants and animal meat, which it claims are healthier than the traditional kind.

The impossibilities are endless

Other firms are trying to woo customers by making animal husbandry greener. Danish Crown, Europe's largest pork producer, has said it wants to halve its emissions by 2030 by using energy and water more efficiently, and using greener packaging. More investors are demanding transparency on how meat is sourced, says Aarti Ramachandran of the FAIRR Initiative, a group that tells investors they might lose money if they back environmentally dodgy meat producers.

Other meat makers are lobbying for protection. Terrified of the prospect of meat grown from stem cells in labs, the beef industry in America has been urging legislatures to restrict the use of the word "meat" to that which comes from an animal carcass. At least nine American states—including Arkansas, Missouri and Mississippi—have now agreed. The National Cattlemen's Beef Association is also asking the Food and Drug Administration, the federal regulator, to outlaw what it sees as misleading labelling of plant-based meat. In April the European Parliament's agriculture committee recommended the introduction of a ban on plant-based meat producers using such terms as "burgers" and "sausages", although the proposal has not yet been debated or voted upon by the full parliament. The European Court of Justice ruled that many plant-based alternatives could not be labelled "milk" in 2017, but this did not noticeably affect demand.

The fight over labels is a sign that meat producers are on the defensive, says Mr Friedrich of the GFI. "The meat industry attempting to define meat as something that comes from a slaughtered animal is every bit as absurd as trying to say that your phone is not a phone because it doesn't plug into a wall any more," he claims.

When plant-based meat becomes common, language will no doubt adapt. The word "meat" may one day simply evoke the sensory experience that comes from eating a particular blend of fats, amino acids, minerals and water. Whether that is made by slaughtering animals or by some other means depends on the ingenuity of the new meat makers. ■

The world economy
The end of inflation?

The end of inflation?

Inflation is losing its meaning as an economic indicator

Economic policy must adapt, says Henry Curr

Print | Special report Oct 10th 2019

INFLATION USED to be the scourge of the world economy and the bane of American presidents. In 1971 amid an overheating economy Richard Nixon took to television to announce a freeze on "all prices and wages throughout the United States". A board of bureaucrats ruled on what this meant for everything from golf club memberships to commodity futures. Gerald Ford, Nixon's successor, preferred a grassroots approach. He distributed buttons bearing his slogan: WIN, for "whip inflation now". Ronald Reagan, running for office four years later amid another surge in prices, declared inflation to be "as violent as a mugger, as frightening as an armed robber and as deadly as a hit man".

Today the lethal assassin has gone missing. Most economies no longer struggle with runaway prices. Instead they find inflation is too low, as judged by their inflation targets. A decade of interest rates at or near rock-bottom has not changed that. Nor has the printing of money by central banks in America, the euro zone, Britain and Japan that has expanded their balance-sheets beyond a combined $15trn (35% of their combined GDP). Nor have unemployment rates that are in many countries the lowest they have been for decades.

The IMF counts among its members 41 countries in which monetary-policy targets inflation. Add in the euro zone and America (where the Fed has multiple goals), and you get 43. Of those 28 will either undershoot their inflation targets in 2019 or have inflation in the bottom half of their target range, according to the fund's most recent round of forecasts. (When those forecasts are updated on October 15th, after this special report goes to press, that number will probably rise.) By GDP 91% of the inflation-targeting world is an inflation laggard on this measure. That includes nearly all the advanced economies under examination—Iceland is the sole exception—and more than half of the emerging markets.

This shift in the inflation landscape reflects both the successes and the failures of economic policy. The advent of inflation-targeting central banks since the 1990s has gradually immunised economies against runaway prices. But policymakers seem either unwilling or unable to stop inflation falling short of their targets. This special report will argue that anchored inflation expectations, technological change and the flow of goods and capital across borders have conspired to make inflation a less meaningful—and less malleable—economic indicator. Central banks are therefore finding their targets harder to hit. At the same time, constraints on monetary policy mean that the risk of inflation shortfalls looms larger than that of excessive price rises. Central bankers and politicians must find ways to adapt economic policy to this new world.

Disinflation nations

Low inflation is striking over both the long term and the short term. In the long term it is the culmination of a decades-long trend. The rich world conquered runaway prices by the late 1990s as governments made central banks independent and gave them inflation targets. In the 2000s and the early 2010s commodity-price booms kept prices rising at a decent clip. But since the oil price crashed in 2014, inflation above 2% has been rare. In emerging markets it is higher, but the direction of change is the same (see chart). For nearly two decades economists have talked of an era of "global disinflation".

In the short term low inflation is especially striking because it seems to defy the "Phillips curve", the supposed inverse relationship between inflation and unemployment. In two-thirds of countries in the OECD, a club of mostly rich countries, a record proportion of 15- to 64-year-olds have jobs. According to the models taught in economics courses and used by central banks, a jobs boom on this scale should have brought accelerating prices and wages. For the most part, it has not.

Central bankers have been caught out. For years they have promised that jobs growth would soon be over and inflation would rise. They have repeatedly been proved wrong and are conscious of their mistakes. In February 2016 Mario Draghi, the outgoing head of the European Central Bank (ECB), described whether inflation targets can be met as "the most fundamental question facing all major central banks". Mark Carney, governor of the Bank of England, recently warned of an "increasingly untenable" economic-policy consensus. In March this year Jerome Powell, the Fed's chairman, said low global inflation was "one of the major challenges of our time". The Fed's failure to hit its inflation target has encouraged an assault by President Donald Trump, who is incensed that in 2018 Mr Powell slowed growth by raising interest rates to see off an inflationary threat that has not yet materialised.

The disease of the 1970s and 1980s was simultaneous high inflation and high unemployment. That both are now low might seem like cause for celebration. Certainly inflation below target is a better problem to have than runaway prices. But it poses problems for three reasons. First, it represents a missed opportunity. Monetary policy could have been looser, and hence growth faster, without price pressures taking off. Second, central banks missing their inflation targets undermines their credibility. In Europe markets' long-term inflation expectations have sunk to little over 1%, lower than when the ECB started its quantitative-easing programme in early 2015, despite an inflation target of below but close to 2%. When inflation targets are not credible, the future is more likely to spring a costly surprise. Unexpectedly low inflation causes lenders to profit and borrowers to suffer, because debts do not shrink as fast in real terms as they were expected to when loans were agreed.

Most important, low inflation can be self-reinforcing. More significant than the nominal interest rate set by central banks is the real interest rate, which adjusts for inflation. As the public comes to expect lower inflation, the real rate rises, weakening demand and pushing inflation down even more. That would not be a problem if central banks could cut the nominal rate further to fight the disinflationary slump, but they have little room to do so. In Europe and Japan nominal interest rates are already below zero. They are near zero in Britain, and only a little higher in America. Though the exact location of the lower bound on interest rates is uncertain, it exists somewhere because the public always has the option of holding cash at a zero nominal return.

Why has inflation reached this curious—and precarious—point? Some would argue that inflation is falling short because governments have lost the ability to boost prices. This cannot be true. If it were, they could cut taxes to zero, boost spending, print money to finance the resulting deficits and never see an inflationary downside. Inflation will always respond, eventually, to a determined policymaker who has access to interest rates and the printing presses. Governments can always debase their currencies, as high inflation in Argentina and Turkey shows.

This might suggest that below-target inflation reflects only a failure of ambition. But that is not right either. Inflation has become harder to fine-tune because economies have changed in ways that are not yet fully understood. Monetary policy must not just become more ambitious but also adapt to rely less on failing models and to take a longer-term view. And while central banks are hamstrung by low rates, fighting low inflation will increasingly fall to fiscal policy. The case for reform rests first on an understanding of where economic models have gone wrong. ■

See next article: Economists' models of inflation are letting them down

Finding Phillips

Economists' models of inflation are letting them down

Why has the "Phillips curve" failed at both ends?

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ONE OF THE economic models named after William Phillips is physical. The Phillips hydraulic computer uses flows of water to simulate flows of money in the economy; its success helped earn Phillips a job at the London School of Economics in 1950. Today economists can bring the full power of modern computing to their calculations. But they still depend utterly on another Phillips eponym: the curve tracing the relationship between inflation and unemployment (see chart). It comes in various flavours, but the basics underpin central banking. If unemployment falls too low, inflation will rise; too high, and it will fall.

Over the past decade the "Phillips curve" has failed at both ends. First came the so-called "missing deflation". The financial crisis sent rich-world unemployment soaring to 8.5% by the start of 2010. Both theory and experience suggested that this should have caused a prolonged slump in inflation. But it did not. The IMF wrote of "the dog that didn't bark"; some economists argued that unemployment had become structurally higher (meaning it would not affect prices). It was only once oil prices collapsed in late 2014 that the rich world faced serious disinflationary pressure, with the euro zone falling temporarily into deflation in 2015 and 2016.

By then, however, labour markets were recovering. Unemployment fell and then fell some more. Today the proportion of 15- to 64-year-olds with a job is at a record high in two-thirds of OECD countries. Pockets of continued high joblessness remain in places such as Spain and Italy but, for the most part, missing deflation has become missing inflation. The Phillips curve you can still find in the data is extraordinarily flat. Economists at Goldman Sachs estimate that a one-percentage-point fall in American unemployment, for example, is associated with a 0.1-0.2-percentage-point rise in inflation—so small as to be difficult to perceive. Some economists argue that it is increasingly viable to forecast inflation without any regard to unemployment at all.

There are three potential explanations for a flat Phillips curve, none of them entirely satisfactory. The first is that it is a statistical artefact. In a recent working paper, Michael McLeay and Silvana Tenreyro of the Bank of England argue that the relationship between inflation and unemployment is subject to "Goodhart's law": that observed statistical relationships collapse once they are exploited by policymakers (not to be confused with the "Lucas critique", which says that some relationships cannot be exploited at all). Suppose a central bank cares about both unemployment and inflation. In a downturn it will ignore higher inflation if it needs to get unemployment back down. Yet when unemployment is low, central banks will react hawkishly to any sign of fast price rises. Over time those preferences will create an artificial positive correlation between inflation and unemployment, offsetting the underlying causal relationship running in the other direction.

This argument has some traction. In 2011, for example, a spike in commodities prices pushed inflation up but most central banks ignored it to focus on healing their scarred economies. Later in the decade, amid low unemployment rates, monetary policymakers became more attuned to the risk of overheating. It would be odd, however, to explain low inflation by appealing solely to deliberate choices on the part of central banks, when they themselves profess to be confused by inflation's quiescence. Moreover, the argument does not suppose that unemployment can fall for ever without inflation surging. Even if a flat Phillips curve over time is no surprise statistically, today's particular combination of low inflation and ultra-low unemployment still can be.

What to expect when you're expecting

The second potential explanation concerns inflation expectations. The public's ability to anticipate an overheating economy, or at least to notice prices rising faster and adjust their expectations accordingly, is supposed to be a driving force behind the Phillips curve. Firms should raise prices and workers should demand higher wages as soon as they see a boom coming.

Such expectations seem to be getting stickier. Canada, New Zealand and Britain have barely reacted to short-term changes in inflation since 2000, according to the World Bank. Benoît Cœuré, a rate-setter at the ECB, has studied the sensitivity of households' fears that inflation might spiral out of control to perceptions of current price rises. Before the euro the two were closely linked; in the era of the single currency the link has been severed. In America, too, inflation expectations react more slowly to economic data than in the past, according to research by Damjan Pfajfar and John Roberts of the Federal Reserve. It might be that prices now rise so slowly that it is no longer worth paying attention to economic news.

There is little doubt that without the amplifying effect of inflation expectations the Phillips curve should be flatter. But although expectations are supposed to be important, they are not supposed to be everything. Eventually, economies must find that rising demand runs up against supply constraints. Hence the third, and most credible, explanation: that the Phillips curve still exists, but is "non-linear". Prices and wages could suddenly and quickly accelerate should unemployment fall beneath some threshold at which everything becomes unanchored.

Where might such a threshold lie? Answering that question requires breaking the inflation puzzle into its constituent parts. First, to what extent are firms' costs—most importantly, wages—rising? Second, are firms passing on those costs by raising prices?

The link between unemployment and wages has loosened but remains intact. In America and the euro zone wage growth has risen gradually in recent years as labour markets have tightened. America is further ahead, but in both cases the figures remain underwhelming by historical standards: 2.7% and 3.2% respectively, as this report went to press. Only in Britain has wage growth really taken off, reaching 4%, its highest since 2008, in July. Still, in most places the link between employment and wages remains discernible. The only real exception is Japan, where wage growth is flat despite monetary policy under the "Abenomics" programme driving a remarkable jobs boom (see chart). Japan's culture of lifelong employment, in which some workers find it hard to move companies for higher wages without losing social status, is probably part of the explanation.

Elsewhere it is the second link, between wages and prices, that seems to have vanished. On neither side of the Atlantic has core inflation displayed the same gradual upward trend as wages. Britain is an exception, but it has also had an inflationary devaluation of its currency since its vote to leave the European Union in 2016.

There are two ways to have wage inflation without price inflation. The first is a productivity boom, hitherto absent. The second is if firms' profit margins fall. There is clear scope for lower margins in America, where since the mid-2000s firms have enjoyed profits, as a share of GDP, that have been historically high. Profits have begun to come down in recent years as wage growth has risen. The question is how much further they might yet fall, given that America's high profit margins also reflect a lower level of competition in the economy. Outside America margins are lower and so profits provide less of a buffer between costs and prices.

In summary, if you wanted to tell a story about when inflation might take off in the rich world, it would go something like this. Wage growth is strongest in America, but so are profits. Once margins fall, firms will have no choice but to raise prices. In Europe profits are lower, but so is wage growth, because Europe's labour market has not boomed as much as America's. If it ever does, inflation will budge. The Phillips curve is non-linear, meaning that prices will suddenly rise sharply only once economies cross the inflationary Rubicon. Central banks will have to fight the subsequent overheating or risk losing control of inflation expectations, as they did in the 1970s. Japan, with its entrenched deflationary mindset and unique labour-market institutions, is a special case.

The problem with this story is that financial markets do not expect it to happen. As this report went to press, the price of swaps implied that America's consumer-price index between 2024 and 2029 will rise by an average of just 1.9% per year. Because the Fed targets an index that tends to undershoot the CPI by about a third of a percentage point, this implies missing the central bank's 2% target by a long way. In Europe the same measure of inflation expectations languished around 1.2%. Sometimes policymakers try to explain away markets' low inflation expectations by saying that they are driven by a lower risk of very high inflation, rather than a change to traders' central expectations. But this does not sit well with the idea of an inflection point in the Phillips curve lurking, ready to catch central banks off-guard.

Perhaps markets expect that recession, or at least an end to the jobs boom, will render the argument moot. But the puzzle has been enough to prompt a search for disinflationary forces beyond monetary policy and labour markets. One is technological progress. ■

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Alexa, how much is it?

Technology is making inflation statistics an unreliable guide to the economy

Some people blame Amazon for low inflation

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AMAZON IS USED to fielding accusations: that it has killed off physical retail business, that it mistreats warehouse workers, that it abuses its dominant platform in online sales. So perhaps it is not a surprise that some people also blame it for low inflation. In 2017 Janet Yellen, then chair of the Federal Reserve, wondered aloud if cut-throat online competition might be stopping goods-producers raising prices even in a world of rising demand. Alberto Cavallo of Harvard Business School has found that Amazon's prices are 6% lower than those of eight large retailers, and 5% lower than on those retailers' websites. The internet in general is no place to go in search of inflation: in America online prices have been falling fairly steadily since about 2012 and are lower than they were at the turn of the millennium.

Yet the so-called "Amazon effect" should not seem so novel. The winds of disinflation have been blowing through American retail for decades. In the 1990s and 2000s big-box retailers like Walmart and Target ruthlessly cut goods prices as they optimised their supply chains. Cheap imports from China and other emerging-market economies squeezed domestic producers. One study in 2008 found that low-wage countries capturing 1% of market share in America was associated with a 3.1% fall in producer prices. There has been barely any cumulative rise in American consumer-goods prices, excluding food and energy, for two decades. Before the financial crisis, inflation as a whole behaved normally because services inflation held up. Today, both goods and services inflation are low (see chart). The rise of online retail does not easily explain that broader shift.

Nonetheless, technological advance is a disinflationary force worth pondering. At a basic level, it allows an economy to produce more with its finite resources. If aggregate demand does not keep up, prices will fall—or at least not rise as fast. The idea that inflation has been low lately because productivity growth has been strong seems laughable everywhere except Silicon Valley because economic statistics have documented a global slowdown in productivity growth. Yet there is an argument that statisticians fail to capture some technological advances, making productivity seem lower and inflation higher than they really are.

The basic concern is a longstanding one. Because it takes a while for statisticians to notice that consumers are buying new products, they miss precipitous price falls early in a product's life. It is also hard to tell how much better new products are than what went before. In today's economy the missed value comes from smartphones, social media and online streaming. Spencer Hill, an economist at Goldman Sachs, recently calculated that the measured growth in consumption of personal electronics, communications and media was lower in the 2010s than in any of the five preceding decades. That was despite the fact that in 1990 it would have taken perhaps $3,000 to replicate even the basic functions of a modern phone—and only by using very bulky devices. In real terms, consumption in this category is surely soaring. The statistics must be missing something.

Statisticians are constantly battling the problem. But a review of America's inflation indices in 2018 by Brent Moulson, a former top government official, estimated that the inflation index targeted by the Fed remained upwardly biased by almost half a percentage point, primarily because of new products and quality changes. The shift to online sales could be making new-product bias worse. A paper by Austan Goolsbee and Peter Klenow of Stanford University found that even excluding clothing, for which tastes are fickle, 44% of online sales in a database produced by Adobe Analytics, a computing company, were of goods that did not exist in the prior year. With such high churn the basket of goods monitored by official statisticians would quickly go stale. Messrs Goolsbee and Klenow have, for some categories of goods, helped Adobe Analytics to construct its own "digital price index" which shows much less inflation than official measures. For example, they find that furniture and bedding fell in price by almost 12% online between January 2014 and June 2019, while the official consumer price index records a fall of only 2.1%.

A bigger problem than falling prices is prices that are zero from the start. Most consumers today carry devices in their pockets with which they can make a video-call anywhere in the world, access information on any subject and translate languages instantaneously, all for free. The explosion in the provision of free services is usually cited as a reason to doubt the accuracy of GDP. But it is as big a problem for inflation. First, free services sometimes replace ones that were previously paid for, which puts new-product bias on steroids. Second, if consumers derive a greater share of their well-being from things that come free, inflation ceases to be a good measure of the cost of living or of the purchasing power of incomes.

The value of nothing

Measuring the price of something and measuring its value to consumers are two different tasks. Erik Brynjolfsson of MIT and two co-authors have run experiments in an attempt to do the latter. They asked 3,000 online participants what they would need to be paid to give up Facebook for a month, offering to enforce the deal for a few randomly selected participants using Facebook features that reveal to friends when somebody last logged on. The median response was $42. About a fifth of users quoted somewhere near $1,000. In another experiment they struck similar agreements with participants at a Dutch university, enforcing the contract by getting users to change their passwords, in effect locking them out of their accounts, or to submit to monitoring of their electronic devices. The median figure participants quoted to give up mapping services for a month was about €59 ($64); for WhatsApp it was €536. In another paper Mr Brynjolfsson and his colleagues asked consumers what they would need to be paid to forgo free online search engines for a year: the median response was over $17,500.

These figures can mislead. People will always fear the social isolation that would come with being cut off from the predominant communications technology of the day, whether it is telephones, texts or TikTok. Inflation and GDP were never intended to measure consumer welfare. Some free services are displacing activity which has never been counted in GDP, like casual matchmaking. Free services funded by advertising are not new: radio and television have been around a long time. And advertising is only small relative to the economy. John Fernald of the San Francisco Fed argues that many of the consumer benefits from modern technology are "conceptually non-market".

Yet the line between market and non-market services is hazy. Imputed rent, the money homeowners would have to pay to rent a house equivalent to the one they own, is included in inflation and GDP, despite not representing any market transaction. In another recent paper David Byrne of the Federal Reserve and Carol Corrado of the Conference Board, a business group, argue that smartphones, broadband connections and Netflix subscriptions should be viewed as investments that reap variable dividends over time depending on how intensively they are used. Armed with trends in data usage and time-use surveys Mr Byrne and Ms Corrado construct a quality-adjusted price index for digital access services that shows prices falling by 21% between 2007 and 2017. The official price index for internet access, by contrast, shows prices up 4.5% over the same period.

The fact that inflation may be even lower than is reported is, in one respect, good news: it means that growth in living standards has been understated. But it is troublesome for central bankers who are already undershooting their inflation targets. Moreover, the justification for targeting inflation in the first place rests on the notion that the number is a meaningful representation of the economic experiences of the public and of firms. The more economic activity shifts into a domain where price is a slippery concept, the weaker that link will become. And there is another source of breakdown in economists' understanding of how prices are formed: globalisation. ■

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Prices without borders

Low inflation is a global phenomenon with global causes

The price of commodities, trade in goods and capital flows all play a part

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ECONOMIC MODELS say that less slack in an economy leads to more inflation. But what defines an economy's borders? As inflation-targeting took off in the 1990s, globalisation also accelerated. Trade grew from 39% of world GDP in 1990 to 51% at the turn of the millennium, cross-border finance was liberalised and the internet slashed the cost of communicating. In the 2000s policymakers began to wonder whether integrated markets had made inflation a global process. Economists generally pooh-poohed the idea. But with central bankers searching for explanations for today's low inflation, the idea that global forces might be at work has come back into fashion. It has also become more relevant. If globalisation has held down inflation, might its reversal—thanks to the trade war and Brexit—send it shooting back up?

Inflation has been getting more synchronised across borders. On average, a common global trend accounts for nearly a quarter of the variation in national inflation rates since 2001, according to Jongrim Ha, Ayhan Kose and Franziska Ohnsorge of the World Bank. Add in factors specific to advanced economies and emerging markets, respectively, and trends spanning borders account for more than half the movement in inflation in the rich world and nearly a third of it in poorer countries.

This partly reflects simultaneous trends in monetary policy. But it may also indicate a growing role for global factors. Kristin Forbes of MIT, formerly a Bank of England rate-setter, has studied the drivers of inflation in 43 countries between 1990 and 2017. She includes in her models global factors such as exchange rates, an estimate of global economic slack, and commodities prices, and finds that their input appears to have increased over the past decade. This is especially true when considering only temporary deviations in inflation from its long-term trend.

There are three main sources of global influence on inflation: the price of commodities, trade in goods, and capital flows. Commodities prices are the most obvious and longstanding. Synchronicity of inflation rises after large movements in the oil price, such as the shocks of the 1970s. More recently commodities prices have, on the margin, been driven by demand in emerging markets, especially China. Between 1996 and 2016 the seven largest emerging markets accounted for almost all of the rise in global consumption of metals and two-thirds of the rise in global consumption of energy. As a result, booms and busts in emerging-markets' demand for commodities are felt everywhere. In the mid-2010s it was a commodities bust that helped push Europe into deflation.

That much is not controversial. But another effect of globalisation has been to bring down the price of manufactured goods as their production has shifted to economies with low labour costs. Unlike with commodities, this has been a one-way bet, not a cycle. For decades goods have been getting cheaper relative to services.

Economists can get annoyed by claims that goods trade has dragged down overall inflation. In theory just some things getting cheaper should not be disinflationary because, with the right monetary policy, average prices will still rise fast enough to make up the shortfall. In practice monetary policy works only with a delay. That means changes in relative prices matter. Today, because the Phillips-curve relationship seems to have weakened, central banks often find themselves at the mercy of short-term trends (see article).

Goods trade does not just mean imports of finished products. The recent growth in cross-border supply chains has created conduits along which cost changes in one part of the world flow into the prices of goods that emerge from factories elsewhere. Research by Raphael Auer of the Bank for International Settlements (BIS), Andrei Levchenko of the University of Michigan and Philip Sauré of Johannes Gutenberg University in Mainz has found that half of global synchronisation in producer-price inflation is attributable to prices that can be traced through supply chains. Via this mechanism the average country imports one-fifth of any change in inflation in the rest of the world. Prices are more intertwined in integrated trading regions such as America, Canada and Mexico.

If firms can locate their supply chains where costs are lowest, it becomes easier to avoid economies that are running hot. Only if inflation is driven up everywhere are rising costs inescapable. In other work with his colleagues at the BIS, Claudio Borio and Andrew Filardo, Mr Auer finds that the greater a country's integration into cross-border supply chains, the more inflation tracks slack in the global economy. If imports of inputs to production double as a share of GDP, the sensitivity of inflation to global economic conditions also appears to double. Messrs Ha and Kose and Ms Ohnsorge also find that global factors explain a greater share of inflation in countries which participate more in global supply chains.

This view implies that prices in non-tradable sectors, such as services, will remain sensitive to domestic economic conditions. That is what James Stock of Harvard University and Mark Watson of Princeton University find in America. Hotels and restaurants, for example, remain fairly sensitive to labour-market slack. Messrs Stock and Watson are even able to separate inflation into an index that is "cyclically sensitive" and one that is not.

The third global factor is capital flows. As inflation has synchronised across borders, so too have long-term real interest rates. For the past four decades they have moved in tandem as saving and investment have been brought into balance globally. And they have moved in one direction: down. In other words, there appears to be a glut of global saving. The potential reasons for this phenomenon, which was first identified in the mid-2000s, include ageing populations, slower productivity growth, a scarcity of safe assets relative to risky ones, and a dearth of lucrative opportunities for private-sector investors.

It is not just long-term rates that have fallen in tandem. So have the "equilibrium" short-term rates which anchor monetary policy, according to estimates by John Williams, president of the New York Fed, and Kathryn Holson and Thomas Laubach of the Fed in Washington, DC. Falling equilibrium rates mean that any interest rate central banks choose is less stimulative than it would have been a decade or two ago. In other words, the effects of excess saving spill across borders. Current-account surpluses in, say, Japan and Germany, which together totalled nearly half a trillion dollars in 2018, bear down on the interest rates that must be set by the central banks of other countries to keep inflation on target.

That is fine if central banks adjust accordingly. The problem is that equilibrium rates have been driven close to zero. Unable to cut rates much, central banks find that the only way to fight disinflationary pressure is with unconventional measures like quantitative easing (QE). These are themselves policies with global consequences. QE is supposed to work in part by getting investors to buy riskier assets. That adjustment happens on the balance-sheets of asset managers who invest worldwide. As a result it sends billions of dollars of capital looking for interest rates to drive down elsewhere.

Ironically, the recent incremental reversals of globalisation provide good examples of the importance of global financial conditions to inflation. In theory tariffs should boost inflation in the country that sets them. But as the trade war between America and China heated up during 2019, it sparked fears about global growth and triggered a rush into safe assets such as Treasury bonds. Long-term bond yields fell to new depths and the dollar surged. In response the Fed has cut rates and the ECB has restarted QE.

The deflationary impact of a change in global risk appetite has proved far more significant than the modest inflationary impact of the tariffs themselves. Only in Britain has the rolling back of globalisation, via its vote to leave the EU, had a very noticeable upward effect on prices. But even that was due to a fall in the value of the pound; the direct effect of Brexit, if and when it happens, could seem small in comparison.

One group of countries feels the effects of the global financial cycle above all others. For emerging markets, it is so important that they face a distinct set of monetary-policy challenges. ■

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You’re hot then you’re cold

Why onions and pigs can give economists a headache

Idiosyncratic price rises can make targeting inflation tricky

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IN FEBRUARY 2017 Verizon, an American mobile-phone carrier, started offering mobile-phone connections that put no limits on data. “Unlimited adventures, unlimited laughter, unlimited connections,” promised an advert. They might have added “unlimited woe for central bankers”. The category of inflation in which mobile-phone plans feature subsequently plummeted, dragging overall core inflation down by about 0.2 percentage points at a time when it had been forecast to rise. For the best part of a year the Verizon disinflation became crucial to central bankers’ own communications, as they promised financial markets that the effect would soon wear off.

One-shot changes in prices constantly play havoc with central bankers’ attempts to target inflation down to the last tenth of a percentage point. In early 2019 Germany’s statisticians improved their monitoring of how holiday prices vary with the seasons. Unfortunately this captured volatility that has disrupted the index. In May the prices were 9% down on a year earlier; in June they were 6% up. Package holidays make up nearly 3% of German household consumption, giving them enough weight to cause volatility in overall inflation. And because Germany accounts for nearly one-third of the entire euro-zone inflation basket, the movements are large enough to show up at continental level (just like the tourists themselves).

In India onion prices are an important part of the inflation recipe. The vegetable is prominent in the Indian diet. When prices rise it not only brings tears to the eyes of consumers, but can send financial markets tumbling. Politicians, fearing voters’ wrath, scramble to act. In 2013 a 370% jump in wholesale onion prices caused inflation to spike; a sustained shortage led Prime Minister Narendra Modi to tighten export controls the following year.

In China pork is what matters—the country consumes as much hog meat as the rest of the world combined. Unfortunately an epizootic of African swine fever has recently wiped out at least a third of all the pigs in China. This pushed pork inflation to above 47% in August in a market that is already volatile, contributing nearly half a percentage point to headline inflation. In an attempt to abate price pressures China has released meat from its frozen-pork reserves, an emergency facility created in the 1970s (many countries have oil reserves for the same reason).

These are not the only ways in which idiosyncratic price rises trouble the world’s economists. Staff at the International Monetary Fund are suffering from a heady rate of food inflation in their canteen: prices per ounce are up 38% in three years. The result of fewer distortive subsidies, perhaps. Or maybe some sort of programme is needed? ■

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See next article: Most, but not all, emerging markets have overcome high inflation

Fewer exceptions

Most, but not all, emerging markets have overcome high inflation

They have done it by using rich-world methods

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THIS YEAR marked a quarter of a century since Brazil beat hyperinflation with a conjuring trick. The old currency, the cruzeiro, had been debased, suffering annual price rises reaching 2,500%. Following the advice of a small group of economists, the government required firms to list prices and wages in "units of real value", a new unit of account linked loosely to the dollar. Cruzeiros—ever more of them—continued to be used for payment, with the exchange rate between the unit and the currency widely publicised. Eventually the authorities simply scrapped the cruzeiro, replacing it with the freshly-minted "real", which by then was a trusted yardstick. Inflation tumbled to 22% in 1995.

It seemed like a miracle. Yet arguably what came next, both in Brazil and other emerging markets, was more remarkable still. Since then, many emerging-market economies have defeated not just hyperinflation but high inflation too. In 1995 median inflation among emerging markets was over 10%. By 2017 it was only 3.3%. Exclude crisis-struck Turkey and Argentina, and at the start of 2019 the gap between average inflation in emerging markets and advanced economies was at a record low (see chart). In Brazil today inflation is just 3.4%.

This longer, slower miracle was achieved using rich-world methods but in harsher conditions. By the 1990s, and especially after a speculative attack on Thailand's currency in 1997 sparked a financial crisis in Asia, emerging markets were moving away from the old monetary paradigm of fixed exchange rates. At the end of the decade they began to embrace inflation targets. The first to transition was Poland in 1999, followed by Brazil in 1999, South Africa in 2000, Hungary in 2001 and the Philippines in 2002. Today 24 emerging markets have inflation-targeting central banks.

On average they have been a clear success. Inflation has fallen, as has its volatility. Prices still rise faster than in the rich world but targets are also higher: typically closer to 5% than the 2% advanced-economy norm. Yet the landscape is varied. In countries like Chile, with transparent central banks, low public debt and high openness to trade, inflation expectations are pinned down. In others, like India, with higher public debt and less credible institutions, they remain volatile. And emerging markets still provide the main exceptions to global disinflation, including Argentina and Turkey, where inflation is running at 54% and 15% respectively.

This variation is one reason why there is not much head-scratching about low inflation in emerging markets. Another is that fewer central banks than in the rich world—a little more than half of the total—are undershooting their targets. And monetary policymakers are not pressed up against the lower bound on interest rates, at which low inflation becomes a greater threat. But this poses its own problem. Higher rates make emerging markets potentially attractive sources of yield for rich-world portfolio investors, who tend to be fickle. Capital flowing in and out can send exchange rates haywire, affecting not only inflation but also trade and financial stability.

In such an environment anchored inflation expectations take on more importance. They make the response of inflation to exchange-rate fluctuations transient and less severe, thereby allowing central banks to focus on the health of their economies. Last year the IMF found that from 2011 to 2015 monetary policy reacted more to local economic conditions in emerging markets where inflation expectations were better anchored. That was particularly helpful during the "taper tantrum" of 2013, in which the prospect of less quantitative easing in America sent many emerging-market currencies tumbling.

Dollar dilemma

The trouble is that the exchange rate partly determines the local economic conditions to which central banks must respond. As well as boosting inflation, a cheaper currency makes it harder for emerging-market corporations that have borrowed in dollars to service their debts. These dollar debts have grown from 14% to 20% of GDP since 2009, on average. And although in theory a falling exchange rate should at least boost exports, this effect is limited by the fact that so much trade is invoiced in dominant currencies like the dollar or the euro. Research by Gita Gopinath and Emine Boz of the IMF and Mikkel Plagborg-Møller of Princeton University has found that a strong dollar tends to gum up world trade, as well as making dollar debts harder to repay.

As a result, even emerging markets with independent central banks and floating exchange rates can appear to be at the mercy of international financial conditions, in particular the policy of the Federal Reserve. Certainly many still mimic the Fed. As of August, 13 emerging-market central banks had followed the Fed's interest-rate rises in 2018 and cuts in 2019. Several, such as Indonesia and Thailand, raised rates in 2018 even with inflation well under control. And many continue to intervene directly in currency markets, accumulating and running down foreign-exchange reserves even as they maintain a notional commitment to floating exchange rates. "The textbook version of the inflation-targeting framework is obviously too narrow for emerging-market-economy central banks," said Agustín Carstens, head of the Bank for International Settlements and former governor of the Bank of Mexico, in May.

That casts some doubt on the simple story that inflation targeting in emerging markets has been a triumph for conventional economics. What is more, it is uncertain how secure emerging markets' low inflation is. Three factors threaten it: the strength of institutions, fiscal policy and the global environment.

One of the curiosities of the rich world's low inflation is that it has coincided with the rise of populism. Yet it is only in emerging markets, specifically in Argentina and Turkey, that institutional weakness has led to runaway prices. In Argentina President Mauricio Macri's government tried to establish inflation-targeting at the central bank in 2017, but a series of missteps hurt its credibility before a weakening of Mr Macri's re-election prospects caused a further run on the currency. Turkey has an inflation-targeting central bank but it has come under relentless attack from President Recep Tayyip Erdogan, who claims, wrongly, that higher interest rates cause inflation.

Not all populists have laid siege to their central bank. In Mexico President Andrés Manuel López Obrador has promised not to interfere with the Bank of Mexico. In Brazil President Jair Bolsonaro's Chicago-educated economy minister Paulo Guedes has defended the independence of the central bank, and the legislature is considering granting it formal independence. Still, emerging-markets institutions are clearly more vulnerable to populists than the rich world's. Even in India, where the central bank is older than the republic, the head of the central bank resigned in December 2018 after a string of conflicts with the government, which pressed for looser policies and a large bite of the central bank's capital.

Fiscal policy is the second worry. Unlike in advanced economies, budget-balancing played an important role in emerging markets' battle against inflation. Their government debt peaked at over 70% of GDP in the mid-1990s. By the eve of the financial crisis in 2007 it was down to about half that. This was partly just luck. A commodities boom boosted growth and filled government coffers, creating space for central banks to establish credibility, says Guillermo Tolosa of Oxford Economics, a consultancy. It soothed worries about so-called "fiscal dominance", when governments are tempted to inflate away their debt problems.

Since then, however, debt has been rising again. It is forecast to average 53% of GDP this year, and 60% of GDP by 2024. Mr Tolosa is unworried, pointing out that even in Brazil, which has a huge hole in its budget caused by public pensions, inflation expectations are under control. But others, such as the World Bank, have issued warnings about debt. Although economists are revising up their estimates of the debt that advanced economies can bear in a world of low interest rates, the same argument does not apply in emerging markets, where rates are higher and investors flightier.

The final factor is the external environment. Those who champion inflation-targeting reject the idea that emerging markets' disinflation is a result of global factors rather than better economic policy. That is surely right when looking at the long-term trend. But because inflation expectations are less anchored in emerging markets, the short term matters quite a bit. In that respect today's global disinflationary environment surely helps. So whereas the rich world might breathe a sigh of relief were global inflation to rise, it would not benefit emerging markets. And higher inflation in America would probably mean higher interest rates there and hence disruptive capital flight.

The upshot is that emerging markets must remain more vigilant about inflation than the rich world. They have not yet reached the point where more inflation looks desirable. That is true only in advanced economies, and calls for its own policy agenda. ■

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A new monetarism

How to make economic policy fit for a world of low inflation

Both monetary and fiscal policy need to change

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THE HISTORY of monetary policy is one of intermittent revolution. In the whole of the 19th century, constrained by the gold standard, America's prices rose only 12%. After the second world war countries pegged their currencies to the dollar, which was in turn redeemable for gold. That system broke down in 1971 when it was abandoned by America. Its collapse ushered in the era of fiat currencies and preceded the inflation of the 1970s. Inflation-targeting was born out of that debacle and simultaneous intellectual advances by economists, who realised the importance of credible institutions. Over time more central banks committed to "flexible" inflation-targeting, meaning that in a crisis they could prioritise fighting unemployment.

Shortfalls in inflation, combined with very low interest rates, are causing another rethink today. In 2020 the Federal Reserve will report on a review of its targets and tools. The ECB is searching for new ways to fight low inflation in the euro area. Meanwhile economists are increasingly willing to question the dictum set out by Milton Friedman in 1963 that inflation is a monetary phenomenon. A decade of below-target inflation suggests that "what was previously treated as axiomatic is in fact false," according to Larry Summers and Anna Stansbury of Harvard University. "Central banks cannot always set inflation rates through monetary policy."

Central banking has also become more politicised. One of the few ideas to unite President Donald Trump with Alexandria Ocasio-Cortez, a left-wing congresswoman, is the belief that the Fed should stop worrying about inflation and gun for growth. Mr Trump has called Jerome Powell, the Fed's chair, an "enemy" for failing to cut rates as much as he would like as America fights a trade war with China. In Europe the ECB is facing fierce hostility to its negative-interest policy among the German public.

On the left, wacky schools of thought like "modern monetary theory" (MMT), which says, roughly, that as long as inflation remains contained the government can borrow as much as it likes and that fiscal policy should manage the economic cycle, have influenced some people such as Ms Ocasio-Cortez.

This environment brings risks. A history of inflation by economists at Deutsche Bank warns that periods of high inflation have tended to accompany transitions between monetary-policy regimes like the abandonment of Bretton Woods. Nobody should welcome reforms to central banks led by populists. It would be wrong to suppose that low inflation expectations are immutable or there to be exploited, whether to boost growth or to fund more government spending. Stimulated too much, economies will eventually overheat. An environment of low inflation does not justify tearing down institutions that guard against currency debasement like that seen in Argentina and Turkey.

Yet reform is needed to achieve three goals. First, central banks must improve how they fight recessions. Second, they must find ways to steer the economy despite a flat and uncertain short-term Phillips curve, the relationship between inflation and unemployment. Third, fiscal policy must act as the stimulus-of-last-resort if economies weaken and inflation falls while interest rates can fall no further. These needs are increasingly recognised, but the reforms that are under consideration mostly lack ambition.

Getting real

Take each aim in turn. First, recession-fighting. For several decades economists have had a prescription for monetary policy when nominal interest rates can fall no further: reduce real interest rates instead, by promising more inflation in the future. At the very least, inflation expectations should not be allowed to slip. To that end the Fed may soon commit to targeting 2% inflation on average over the economic cycle rather than at any one point in time. In booms, inflation would be allowed to run a little higher than 2%. In a downturn, this should brighten the economic horizon.

A more effective reform would be to target a long-run path for the level of prices, rather than year-to-year inflation. Policymakers would have to correct their mistakes if prices veered off course. There could be no repeat of the persistent policy timidity seen in the 2010s. After a long downturn and disinflation central banks would have to push to find the limits of the economy's capacity.

Yet this would do nothing towards the second goal: freeing central banks from having to divine the short-term trade-off between inflation and unemployment. To target prices they would still have to judge whether movements in inflation were being driven by the labour market or by supply-side factors, such as technological change or global shocks reverberating through cross-border supply chains. Worse, they would lose some flexibility to ignore temporary distortions. Phenomena such as rising tariffs or oil prices that pushed inflation up and growth down could force central banks to tighten monetary policy to get prices back on course even as the economy suffered.

It would be better for them to remain agnostic on economic relationships that they do not understand and target a single, simpler variable: the level of nominal GDP, or, loosely speaking, output plus inflation. Such a target would incorporate both central bankers' underlying goals of stable inflation and a healthy economy. It would replace their faulty judgment about the

Phillips curve with a better, implicit test: only when growth and inflation rose in combination—a sign of overheating at home, rather than a shock to supply—would they need to get hawkish. There would be no more fine-tuning of the labour market.

The third aim, reform of fiscal policy, is the hardest to achieve. One idea is to sharpen the so-called automatic stabilisers, such as unemployment benefits, which ensure a mini fiscal stimulus during downturns. Governments could legislate in advance to cut, say, payroll taxes when the unemployment rate rises sufficiently. This would not hurt. But it would be an incremental reform that cannot compensate for a total loss of monetary-policy firepower. Calibrating a sufficient fiscal stimulus without knowing the economic circumstances in which it would apply is too difficult.

In addition to beefing up automatic stabilisers, governments should also find a way to give central banks some scope for fiscal action that can be used at their discretion. A recent paper by Blackrock, an asset manager, whose authors include Stanley Fischer, a former vice-chair of the Fed, suggests central banks should have a "standing emergency fiscal facility". The idea is that in a deep slump, central banks would be authorised to create money to finance new spending or a tax cut.

Technocrats cannot easily oversee a fiscal stimulus. Monetary policy is not about building bridges or setting rates of income tax. The redistributive effects of low rates, which some say has exacerbated wealth inequality by boosting asset prices, are controversial enough without central banks deciding how society's resources should be spent. So politicians would need to agree on the structure of the central bank's fiscal tools in advance. One simple option would be a uniform handout to the public in which every adult received an equal share of newly created money. Central banks' role would be what it has always been: to calibrate the size of the stimulus and ensure a credible commitment not to overdo it.

It is wishful thinking to imagine that these reforms can happen quickly, not least because they involve handing more power to technocrats. For good reason the role of monetary policy is constrained by law. In Europe it is set by treaty. It may take a downturn to create political impetus for change. But sooner or later economic policy will have to adapt to today's disinflationary world. ■

See previous article: Most, but not all, emerging markets have overcome high inflation

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Self-driving cars
Autonomous ways

Autonomous ways

Chinese firms are taking a different route to driverless cars

The path to a world of self-driving remains long and winding

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THE SELF-DRIVING cars that cruise around South Ronghua Road look just like their American counterparts: chunky sedans with a rack of sensors bolted to the roof and a supercomputer in the boot. Beijing's government has dubbed this south-eastern patch of the city Beijing-E-Town. It is one of a growing number of urban spaces across China designated for testing autonomous vehicles (AVs). Digital lane markers can switch parts of the road to AV-only on demand. Signs announce "National Test Roads". Cars bear the decals of China's leading AV companies: Baidu, Pony.ai, WeRide.

For years Western carmakers have promised a world awash with AVs by now, making roads safer and less congested (see table). That it is not shows just how tough a computational and regulatory nut self-driving is to crack. It increasingly seems that if AVs are to become widespread, it may happen first not in the West but in China. A fleet of Chinese firms hope to profit handsomely in the process.

That may seem counterintuitive. Technologically, the West appears streets ahead. "Everybody is behind Waymo and Cruise," concedes a senior Chinese AV executive, referring, respectively, to a subsidiary of Alphabet (Google's holding company), and of General Motors (GM), a giant carmaker. Waymo's cars alone have self-driven more miles than all Chinese AVs put together. Cruise has attracted $6.2bn of investment since GM bought the startup for $1bn in 2016. CB Insights, a research firm, estimates that $11.9bn has been invested in American AV firms since 2014, compared with $4.4bn in China.

AVS with Chinese characteristics

Yet in the absence of driving software which can handle chaotic city streets, some Chinese firms are adopting an alternative strategy. They are turning the streets themselves into something that software can handle. The approach involves installing sensors to guide cars, writing and enforcing rules about how humans move around, designing (or redesigning) urban landscapes to be AV-friendly and, critically, limiting AV firms' legal liability in the event of inevitable accidents. All this is easier in authoritarian China than in the West's unruly, litigious democracies.

It also requires input from companies beyond dedicated AV-makers. Mobile-network operators, such as China Mobile, and telecoms-equipment manufacturers, like Huawei, are building technology into their systems which may in time help cars along the road. Huawei wants its zippy 5G mobile antennas to take on a large part of the processing required to run an AV—and a chunk of AV profits. That leaves a smaller share of the pie for AV companies. But the pie itself should grow more quickly. Lowering the cost of infrastructure per AV deployed should accelerate its roll-out, notes Feng Hao of Bosch, a German engineering conglomerate which supplies high-tech components to Chinese carmakers.

In a recent speech China's minister of industry and information technology, Miao Wei, said that the market for connected vehicles is projected to be worth 100bn yuan ($14bn) by next year. And as with just about anything, the potential demand for AVs among 1.4bn Chinese is huge—$2trn by 2040, reckon consultants at McKinsey.

Chinese firms may prosper well before the eventual arrival of all-out AVs. They already benefit from the leapfrog effect, says Wei Zhou, boss of China Creation Ventures, a venture-capital fund. Cowa Robot, one of his firm's investments, has sold autonomous street-sweeping robots to authorities in Changsha, the capital of Hunan province. Horizon Robotics, which is valued at $3bn, furnishes specialised AV computers for companies like Cowa.

The ability to make money now by automating simpler tasks keeps the firms going on the way to fuller autonomy—a luxury few American rivals, up against powerful incumbents like municipal-services companies, enjoy. At the same time, they are shielded from foreign competition by rules that limit overseas AV companies to minority stakes in Chinese-led joint-ventures.

Chinese AV companies have one final advantage over their Western peers: explicit support from the Chinese state. "There's a lot of fuel coming from the government planning," says an executive of one Chinese firm. The government wants companies like his to succeed, and is willing to use its autocratic muscle to build infrastructure, promote new technology and rewrite policy. It will spend up to $220bn on 5G by 2025, according to state media, and plans to install AV infrastructure throughout the 2020s, including telecoms networks to capture data from vehicles and their surroundings, cloud-computing capacity to process these data and map services to guide the cars.

In addition, the authorities promote AV-friendly standards and regulations. They can stitch "National Test Roads" into the urban fabric without the fuss Western authorities can expect from local residents. In one-party states like China "you have single-focus government that can make things happen", sums up Amer Akhtar of DeepMap, a Californian maker of software for maps which AVs need to navigate.

The road is not all smooth for China's AV industry. Together with the rest of Chinese tech, it is caught up in the Sino-American economic war. In May America's government barred its companies from supplying Huawei, on the ground that its kit might allow Chinese eavesdropping. On October 7th another eight Chinese companies were added to the blacklist, including those working on things useful to AVs, like computer vision (see article).

The prospect of losing access to American technology is particularly worrisome for AV companies, because the Chinese car industry relies heavily on foreign suppliers for the electronics that power modern vehicles. Last year Chinese imports of integrated circuits totalled $312bn, ten times the value of imported car parts. Chinese entrepreneurs eyeing the Chinese AV market have founded plenty of promising startups—but many of them in Silicon Valley, subject to American law. Efforts to make more cutting-edge gubbins at home are moving slowly.

Nor are Chinese AV developers immune from the biggest problem which afflicts their Western rivals. Like them, Pony.ai, WeRide and others continue to lose money. This may not change soon. The desire of motorists to own self-driving cars has yet to be tested. The business model of ride-hailing, where future profitability is in part predicated on the eventual removal of costly human drivers, looks shaky. Investors are growing impatient with loss-making firms such as Uber, which has shed a third of its stockmarket value since going public in May. It may take longer for software to become competitive with *Homo sapiens* in China, where labour remains relatively cheap. As one global car executive puts it, "If drivers are abundant but space on the road is not, the problems you should be solving first are not about taking the driver out of the car."

China's approach to self-driving reflects its attitude to development more broadly: heavy on infrastructure and government oversight, lighter on cutting-edge technology and civil liberties. It may one day prevail over the Western path to autonomy. Whether Chinese AV companies will stand on their own four wheels as profitable businesses is another matter. ■

One in the AI

America blacklists China's best artificial-intelligence firms

The move, linked to repression in Xinjiang, strikes at the heart of China's technological ambitions

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FOR TWO years reports of mass incarceration have seeped out of the remote Chinese province of Xinjiang. Over 1m people, mainly Uighurs and other Muslim minorities, have been locked up in camps. Millions more live under a police state. American officials, fearful of upending trade negotiations, have dithered over a response. On October 7th, three days ahead of the 13th round of talks, they put their foot down. The Commerce Department banned American firms from selling software and hardware to 20 public-security organs. It also blacklisted eight Chinese companies whose products, it says, facilitate the Orwellian surveillance in Xinjiang.

The ban hits at the heart of China's artificial-intelligence (AI) ambitions. The eight firms include startups working on facial recognition (Megvii, SenseTime, Yitu), voice recognition (iFlytek), digital forensics (Xiamen Meiya Pico) and chipmaking gear (Yixin), as well as Shenzhen-listed makers of video-surveillance kit (Hikvision and Dahua). Together they are worth around $75bn. In August Megvii and Yitu were designated as national champions.

How much will it hurt? Most of the firms are probably using American components. The 10% post-ban drop in the share price of Ambarella, an American maker of computer-vision chips, suggests that the Chinese are important customers. Huawei, a telecoms giant on the same blacklist since May over concerns that Chinese spooks use its gear to spy on America, expects to lose $10bn in sales this year as a result, mainly from its smartphone business.

Things may not be so bad for the octet, at least in the short run. They have been hoarding parts in anticipation of a ban and have sought other suppliers. Since the array of components they require is tiny next to Huawei's needs, they can buy essential ones on secondary markets. Jefferies, a bank, reckons domestic chipmakers such as DeePhi, Horizon and HiSilicon, an arm of Huawei, can make up any shortfall.

The firms were quick to downplay the ban's impact on their business. Xiamen Meiya Pico said its hardware was mostly home-grown and "highly replaceable". iFlytek said the restrictions would have "no significant impact" on daily operations. Most cameras built by Hikvision and Dahua are thought not to contain sophisticated American innards. For the "very small fraction" that cannot be substituted, Hikvision said it would ask clients to source and integrate the parts themselves.

The ban's longer-term effects look hazier. It has spooked the firms' Western research partners, whose help they rely on to develop cutting-edge technology. On October 9th the Massachusetts Institute of Technology, which cut ties with Huawei earlier this year, said it was reviewing those with SenseTime. American suppliers who lobbied their government to keep selling to Huawei may recoil at defending firms suspected of aiding human-rights abuses.

Foreign customers and investors may be put off, too. Over a quarter of Hikvision's revenues come from abroad. In 2018 it entered the MSCI index of emerging-market stocks. But foreign shareholders are skittish. After selling down its stake UBS, a Swiss bank, is no longer among its ten biggest investors. This week Goldman Sachs, an investment bank, said it was reviewing its role in Megvii's forthcoming flotation in Hong Kong. Megvii insists its blacklisting reflected a "misunderstanding" of the company, which earned 1% of its revenue in Xinjiang last year and requires clients "not to weaponise our technology".

The ban came days before the latest round of trade talks, due on October 10th, after *The Economist* went to press. President Donald Trump may see it as a bargaining chip. Samm Sacks of New America, a think-tank in Washington, discerns darker motives. The blacklisting is "a clear shot across the bow from the decouplers of DC", she says, referring to national-security hawks intent on disentangling the commercial ties that bind the two superpowers. Sure enough, the move led China to decry America's "wanton interference" in its internal affairs. It threatened retaliation. ■

***Correction** (October 10th 2019): An earlier version of this article implied that all of Huawei's $10bn in reduced revenues would be down to its smartphone business. That is expected to be the main reason for lower revenues, but not the only one.*

Bartleby

In praise of dissenters

It pays companies to encourage a variety of opinions

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THE STORY of the emperor's new clothes is one of Hans Christian Andersen's best-known fables. Conmen fool the monarch into believing they have made him a fabulous suit that the unworthy will be unable to see. Courtiers dare not say that the emperor is naked; it takes a child to point out the obvious.

The moral is that people are often too hidebound by social convention to state their views. How many companies have ploughed ahead with expensive projects that were favoured by the chief executive, even when other managers have had doubts? In his new book "Rebel Ideas: The Power of Diverse Thinking", Matthew Syed, a sportsman-turned-journalist, argues that the key to dealing with this problem is "cognitive diversity". In other words, assembling a team of people with different perspectives and intellectual backgrounds.

He begins with the striking example of the failure of the American authorities to prevent the terrorist attacks of September 11th 2001. An important reason, he argues, was that the CIA was dominated by white Christian males, who failed to grasp how Osama bin Laden was exploiting Islamic symbols to build support. Or take the British government team that introduced the poll tax in 1989-90, a disastrous policy that led to riots in Trafalgar Square. The policy's masterminds were all drawn from wealthy stock and did not appreciate quite how hard it would hit low-earners.

People from different backgrounds approach problems from different angles—that much should be blindingly obvious. It is not just about selecting people for teams from both sexes and various ethnicities (though that, too). Hire only Cambridge politics graduates (or Harvard MBAs or Stanford software engineers) and they will have studied under the same professors and absorbed similar world views, regardless of their gender or skin colour.

In the modern world, with all its complexity, co-operation is essential if breakthroughs are to be made. In science and engineering, 90% of papers are now written by teams rather than individuals. Analysis of American patent filings since 1975 showed teams dominate in every one of the 36 defined categories.

There are two elements to selecting a good team. First, assemble people with diverse viewpoints. Second, ensure that those viewpoints are heard and respected. That may not happen if those in charge are overbearing. A study of over 300 projects by the Rotterdam School of Management found that those led by junior managers were more likely to succeed than those led by senior managers—maybe because other team members were less intimidated about pointing out potential pitfalls to someone lower down the pecking order.

The ability to speak up within an organisation, without fear of sanction, is known as "psychological safety" and was described by Amy Edmondson of the Harvard Business School in a book on the issue. Mr Syed cites a study of teams at Google, which found that self-reported psychological safety was by far the most important factor behind successful teamwork at the technology giant.

One way to overcome diffidence while brainstorming, for instance, is for everyone to write down their ideas but ensure they are anonymous. That way, opinions about thoughts are less closely tied to the seniority of the thinker and can be tested against each other with less fear or favour (though some degree of second-guessing is probably unavoidable). Increasing the number and range of ideas on offer (within reason) may be the secret of success. As Mr Syed writes, the willingness to share knowledge pays off in a world of complexity.

Another advantage of diversity is that outsiders can spot profitable opportunities that insiders may miss. Immigrants account for 13% of the American population but 27.5% of those who start a new business. By their nature, migrants have more get-up-and-go than the average person—otherwise they wouldn't move. Some may start businesses because existing ones won't hire foreigners. But Mr Syed is probably right that experiencing more than one culture is a competitive advantage.

A fresh perspective may help existing firms, too. Studies show that firms with more diverse boards enjoy higher returns than ones with identikit directors. Correlation is not causation, of course; successful businesses may feel freer to appoint atypical board members. But a bit of variety can't hurt.

In for the long haul

Trade disputes harden the Airbus-Boeing duopoly

A Chinese rival is having trouble getting off the ground

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VICTIMS OF A long-running trade dispute between Boeing and Airbus are proliferating. Americans keen on a Spanish olive before a main course dusted with Italian Parmesan and washed down with Scotch will have to stump up more cash. The World Trade Organisation (WTO) has given America the go-ahead to impose $7.5bn-worth of tariffs on a smorgasbord of European imports on October 18th after ruling that Airbus had received illegal state aid in Europe. Passenger aircraft made by Airbus and parts that feed its factory in Alabama will be on the menu. But efforts to tackle anticompetitive practices in aerospace may only strengthen the planemakers' stubborn duopoly.

Europe will doubtless retaliate. Shortly after Boeing brought its case against Airbus at the WTO, the European firm launched a similar one against its American rival. After 15 years of legal wrangling both have been found to be roughly equally at fault. Europe can expect to be given the opportunity to levy tariffs of its own in a few months unless a negotiated settlement, which has proved elusive, is agreed. Europe is sure to include Boeings.

Tariffs will raise the cost of each firm's aircraft in the other's market. Airlines play one off against the other to get the best price. In the short term orders will be hard to switch. But industry-watchers predict that, in the long run, America's carriers will plump for Boeings and Europe's will favour Airbuses, creating captive home markets.

It would not be the first instance of trade-dispute mechanisms stifling competition. In 2008 Canada's Bombardier, a maker of regional jets, launched the C-Series, a plane that competed with some smaller models made by Boeing and Airbus. Cost overruns and delays threatened the C-Series until an order in 2016 from Delta, an American airline, seemed to guarantee its future. But Boeing complained to American regulators about Canadian subsidies, leading to the imposition of a vast tariff. The levy was later struck down by an American tribunal—but not before Bombardier had handed half the struggling C-Series programme to Airbus to keep it alive.

To keep pace with Airbus, in 2018 Boeing sought a controlling stake in the commercial-aircraft arm of Brazil's Embraer. On October 4th the European Union opened an investigation into the planned tie-up claiming that it would "eliminate a small but important competitive force" and ultimately hamper rivals making similar planes in China, Japan and Russia. Some suspect that the move to clip Boeing's wings shortly after America imposed its latest tariffs is not coincidental.

Another rival to Airbus and Boeing, China's COMAC, might also suffer. If Europe and America become domestic monopolies, their main battleground may switch to Asia, where demand for air travel is soaring. Airbus's most recent annual industry forecast for the next 20 years predicts that Asia will account for 42% of new aircraft sales, compared with 36% for Europe and America combined. COMAC's C919, a supposed short-haul rival to Airbus's narrow-body A320 and Boeing's 737, is not taken seriously as a threat by the pair. Boeing's troubles with the 737 MAX, grounded since March and awaiting regulatory approval to fly again after two fatal crashes, may not provide COMAC with much of an opening. In part this is because the C919, first conceived over a decade ago, has been serially delayed. A recent announcement of yet another hold-up means that the first customer, China Eastern Airlines, may not get its first plane until 2022. Meanwhile, Boeing and Airbus have launched planes widely considered better than the C919, have set up factories in China and are sure to compete fiercely with each other, making COMAC's life in its home market tougher.

China's government has twisted the arms of domestic airlines to order C919s but it will be hard to force a less sophisticated aircraft on Chinese carriers, which already have big fleets of Western planes. Airbus and Boeing are clamouring for business with new ones built in China. Trade disputes, it seems, may help keep the aerospace duopoly aloft. ■

Energetic listing

Saudi Aramco is raring to go public

An announcement may come as soon as this month

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THREE YEARS ago Muhammad bin Salman, Saudi Arabia's crown prince, suggested floating up to 5% of Saudi Aramco, the world's biggest oil company, at a valuation of $2trn. At first glance now is a terrible time to do so. A month ago drone attacks suspended more than half the giant's output. On October 7th security concerns prompted Fitch Ratings to downgrade Aramco's credit by a notch. To make matters worse, fears of an economic slowdown that depresses demand for crude has dragged the oil price down below the level before last month's attack.

Apparently unfazed, Aramco is forging ahead with plans to list a portion of its shares. Prince Muhammad and the ministers overseeing the offering want this done in short order. To that end, last month they appointed Yasir Al-Rumayyan, the head of Saudi Arabia's sovereign wealth fund, as Aramco's chairman. The press-shy company is inviting reporters to its vast complex in Dhahran. When your correspondent visited this week, executives touted Aramco's capabilities, from drilling analytics to research on fuel efficiency. More important, the company has devised new dividend and royalty policies, presented to bank analysts last month. Nine banks are soliciting feedback from potential investors. An announcement of an intention to float may come by the end of October.

There is logic to this sprint. There have been many reasons to delay Aramco's initial public offering, from concerns about the legal risks of listing abroad to uproar over the murder last October of Jamal Khashoggi, a journalist, in the Saudi consulate in Istanbul. But the main reason for pursuing the IPO—to raise money to help the kingdom diversify its economy—remains pressing. And Aramco looks better prepared today than it did last year.

In March the company announced it would pay $69bn for a 70% stake in SABIC, a petrochemical company owned by the Saudi sovereign wealth fund. In April it issued bonds to help finance the deal, which will help Aramco expand its downstream business, a strategic priority (underscored by its decision in August to buy 20% of the refining-and-chemicals business of Reliance, an Indian conglomerate). The bond prospectus amounted to a 469-page dress rehearsal for required IPO disclosures.

The market liked what it saw. Aramco's $111bn in net income in 2018 was nearly twice that of Apple, the world's most profitable listed company, and more than that of the five biggest publicly traded oil giants—ExxonMobil, Royal Dutch Shell, BP, Total and Chevron—combined. Investors lapped up $12bn-worth of Aramco bonds.

Aramco has also worked hard in the past few months to assure potential investors that they will not be neglected as the company serves its royal master. In September it said non-state shareholders will get a proportionate share of "an annual base dividend" of $75bn in 2020. The firm intends to maintain the same payout to minority investors until 2024 even if the total dividend declines. If crude prices rise, their dividends could grow, too. The state, meanwhile, would get a progressively larger windfall from royalties when oil fetches more than $70 a barrel. Below that, it would receive a relatively slim royalty of 15%.

The company is moving forward with plans for an initial listing on the Tadawul, Riyadh's stockmarket. Some large international investors have voiced concerns about a lack of liquidity on the Saudi exchange (see chart). Last year $232bn of shares was traded on the Tadawul, about one-twentieth the volume traded on the London Stock Exchange.

However, the government has taken steps to liberalise rules on the exchange and is eager to boost the kingdom's financial sector. A Tadawul listing also avoids the kind of legal liabilities that might arise from listing in, say, New York. Aramco looks likely to list 3% of its shares by the end of the year, according to a person familiar with the matter, before pursuing a secondary listing abroad.

Whether the IPO will be as Prince Muhammad once envisioned is another matter. Aramco has denied reports that the kingdom is pressing Saudi families to be cornerstone investors. Investors have grounds to be nervous. The company says production has recovered to the level before the attacks but they were a reminder that its 257bn barrels of proven reserves are not just uniquely vast but unusually concentrated and vulnerable. Last, Aramco must decide how much it thinks it is worth. One of the main metrics for valuing an energy firm, notes Oswald Clint of Bernstein, a research firm, is the dividend yield. The best supermajors offer about 6%. For Aramco's $75bn payout to match this would imply a valuation of $1.2trn or so, well short of the original princely sum. ■

Strike force

A strike at General Motors is hitting its suppliers hard

Talks with labour unions have stalled

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AMERICA'S BIGGEST carmaker is in the grip of the longest industrial action it has suffered in decades. In 1970 a crippling strike called at General Motors by the United Auto Workers (UAW), the industry's main labour union, dragged on for 67 days. On September 16th UAW workers at its plants across North America once again walked out. Their chief gripes include GM's use of temporary workers, health-care benefits and product allocation at various plants. Although the company is highly profitable, its boss, Mary Barra, intends to reduce costs dramatically in order to invest more in electric vehicles. A sudden breakthrough is possible even in such heated negotiations. But as *The Economist* went to press on October 10th, the strike looked poised to reach the one-month mark.

GM is already feeling the impact. It makes about 2m vehicles a year in its American factories, which were shut down immediately by the walkout. Most GM plants in Canada and Mexico, which make roughly another 1m vehicles a year, were forced to shut a few days later. By the reckoning of JPMorgan Chase, a bank, this lost output has already slashed GM's profits this year by over $1bn. It is now costing the firm roughly $82m in earnings each day.

A healthy cash cushion of nearly $20bn at the end of June should help GM stay afloat. The firm should be able to boost production quickly after the strike ends. The same cannot be said for most of its suppliers. As a consequence, these companies have been hit much harder.

The outlook for North American makers of car parts was darkening before the GM strike. Moody's, a credit-rating agency, now forecasts that their earnings before interest, taxes and amortisation will decline by 9.7% this year compared with 2018—a much steeper fall than it predicted at the start of the year. The main reason is its expectation that global car sales will droop by 3.8% this year.

A prolonged strike will make things worse. Adam Jonas of Morgan Stanley, an investment bank, calculates that by day 22 the strike had already cost suppliers around $3.7bn in total revenue. Every day it goes on they lose another $170m.

In dollar terms, the hardest hit company is Magna, a Canadian maker of drivetrains and other complex systems with a market capitalisation of $15bn. It is losing $27m in earnings before interest and taxes a week. Smaller suppliers are even less able to withstand shocks. Lear and American Axle, two domestic producers of seats and driveshafts respectively, are losing $16m-17m each a week, according to JPMorgan Chase. Measured as a share of market capitalisation, the hit to American Axle is more than ten times that to bulkier Magna.

In defending GM's workers the UAW may be hurting others who are worse off as it is. The Centre for Automotive Research, an industry think-tank, puts the average total labour cost (including benefits and profit-sharing) at GM at $63 an hour, above Ford's $61, and $55 at Fiat-Chrysler. Suppliers, especially smaller ones, pay far less.

Dale Rogers, a supply-chain expert at Arizona State University who grew up near Detroit, still has family working at GM. For every worker at a car plant owned by the big carmakers and affected by a strike, he recalls, the rule of thumb used to be that ten workers at suppliers in neighbouring cities like Toledo and Lansing would suffer. "When Detroit catches a cold, Toledo gets pneumonia," he says, invoking a local adage. The rise of vehicle production in Tennessee and other parts of the American south means that Motor City no longer dominates carmaking. Even so, there is still truth in this old Michigander saying. ■

Schumpeter

Airbnb and Uber are chalk and cheese

As the home-rental firm prepares to go public, it is keen to point out how its business differs from ride-hailing

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THEY ARE the two most prominent examples of what used to be called the "sharing economy". Founded in 2008 and 2009, respectively, Airbnb and Uber pioneered asset-light platforms to bring together providers and consumers of particular services—accommodation for the first, transport for second. Both firms became bywords for entire categories: startups now claim to be Airbnb for dogs or Uber for doctors. But Uber's stockmarket flotation in May did not go well. Its share price has fallen by nearly 35% since its listing (and that of its rival Lyft, which went public in March, by 50%). As Airbnb prepares to go public next year, its boss, Brian Chesky, has been making the case for his company, both to the press and behind closed doors. He is keen to get across that, sharing-economy heritage notwithstanding, Airbnb is no Uber.

Mr Chesky founded the firm with his friends Joe Gebbia and Nate Blecharczyk, after he and Mr Gebbia, both unemployed designers, began renting out an airbed in their San Francisco apartment to make extra money. He originally thought it would be a side-hustle while he started a social-media startup. As is often the way, the side-hustle turned out to be the better idea. After an initial focus on renting spare beds in cities during conferences, when hotel rooms were scarce, the startup expanded into rental of entire properties. In 2009 Airbed and Breakfast became Airbnb. Since then more than 500m stays have been booked through its platform, which now offers more than 7m properties (including 4,900 castles and 2,400 tree-houses) in over 100,000 cities. Each night, around 2m people around the world stay in an Airbnb.

Having been in roadshow mode for several months, Mr Chesky has polished answers for everything up his sleeve. Not that there is much room up the former bodybuilder's sleeve: his rippling physique sometimes strains the buttons of his shirt. Oof! He cleanly dispatches a question in a television interview about safety and hidden cameras, then flips it around into an opportunity to talk up Airbnb Plus, a premium tier of properties that are even more closely vetted. Pow! He bats away the notion that he is worried about Marriott, a hotel giant that is launching a rival to Airbnb called "Homes & Villas", instead seeing it as an endorsement of his model. Indeed, Airbnb is punching back, letting hotels list rooms on its site and investing in properties custom-built for Airbnb rental.

The firm has grand designs to move beyond accommodation, and provide the entire trip: where to go, what to do and how to get there, not just where to stay. It intends to team up with airlines to "elevate" the experience of air travel. As part of this effort earlier this year Airbnb hired Fred Reid, the founding chief executive of Virgin America, though Mr Chesky is cagey about details. Already, users of the Airbnb Luxe service (where those castles, and other fancy venues, are listed) are assigned a "trip designer" to help them arrange transport, restaurants and other perks. Indeed, Airbnb's main growth plans hinge on offering users not just a bed but an experience, "designed and led by inspiring locals" to boot. Airbnb Experiences, launched in 2016, uses the Airbnb platform to link guests with locals who can provide things like guided tours or cooking workshops. In June it added Airbnb Adventures, which arranges trips for up to 12 people in exotic places. People don't travel to sleep, Mr Chesky likes to say, but to have an experience.

So far, so Uber. The ride-hailing giant, too, has expanded into areas like food delivery and road freight. But here the similarities end, starting with money. Whereas Uber has yet to turn a profit (and, sceptics say, never will), Airbnb says it is already profitable (to be precise, EBITDA-positive) and has been since 2017, when it is thought to have earned $93m on revenues of $2.6bn. That is not the only distinction. For ride-hailing firms like Uber and Lyft, supply and demand must be matched in the same city; a driver in Manhattan is no use to a rider in Mumbai. Airbnb's listings, by contrast, are global. Any property anywhere can potentially appeal to any user; a Mumbaiker may want to stay in New York. A telltale sign of Airbnb's superior "network effects" is that whereas drivers for Uber often drive for Lyft, and vice versa, doing their utmost to play the platforms off against each other, most of Airbnb's listings do not appear on any other platform.

Unlike Uber drivers, few of whom were previously riders, Airbnb hosts typically start out as renters first. Since it is a middleman for property rather than labour, Airbnb has avoided the controversy about "gig economy" exploitation, and the vexed question of whether ride-hailing firms should treat drivers as employees.

An accommodation with regulators

More broadly, Airbnb decided earlier than Uber to work with regulators rather than fighting them. It has struck deals in more than 500 big cities around the world. It says it has collected more than $1bn in hotel and tourism taxes in America alone and is "on track to become the world's largest single collector of these taxes".

A few worries linger. One has to do with its long-running feud with regulators in New York, who in February demanded data about New Yorkers who are listing properties for short-term rental on the site, in violation of local laws. Another pertains to protests in cities, such as San Francisco, where residents gripe that renting properties to tourists leaves fewer for long-term renters, making already high prices unaffordable. Airbnb has also grappled with the problem of some hosts being racist towards guests.

These concerns pose the biggest threats to a smooth stockmarket debut (expected to be by the trendy mechanism of a direct listing) in 2020. Airbnb's most recent funding round valued it at $31bn. In the meantime, Mr Chesky tirelessly talks up its growth potential. This month Airbnb launched Animal Experiences, a subcategory of experiences, from honeybee therapy to llama-trekking to elephant-spotting. It is a reminder, if one were needed, that although they are often lumped together, Airbnb is not at all like Uber and Lyft—but a different beast entirely. ■

Finance and economics

Indian banks
Skeletons in the closet

Skeletons in the closet

Indian banks' share prices are being hammered

Investors worry about what horror will be revealed next

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THE RUN on the Punjab and Maharashtra Co-operative Bank (PMC), a small Indian lender, is now in its third week. At a branch in Mumbai near the Reserve Bank of India (RBI), the central bank, depositors wait in line, scanning their mobile phones. But the calm is deceptive. A single bankrupt borrower, Housing Development and Infrastructure Limited (HDIL), accounted for 73% of PMC's loan book. As part of the elaborate deception it created 21,000 fake customer accounts.

Posted outside PMC branches is a letter from the RBI dated September 23rd. A passage is highlighted in pink: withdrawals are to be limited to 1,000 rupees ($14) over six months. That fired the starting pistol for the bank run. Protesters showed up at the gates of the RBI. The withdrawal limit was raised in response, first to 10,000 and then to 25,000 rupees. That was high enough to cover the balances of 73% of customers, but represents just 7.75% of the bank's $1.7bn of deposits. Government-backed deposit insurance covers just 100,000 rupees per account.

PMC's chairman, Waryam Singh, as well as the head of HDIL, Rakesh Wadhawan, and his son Sarang, have been arrested. Local papers are plastered with tales of the Wadhawans' close relationships with politicians, lavish parties with Bollywood stars and assets seized or sought by enforcement agencies, including Rolls Royces, private planes and a yacht thought to be in harbour in the Maldives.

During the past six years the government has done much to clean up India's banks. Bad loans have been identified and written off. The bosses of three of the four largest private banks have been pushed out because of lax lending practices. On paper, the bigger ones, at least, look in fine shape. The 18 banks classified as "public sector" look weaker, but in August the government said they would be consolidated into 12 in the hope of boosting their performance.

But PMC's collapse has investors on edge. The shares of all but a handful of banks have suffered. At another moment, the failure of a minnow like PMC would have been seen as a singular tale of wrongdoing and excess. Now, says one financier in the midst of the tumult, it seems like proof of systemic failings. India's financial sector needs to restore trust, wrote S&P, a rating agency, in a recent note. "Contagion risk", it added, "cannot be ignored in a market when paranoia sets in."

In the past the authorities have avoided forcing losses on account-holders after banks have failed, by arranging shotgun marriages with healthy institutions. That solved immediate problems but created moral hazard. Co-operative banks typically offer high interest rates in order to attract funds, but with no salutary past examples of losses, customers regard high rates as an opportunity, not a warning. According to Credit Suisse, just 30% of deposits across India's banking system are insured. A bill that would have allowed failing banks to force losses on all depositors lingered in parliament. After criticism it was dropped last year. Recent weeks have seen calls for its revival—and vociferous objections.

This moral hazard is just one of the weaknesses of India's financial architecture thrown into stark relief by PMC's troubles. Another is an awkward structure that PMC shares with many lenders. As a bank it is supervised by the RBI, but since it is a co-operative, the state where it is located shares responsibility. That split too often means lax oversight—and increases the possibility that PMC is not an outlier. India has around 1,500 co-operative banks, accounting for 8% of bank deposits and 11% of assets—a small but by no means insignificant share.

And then there are the non-bank financial companies (NBFCs). These make loans but do not have the same obligations as banks to tie up a hefty chunk of their capital with the RBI and in "priority lending" (meaning to agriculture and a range of government-endorsed activities). As a result, they have become essential to everything from auto to consumer to company finance. According to a study by BCG, a consultancy, the NBFCs account for 55-60% of first-time borrowers.

But NBFCs also suffer from a handicap compared with banks: they are forbidden from raising funds through ordinary deposits. The solution that lenders elsewhere would naturally turn to—issuing bonds with maturities of a decade or more—is rarely used in India. Instead NBFCs fund themselves with short-term loans from mutual funds and—oddly—banks.

This mismatch between short-term funding and long-term obligations is inherently unstable. And in 2018 it came tumbling down when IL&FS, a large NBFC, went bust, making it harder for other NBFCs to raise funds. Many are now struggling. In June one of the largest, Dewan Housing Finance Corporation, run by Rakesh Wadhawan's nephews, defaulted on a loan, triggering a $12bn bankruptcy. On September 12th Altico Capital, a smaller property-finance company, defaulted too. Many more are at risk.

As credit growth has slowed, India's broader economy is feeling the effects. Manufacturing and retail are showing signs of strain. Construction is going through a particularly torrid time. Big cities are littered with frozen projects. One financier in central Mumbai with a particularly panoramic view can count 35 skyscrapers on which work has halted—and with it, any hope that the lenders behind them will be fully repaid. ■

Facing factories

America's slowing economy could become an election issue

But a recession next year does not yet seem likely

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FINANCIAL MARKETS have seen several episodes of panic since early 2018, often triggered by developments in President Donald Trump's trade war with China. And in recent months, indicators of economic activity in America have begun to lose momentum. The worst figures are in manufacturing. Growth in the sector almost halted over the summer. Industrial production declined in July, according to the Federal Reserve, and in September the ISM-Chicago Business Survey, another closely watched indicator, hit its lowest level since 2009.

Jobs figures published on October 4th showed a decline of 2,000 jobs in manufacturing between August and September. In parts of America's industrial heartland, including midwestern states such as Indiana and Michigan, which helped carry Mr Trump to victory in 2016, the hiring slump has been pronounced.

Industry is a politically resonant sector. But more than 90% of Americans work in other parts of the economy, in particular services. What happens next depends on whether the weakness in manufacturing spreads. So far it has not. Private employers added a net 358,000 jobs in the third quarter, down from 527,000 during the same period a year earlier, but still well in positive territory. The unemployment rate, meanwhile, fell to 3.5%, the lowest since December 1969.

Consumer spending is the engine of American growth, and petrol aplenty remains in the tank. Personal consumption grew at an annualised rate of 4.6% in the second quarter of 2019, more than compensating for declining investment and exports. Household debt remains relatively low and incomes are growing.

But here too there are spotty indications of trouble. In September an index of service-sector activity showed signs of a slowdown, and growth in new business was the weakest since the index began in 2009. After stripping out employment growth in the rock-steady education and health sectors, private-sector hiring is trending downward as well (see chart). Wage growth weakened in September, slipping to 2.9% year-on-year from 3.2% in August.

A slowdown is not a contraction, however. Weaker wage growth in September mostly reflected soggy increases for managers, not workers in non-supervisory roles. And there is recent precedent for consumers helping America's economy to sail through a manufacturing downturn. Both output and employment in manufacturing fell in 2016. Though growth and hiring slowed more broadly, they stayed positive, and the economy bounced back the next year.

Yet a repeat performance could be hard to pull off. In 2016, as now, America's factories were hit by a worldwide manufacturing slowdown and a slump in global trade. Then, in 2017, trade recovered strongly as China's government sought to pep up domestic growth. American exports to China, which shrank in 2015 and 2016, surged in 2017. Barring a miraculous resolution of the trade war, nothing similar is likely this time round.

Moreover, in 2017 America's economy received a boost from the prospect of Mr Trump's tax cuts. But the impact of expansionary fiscal policy peaked in the second quarter of this year. By 2020 the federal budget is forecast to reduce, rather than add to, economic growth. As the Democrats' impeachment inquiry gains steam, and congressional business is halted, the prospects of another round of stimulus look dim.

Most probably, the American economy will neither sink into recession nor regain full vigour in the year between now and the presidential election in November 2020. But that will be small consolation to Mr Trump. A similar scenario in 2016 deprived the Democrats of the chance to campaign on a strong economy, and probably contributed to Hillary Clinton's defeat. In the absence of a large, and positive, surprise, the economy may not be the electoral asset Mr Trump had probably been expecting. ■

Loved and lost

Hong Kong's pursuit of the London Stock Exchange ends in tears

That leaves the way clear for the London bourse to buy Refinitiv

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FEW BOURSES have been wooed as often as the London Stock Exchange Group (LSE). It has been the target of a bid every two and a half years on average since going public in 2000, according to Berenberg, a bank. All have failed, including the latest, a £32bn ($39bn) offer from Hong Kong Exchanges and Clearing (HKEX) in September that would have created the world's second-largest exchange group by market value (behind America's CME Group). On October 8th HKEX called the whole thing off.

Charles Li, HKEX's boss, styled himself as a Romeo to the LSE's Juliet, and held out the prospect of a tie-up between East and West. HKEX is China's main gateway to Western capital markets. It offered a 23% premium to the LSE's share price. But the LSE's shareholders wanted more, and a greater share of cash, at which point HKEX's shareholders reportedly balked.

HKEX's management had been planning a run at the LSE for about a year, but delayed it because of Brexit uncertainty. Then their hand was forced. In August the LSE had said it would buy Refinitiv, a data conglomerate, for $27bn. Though the timing was terrible, with protests roiling Hong Kong and an escalating trade war between America and China, HKEX realised it was now or never.

The LSE will now return to its original plan of buying Refinitiv. That will probably leave it too large for any other suitor. The deal is due to be voted on later this year and—regulators willing—to be completed by the end of next year.

As HKEX toured LSE shareholders seeking support, it made sure that they understood the drawbacks of the Refinitiv deal. The main one is Refinitiv's slow growth compared with the LSE. Its data platform is healthy, and combined the two firms' trading platforms should create a formidable business. But its desktop-terminal business, where it competes with Bloomberg and low-cost providers such as FactSet, is weak. Commerzbank, a bank, reckons that just over a third of Refinitiv's assets are in structural decline.

After several acquisitions, Refinitiv's information-technology systems are poorly integrated. Its size relative to the LSE makes it a mouthful. It has nearly four times as many staff, and its revenues and profits are bigger. The purchase "could really penalise the LSE if execution goes badly", says a former LSE executive. Since Refinitiv's purchase last year by Blackstone, a private-equity firm, growth has picked up slightly—revenues increased by 3% in the first half of 2019. But the LSE will need to spend heavily, and perhaps dispose of part of the desktop business.

HKEX's ties with Hong Kong's government mean that its purchase of the LSE would have faced close political and regulatory scrutiny. For the LSE-Refinitiv deal, the big obstacle is competition law. The LSE will become a leading creator and distributor of financial data, the high price of which is raising concerns globally. In 2017 the European Commission blocked a merger between the LSE and Germany's Deutsche Börse on competition grounds. The LSE may have to agree to substantial remedies. Still, British regulators will probably give strong backing to a deal that will ensure it continues to be run from London.

The abortive tie-up inspires thoughts of future matches. The world will probably soon have a few giant global bourses and a constellation of small national ones. HKEX could one day be acquired by a privatised Shanghai exchange; two of America's giant exchange groups—ICE and Nasdaq, say—could combine. Some LSE shareholders are thought to be trying to provoke a bidding war before the vote on the Refinitiv deal, in the hope that ICE might join in. Just three years ago, after all, the LSE was fending ICE off. But stepping in so soon after HKEX's stumble would require strong nerves. ■

Investing for victory

New South Korean investment schemes aim to prop up domestic industry

A trade dispute with Japan has inspired financial nationalism

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A STATUE OF Admiral Yi Sun-Shin, famous for his victories over the Japanese navy in the 16th century, casts a fierce eye over Gwanghwamun Square in the centre of Seoul. Recently he has also been staring down at visitors in branches of Nonghyup, a local bank. A picture of the man in full battle gear encourages customers to invest in the “Certain Victory Korea Fund”, which Nonghyup’s asset-management arm set up in August to bet on domestic firms it says will benefit from government support in the wake of a trade dispute with Japan.

Nonghyup is not the only South Korean bank seeking to capitalise on a nationalist moment. KB Kookmin Bank, a rival, is planning a similar fund. Several have been offering free tickets to a film about a famous battle with Japan to anyone opening a liberation-themed account. One has been giving out loans with the interest rate capped at 8.15%, alluding to August 15th, when the country celebrates the end of Japanese occupation. Another said it hoped its “Liberation Day” savings account would “inspire patriotism” as well as increase customers’ assets.

The financial nationalism chimes with the economic agenda of Moon Jae-in, the president, who has promised billions of dollars in support to local manufacturers of components hit by recent Japanese export restrictions. The aim is to make South Korea “self-sufficient” in such materials. Mr Moon put some of his own money into the “Victory Korea” fund to great fanfare shortly after its launch. Nonghyup says the move drew great interest. Other politicians have since followed.

The Nonghyup fund is still tiny, at just under 90bn won ($75m). It is classified as “high risk”, because it is unclear how successful the government will be in encouraging self-sufficiency. Substituting for imported materials is likely to drive up production costs across the board. And the economic impact of the trade dispute is likely to be negative.

But experience suggests that individual companies benefiting from targeted subsidies could do well, reckons Shaun Roache of S&P, a ratings agency. Samsung, South Korea’s biggest chipmaker, has already begun to use locally produced chemicals to guard against potential shortfalls caused by the trade restrictions. Even if the dispute with Japan intensifies, the admiral’s followers could be laughing all the way to the bank.

Creditworthy

A group of fintech firms are changing the way consumers borrow

Instalment loans are the new credit cards

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JUST UNDER $1.1trn of revolving consumer debt—bills racked up on credit cards—was outstanding in America at the end of August. It is a dangerous type of debt. High interest rates and low minimum repayments mean balances can quickly balloon. But a group of fintech firms are growing fast by offering consumers an alternative.

Affirm, based in San Francisco, was founded in 2012 by Max Levchin, a serial entrepreneur who co-founded PayPal. Rather than offer a line of credit to be used at will, like a credit card, it gives loans of up to $15,000 for specific purchases, to be repaid in pre-agreed instalments. When a shopper makes an online purchase with one of its retail partners, for example Peloton, a seller of fancy exercise bikes, Affirm appears as a payment option at checkout. It does a roaring trade in financing for engagement rings and laptops.

Affirm makes some of its money from interchange fees of 3-6% paid by these merchants. On a three-month loan that works out at about as much as if the item had been bought with a credit card and paid off over the same period. That allows it to offer short-term loans at zero interest. On longer-term loans the cost is fixed when the loan is taken out and does not accrue as with cred it cards, even if a payment is late.

The model for such firms was Klarna, which was founded in Stockholm in 2005 and became a bank in 2017. Like Affirm, it offers medum-term loans repaid monthly. But it also allows consumers to split small purchases, like clothing, into three to four fortnightly zero-interest payments. Afterpay, founded in Melbourne in 2014, also splits payments into four. Both charge late fees, but cap the total. Smaller rivals have sprung up, such as Sezzle, based in Minneapolis and founded in 2016, and Quadpay, based in New York and founded a year later.

Affirm made $2bn-worth of loans last year, says Mr Levchin. Klarna financed purchases worth $29bn in 2018, up by a third from 2017. In the year to June 30th the value of sales financed by Afterpay more than doubled, to $5.2bn. Such speedy growth is reflected in their valuations. Affirm is worth $2.9bn. Klarna raised $460m in financing at a valuation of $5.5bn in August. Afterpay, which went public at a valuation of $1.6bn in 2017, is worth $8.8bn.

They are a particular hit with younger customers, who tell pollsters that they fear credit cards. Affirm says half of its customers are millennials or younger. The average age of a Klarna customer is 32. A quarter of millennials in Australia have used Afterpay, compared with 16% of adults.

Until recently they lent only for purchases at selected outlets. For Afterpay and Klarna, these included Anthropologie, a home-goods and clothing store, and ASOS, an online retailer. But this is changing. In May Klarna launched an app allowing shoppers to pay in instalments at any retailer. On October 7th Affirm introduced an app that pre-approves users for credit they can spend anywhere.

In their latest iteration, such firms seem to approach the territory of credit cards. But Mr Levchin insists that they retain the crucial distinction that makes them a better bet for customers: pre-arranged repayment schedules for each purchase, which cap the amount they will pay.

At present losses are modest—around 1% of the value of financed sales at Afterpay, for example. But the firms are burning through cash to finance expansion, and few have yet lived through a recession.

There are reasons to be sanguine about their prospects during one, however. They have grown sufficiently large that regulators are keeping a close eye on them. They must interact constantly with banks, who intermediate their loans. If regulators had concerns, they could simply tell banks to stop doing business with them.

And their sophisticated credit evaluation uses big data and proprietary models to evaluate how much debt an applicant can bear. Customers are turned away if a loan seems beyond their means, and balances are low. Their methods have done well so far, but as the global economy weakens they will face a tougher test. ■

Bitfinessed

The issuer of a star cryptocurrency is being sued for $1.4trn

Investors allege that Tether deliberately inflated a mega-bubble

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LAUNCHED AS REALCOIN in July 2014, Tether aimed to become a more reliable alternative to Bitcoin, the best-known cryptocurrency. With a $4.1bn market capitalisation, it is now the fifth-largest virtual currency. But its efforts to gain investors' trust have fallen short. On October 6th a group filed a class-action lawsuit in New York, accusing Tether of being "part-fraud, part-pump-and-dump, and part-money laundering". They call for truly startling damages: more than $1.4trn.

In response to *The Economist's* queries, Tether's general counsel said that "the lawsuit is meritless and the plaintiffs' complaint is rife with errors." The firm "has not used Tethers to manipulate any market", he added, and operates in "full conformity with applicable laws".

In 2014 Tether adopted its current moniker, which made its selling point explicit. With dollar reserves that it said matched Tethers one-to-one, it was one of the first "stablecoins"—digital currencies that seek to avoid price swings by pegging their value to the greenback. That made it a useful unit of exchange. Many crypto-trading platforms struggle to secure banking services, and thus dollars, because lenders worry about shady transactions. Punters find it easier and quicker to trade Bitcoins in Tether, and it is the most popular crypto currency pair (see chart).

But Tether is also opaque. When and why it mints coins is unclear. Its general counsel says: "We issue Tethers when customers want them, full stop." In China, where crypto-exchanges are illegal, buyers can swap wads of cash for Tethers, says Philip Gradwell of Chainalysis, a blockchain-analysis firm. Tether's reserves have not been independently audited. It hired Friedman, an accountancy firm, in 2017. In 2018 the firms parted ways. Later that year Tether's general counsel told Bloomberg that an audit "cannot be obtained", citing risk aversion among potential auditors.

And yet its influence on crypto-markets is large. TokenAnalyst, a data-provider, says that Bitcoin prices track issuances of Tethers. On days when new Tethers are minted, the price of Bitcoin, which can be bought with them, rises 70% of the time.

The class action alleges that Tether and Bitfinex, a crypto-exchange that shares the same managers and owners, manipulated markets and raked in profits. In 2017 and 2018, it claims, Tether issued "extraordinary amounts" of unbacked coins to flood Bitfinex, propping up demand for Bitcoin and creating "the largest bubble in human history". Bitcoin prices rose 19-fold between January 1st and December 17th 2017, to more than $19,000 a coin, before falling below $4,000 at the end of 2018. The boom-and-bust, the complaint alleges, destroyed some $265bn in Bitcoin wealth.

Tether's general counsel is adamant that the currency is fully backed. For years, when the firm said reserves it meant hard cash. Yet in March, under criminal probes by America's Department of Justice, its futures-market watchdog and New York's attorney-general, it said that reserves "from time to time may include other assets". A month later its lawyer said in court that Tether was then only 74% backed by cash and cash equivalents.

None of this seems to deter crypto-traders. That may be because Tether is the main provider of liquidity to crypto-markets, accounting for 96% of trading volume in stablecoins. It would be hard to replace. Since April Tether's market capitalisation has more than doubled. In September it launched a new stablecoin—pegged to the offshore Chinese yuan. ■

Tale risk

How stories can help explain booms and busts

Once a narrative takes hold, it can drive markets

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EVERYONE KNOWS, or thinks they know, the story of the Wall Street shoeshine boy. In 1929 Joseph Kennedy, patriarch of the Boston-Irish political clan, had an epiphany while his shoes were being cleaned. When the boy who shined his shoes offered him stock tips, he realised the stockmarket was about to implode. Kennedy promptly sold all his shares and took a short position, betting that the market would fall. When it crashed that October he made a killing.

In his new book, "Narrative Economics", Robert Shiller, a Nobel laureate, offers this tale as an example of a contagious narrative that becomes part of folk wisdom. A story need not be accurate to spread. Mr Shiller searched archives of newspapers from the period, and could find no record of it. But he did find a similar kind of story in the *Minneapolis Morning Tribune*. The stockmarket, it said, could not yet have peaked because "we do not hear of the chamber maids and bootblacks who have cleaned up fortunes by lucky plays." That story was published in 1915.

Whatever their provenance, says Mr Shiller, it matters which kinds of narratives are contagious and why. The ones that catch on have the power to influence behaviour. Stories sway decisions to hire or fire; to buy or sell; to spend or save. These individual choices, writ large, move markets and drive the business cycle. Fundamentals such as prices and profits are just one part of the reckoning. The stories that people tell themselves and each other matter at least as much.

To wield such influence, economic narratives must first become popular. Epidemiology offers a model for how they take hold. Disease epidemics are hump-shaped when plotted on a graph. In the rising phase, the rate of increase of newly infected people (the contagion rate) is faster than the recovery rate plus the death rate. When the recovery rate exceeds the contagion rate, the epidemic falls off. It is the same with stories. A growing number of "infected" people spread the narrative; later on comes a period of lost interest and forgetting.

The most contagious economic narratives drive boom-and-bust cycles. Such narratives have common features. They tend to be oversimplified models of reality and thus catchy. Their success may owe to a "super-spreader", perhaps a celebrity, capable of infecting many people. And they are often part of a narrative cluster, which adds weight to their plausibility. The stockmarket boom of the 1990s was powered by an array of stories: the triumph of capitalism; the rise of the internet; the decline of inflation; and so on.

Some of the most contagious narratives are newer, more resistant variants of old ones. Behind every property boom is a mutation of the eternal narrative about the scarcity value of land. "Who could think of tilling or being contented with a hundred acres of land, when thousands of acres in the broad west were waiting for occupants," says a tract documenting the follies of America's land boom of the 1830s. The global housing boom that led up to the Great Recession of 2007-09 was driven by narratives that persuaded people to think of their homes as speculative investments in scarce land.

A science of economic narratives, of the kind Mr Shiller calls for, would require high-quality data. It would need regular surveys designed to draw out people's justifications for their economic decisions. But interpreting even good data would be tricky. Narratives tend to be ignored by economists because their links to events are complex and variable—as Mr Shiller himself notes. Any official data on narratives would, once published, surely become part of the narrative itself.

The most prominent economic narratives today are not cheery. A monthly survey conducted by Bank of America finds that two-fifths of fund managers expect a recession in the next year. The same proportion thinks the trade dispute between America and China will never be resolved. Besides the trade war, fund managers list the impotence of central banks and a bubble in bond markets as their biggest worries.

Take these messages, add to them bleak surveys of business confidence worldwide, and you might decide to batten down the hatches for a coming storm. If so, you may still be troubled by a nagging doubt, a sense that the story does not quite add up. The usual end-of-cycle euphoria, which causes companies to make unwise investments and draws greenhorns into speculative assets, is not there. The chambermaids and bootblacks have gone missing.

Divine speculation

Raids and arrests cast doubt on the Holy See's clean-up

The pope has hired a retired anti-Mafia prosecutor to help stop the scandals

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THE BLOCK of shops, offices and apartments at 60 Sloane Avenue was once a warehouse for Harrods of London. Now it is the focal point of the latest financial scandal to rock the Vatican—potentially the worst since Archbishop Paul Marcinkus, whose buccaneering presidency of the Vatican Bank in the 1970s and 1980s led it to deal with Masons and mobsters. At stake now, as then, is not just the probity of an individual, but the trustworthiness of the Holy See's system of financial governance.

On October 1st the Vatican's gendarmes, on orders from its prosecutors, raided the offices of the Financial Information Authority (AIF), the banking regulator, and the Secretariat of State, which combines the roles of prime minister's office and foreign ministry in the Vatican administration. They were looking for "documents and electronic devices", the Vatican said. A leaked circular to the Swiss Guards, who control access to the walled city, showed that among the five officials suspended pending the outcome of the investigation was the AIF's director, Tommaso Di Ruzza.

"It's a nightmare," says a senior Vatican official. "It risks undoing everything we have achieved in the past eight years." In 2011 the Vatican agreed to inspection of its financial sector by Moneyval, Europe's anti-money-laundering and anti-terrorist-financing watchdog. It has since created an institutional framework similar to those of more conventional states. Dodgy accounts have been closed at the Vatican Bank (properly known as the Institute for the Works of Religion, or IOR). On the day of the raids the IOR passed the latest milestone on its road to respectability when it began using the money-transfer services of the Single Euro Payments Area.

But the IOR's employees are not the only ones handling money in the Vatican. The Administration of the Patrimony of the Apostolic See (APSA) acts as the sovereign-wealth fund of the Holy See, the central administration of the Catholic church. The government of the Vatican City State earns revenue from the lucrative Vatican museums. And several of the Holy See's ministries, known as dicasteries, manage pots of money without oversight by the AIF.

In 2014 Pope Francis created a Secretariat for the Economy to oversee all the financial activities of the Holy See and the Vatican City State. Its first boss, Cardinal George Pell, who is appealing against a conviction for child abuse in Australia, said that after he took over he discovered "hundreds of millions of euros" that did not appear on the balance-sheet. Some in the Vatican, where conspiracy theories flourish, believe he would not be in jail had he not tried to seize control of those funds.

Also notionally under the new body's remit is the Secretariat of State, which reportedly manages around €800m ($880m). It controls the contributions of the faithful to the papacy—charmingly, if modestly, known as Peter's Pence (St Peter being the apostle chosen by Jesus to lead his church). It is also said to control a pot of cash known as the Paul VI Fund, and assets transferred to the Vatican from the Papal State when it was dismembered in the 19th century.

L'Espresso, a news magazine, reported that in 2011, under Pope Benedict, the Secretariat of State sank almost €200m in a fund registered in Luxembourg. Among its investments was a 45% stake in a London property. A Vatican official identifies it as the converted Harrods depository. The building's managers did not respond to a request for confirmation.

A Vatican source says that the prosecutors' investigation centred on a chain of transactions to extract the Secretariat of State from the fund and give it full ownership of the London property, once more acting through an intermediary. According to this account, the Secretariat sought a loan from the IOR to pay off a mortgage on the property. But the IOR refused to get involved, even though the overall operation had been remodelled at the behest of the AIF to ensure compliance. In an otherwise-vague statement, the Vatican said the investigation was launched on the basis of reports from the IOR and the office of the Vatican's auditor-general, which is also the Holy See's anti-corruption authority.

Why these apparently routine transactions raised such concerns is unclear. Other questions include why the Secretariat of State should twice have made investments in such a roundabout way, especially since it could have benefited from sovereign tax exemptions; why the Vatican Bank and the auditor-general's office went to the prosecutors instead of reporting to the AIF; and why the prosecutors felt the need to involve Mr Di Ruzza since the search warrant accuses him of nothing specific, merely stating that the role of the AIF in the affair was unclear. Noting that the warrant was not signed by the prosecutor hired by the Vatican to investigate financial offences, Andrea Gagliarducci, Vatican analyst at the Catholic News Agency, ventures another question: "Did the green light for the investigation come directly from the pope?"

Among all the questions one thing is clear: the job of keeping the Vatican and its officials out of financial mischief is far from over. That has implications beyond the city-state: the Vatican's secretive culture and sovereign privileges make it ideal for dubious transactions. Yet responsibility for overseeing its sprawling financial sector is divided between departments whose competences overlap and conflict.

Ecclesiastical investments

The Secretariat for the Economy was meant to bring most of it under a single authority. Yet it has never been incorporated into the Vatican constitution. "It exists, yet does not exist," says Mr Gagliarducci. Currently, it has only an acting head. The same is true of the auditor-general's office. The original appointee, Libero Milone, resigned in 2017. He later claimed he was threatened with arrest on "prefabricated charges" if he refused to go. "Evidently, they didn't want me to report some things I'd seen," he said.

It is into this murky scene that the Vatican's latest external hire is due to step. On October 3rd Pope Francis named a retired anti-Mafia prosecutor, Giuseppe Pignatone, as president of the Vatican court. One of his first trials will be that of the former IOR president, Angelo Caloia, who is accused of skimming tens of millions of euros from property deals. Mr Pignatone is best known for his role in busting an organised-crime network in Rome. He says that he is looking forward to a "new and extraordinary experience". ■

Free exchange

What to make of the strife at the ECB

As Mario Draghi prepares to step down, his critics are bashing his legacy

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NOT LONG ago it was hard to find anyone with a bad word to say about Mario Draghi, the Italian boss of the European Central Bank (ECB). He is credited with saving the euro by pledging, in the depths of a crisis in 2012, to do "whatever it takes" to stop the currency from breaking up. He seemed certain to leave office at the end of October to gushing tributes and an assured place in the pantheon of Europe's great leaders. Instead, his critics are out in force.

Their fury was aroused by the stimulus package Mr Draghi unveiled on September 12th, which included cutting interest rates from -0.4% to -0.5% and resuming quantitative easing (QE), the purchase of bonds with newly created money. In the hope of reviving inflation, the ECB has pledged to keep rates low and continue buying bonds until underlying inflation returns to its target of "close to, but below, 2%". At least seven members of its 25-strong rate-setting body, including the central-bank governors of France and Germany, opposed restarting QE. Klaas Knot, the head of the Dutch central bank, called it "disproportionate".

On October 4th the old guard joined the fray. Six former Austrian, Dutch, French and German central bankers released a memo criticising the ECB's direction under Mr Draghi. The bank misinterprets its job of maintaining price stability, they say, and its policies have become entangled in politics. One of the signatories, Otmar Issing, the ECB's first chief economist, was its intellectual leader for its first eight years. If Mr Draghi is the euro's preserver, Mr Issing is one of its creators. How to interpret the strife?

To make the single currency palatable to the inflation-phobic Germans, the ECB was modelled on their central bank, the Bundesbank, with control of inflation at the heart of its mission. (In 1992 Jacques Delors, then the president of the European Commission, joked that "not all Germans believe in God, but they all believe in the Bundesbank.") On Mr Issing's watch, the ECB began life with a "reference value" for growth in the money supply and a flinty view of inflation: anything below 2% counted as price stability. But the reference value fell by the wayside. Mr Draghi views the bank's inflation target as symmetrical, not an upper limit, and has said he would tolerate prices growing faster for a spell.

Teutonic toughness was necessary to tame high inflation in the 1970s and 1980s. But that world is gone. Inflation has exceeded 2% in only 29 of the past 120 months; core inflation, not once. In this environment the memo's worry that the ECB'S symmetrical target might stoke runaway inflation seems absurd. It confirms what Mr Draghi told the *Financial Times* on September 30th: that he inherited a "very conservative" institution. This rankles with old-timers, but it is true. On the eve of the great recession in 2008, the ECB raised interest rates as other central banks were loosening. In 2011, as the euro zone's economy teetered on the brink of a double-dip downturn, it raised rates twice. Those mistakes, and its slowness compared with America and Britain to start QE, left it struggling to convince investors that it would act speedily to head off deflation.

Critics of negative interest rates fear that they do more harm than good by reducing bank profits, thereby deterring lending. But in June the ECB'S economists concluded that banks were passing negative rates on to their borrowers and depositors, thus avoiding a squeeze on their margins and providing an economic stimulus. Even some of the hawks on the ECB's governing council think interest rates can safely be pushed even further below zero.

A fear often heard in the northern countries of the currency bloc—and one implied by the memo—is that QE, by lowering the financing costs of indebted southern governments, allows them to avoid painful reforms. It is true that loose money has benefited highly indebted countries the most. But the old guard are wrong to say that the ECB is deliberately cosseting the southerners. Northerners, too, have enjoyed lower debt-service costs—the German state, for instance, to the tune of €368bn ($402bn), or 11% of a year's GDP, according to the Bundesbank.

Now the ECB is wading into deeper political waters. It has set a limit of 33% on the share of a government's public debt that it will buy. That ceiling will soon be reached in countries, including Germany and the Netherlands, with little debt relative to their size. The bank will then face an unpalatable choice. If it raises the limit it could become such a significant creditor that it might one day have to decide whether or not to veto a country's debt restructuring—a highly political question. If it keeps the limit where it is, it will be able to buy more assets only in those countries where the limit has not yet been reached—making it even clearer that the main beneficiaries of QE are indeed the southerners.

North-south divide

The ECB's critics tend to miss the underlying cause of low interest rates: weak demand across most of the rich world. Ironically, the problem is particularly acute in the euro area, precisely because of fiscal reforms by its southern members. For the euro's first decade, growth and inflation trundled along because excess savings in the north were matched by excess spending in the south. But wage restraint and improved competitiveness in the south since the zone's sovereign-debt crisis has turned those countries into savers, too. The northerners have never adjusted. Their governments remain preoccupied with paying down debt. Their companies gain from a weak euro, but hoard cash rather than investing more or paying higher wages. The result is huge current-account surpluses in Germany and the Netherlands of 7-10% of GDP. The euro area as a whole runs a surplus of 3%.

The critics' timing seems calculated to influence Christine Lagarde, the former boss of the IMF, who takes over from Mr Draghi on November 1st. She has promised to review the ECB's strategy. Ms Lagarde must listen to northerners but also tell them some unwelcome truths. Quelling the dissent would be the first step towards an eventual legacy as significant as that of Mr Draghi. ■

The 2019 Nobel prizes
Supercharged!

The 2019 Nobel prizes

Batteries, exoplanets, cosmology and cell biology win Nobel laurels

And humanity is enriched in both body and spirit

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ALFRED NOBEL'S will states that the annual prizes bearing his name should be given to those who "have conferred the greatest benefit to mankind". The science awards, though, have a tendency to end up in the hands of those who have made esoteric, if profound, advances rather than practical ones. Not so with this year's prize in chemistry. Three researchers—two from America and one from Japan—have been rewarded for their work in developing the lithium-ion battery.

Lithium-ion batteries have transformed society because they are lightweight and rechargeable. They have therefore become ubiquitous in everything from mobile phones, tablets and laptops to electric cars. They could also, in the future, become important in storing the intermittently available energy produced by renewable sources such as wind and solar power, as the world attempts to move away from fossil fuels.

Lithium is the lightest metal in the periodic table (it will float on water, though not for long, because it is also one of the most reactive and turns rapidly into lithium hydroxide), and its atoms have three electrons. Two are tightly bound to its nucleus but the third is easily dislodged to create a positively charged lithium ion.

The beginnings of making a battery out of lithium and its ions came in the 1970s, when the world was gripped by the oil crisis. Exxon, a large oil company, was interested in developing sources of energy that did not involve petroleum and one of this year's laureates, Stanley Whittingham, was working at the time in the firm's research division. He was investigating potential superconductors. Specifically, he was interested in solid materials that contained atom-sized spaces. When ions entered these spaces—a phenomenon called intercalation—some of the properties of the solid material, such as its conductivity, would be changed.

Dr Whittingham discovered that when lithium ions intercalate with a substance called titanium disulphide, the interaction stores a useful amount of energy. Employing metallic lithium as an anode and titanium disulphide as a cathode, he built a rechargeable battery cell that worked at room temperature. In it, lithium at the anode is ionised and the ions thus produced then move through an intervening electrolyte and into the spaces in the titanium disulphide cathode. The liberated electrons, meanwhile, traverse an external circuit to create an electric current that can be used to do work. During its recharge cycle, the external current is reversed and the lithium ions move back through the electrolyte in response (see diagram 1).

At first Exxon thought the battery had great potential and decided to commercialise it. But when oil prices fell back the company lost interest. It was about then that the second of this year's chemistry laureates, John Goodenough, who was working at Oxford University, came across the idea and decided to try to improve it. In 1980 he found that, by replacing the titanium disulphide in the cathode with cobalt oxide, he could double the output voltage.

Akira Yoshino, the third laureate, took Dr Goodenough's idea and transformed it into the modern battery that sits inside the world's computers and phones. In the 1980s he was working at the Asahi Kasei Corporation, in Japan, at a moment when electronics companies were becoming increasingly interested in lightweight batteries that could power new electronic devices such as video cameras and cordless telephones. Dr Yoshino was happy with Dr Goodenough's cathode, but felt that the anode needed redesigning.

Instead of lithium, he tried various carbon-based materials that might hold lithium ions. He found success with petroleum coke, a by-product of the fossil-fuel industry. This, he discovered, could hold such ions in abundance. His design was not only safer than using a pure lithium anode (lithium has a distressing tendency to catch fire), but longer lasting, too. In Dr Yoshino's version of the battery, both anode and cathode have a long life because they are not damaged by chemical reactions as the battery is used or recharged. By 1991, the first lithium-ion battery based on Dr Yoshino's design had been commercialised by Sony, an electronics company.

Speaking at a press conference shortly after being awarded the prize, Dr Yoshino said he had pursued his research in the 1980s purely to satisfy his own curiosity, without much thought as to whether or not his inventions would one day be useful. Given the lithium-ion battery's subsequent (and continuing) importance, Dr Yoshino's curiosity ended up fulfilling Nobel's will to the letter.

Cosmic thoughts

The physics prize was split two ways, but both halves went for discoveries beyond Earth. One was for a finding that is, by astronomical standards, quite close by—a planet going around a star a mere 50 light-years distant. The other was for an overview of the entire universe.

In October 1995 Michel Mayor and Didier Queloz, a pair of astronomers then working at the University of Geneva, presented a paper at a scientific conference in Florence. A few months earlier, they had discovered a planet beyond the solar system. It was a gaseous ball twice the size of Jupiter and was going around a star called 51 Pegasi, at a distance of about 8m kilometres—a twentieth of the distance from Earth to the sun. As a consequence of this proximity it orbited 51 Pegasi once every four terrestrial days and had a surface temperature in excess of 1,000°C. The discovery was a puzzle for astronomers. Until then they had thought that such large, Jupiter-like planets could form only far away from their host stars.

That discovery of 51 Pegasi b, as this planet is now known, launched the field of exoplanet astronomy. To date, astronomers have found almost 4,000 other such planets—and the wide variety of sizes, orbits and compositions of these objects continues to surprise researchers, who have yet to come up with a comprehensive physical theory of how planetary systems form.

Since planets do not shine by themselves, astronomers needed to develop special methods to find them. The one Dr Mayor and Dr Queloz used relies on a phenomenon called the Doppler effect. As a planet orbits its star, that star will also move slightly, as it is pulled around by the gravity of the planet (see diagram 2). This will cause the frequency of the starlight arriving at Earth to oscillate (that is, the star will change colour slightly) in the same way that the frequency of an ambulance siren shifts as the vehicle passes by. Nowadays a second approach, which measures the dip in starlight as a planet passes across its disc, is more common. But the Doppler-shift method, as employed by Dr Mayor and Dr Queloz, is still used as well.

The half-prize for the overview of the universe went to James Peebles of Princeton University, who has spent decades developing a theoretical framework to describe how the cosmos evolved from the Big Bang 13.7bn years ago to the state it finds itself in today. According to Sweden's Royal Academy of Science, which awards the physics prize, Dr Peebles was the person who, in the 1960s, shifted cosmology from speculation to a rigorous discipline.

Until the first decades of the 20th century, astronomers had assumed the universe to be stationary and eternal. This was shown to be incorrect in the 1920s, with the discovery that all galaxies are moving away from each other. In other words, the universe is expanding. Rewind the clock and this means that, at the start of time, now called the Big Bang, the universe would have been incredibly small, hot and dense.

Around 400,000 years after the Big Bang it had expanded and cooled enough for light to travel through space unimpeded. Astronomers can detect the glow of that first light today but, because its wavelength has been stretched by 13bn years of the expansion of space, it manifests itself not as light but as a glow of microwave radiation that fills the entire sky. This cosmic microwave background was discovered, by accident, in 1964 by radio astronomers, who used earlier theoretical work by Dr Peebles to explain their discovery. Dr Peebles also showed that tiny fluctuations in the temperature of the microwave background were crucial to understanding how matter would later clump together to form galaxies and galaxy clusters.

Since the early 1990s, space-based observatories have built up increasingly precise portraits of the cosmic microwave background and, true to Dr Peebles's predictions, these show that temperature variations of just one hundred-thousandth of a degree map onto the observed distribution of matter and energy in the universe.

Rewarding cosmic shifts in understanding might seem to be a normal day's work for those who give out the Nobel prizes. But Martin Rees, Britain's Astronomer Royal, sees something new in this year's awards in physics. The award to Dr Peebles, he says, will be welcomed by physicists as recognition of a lifetime of sustained contributions and insights by an acknowledged intellectual leader, rather than a one-off achievement.

Such lifetime-achievement awards are more usually associated with the Oscars than the Nobels. But that is not inappropriate. In many ways the Nobel prizes are a Swedish version of the Oscars—with seriousness substituted for superfice, substance for style, and genuine modesty among the winners for the false sort.

The oxygen of publicity

Those qualities were certainly to the fore in the award of the prize for physiology or medicine. This shone a spotlight onto work that, though of crucial importance in understanding how human bodies work, is—unlike batteries, exoplanets and matters cosmological—almost invisible to the outside world. Yet together William Kaelin, Sir Peter Ratcliffe and Gregg Semenza have answered an important question: how cells detect and adjust to the level of oxygen available to fuel their activities.

The crucial molecule in the system that matches cell physiology to oxygen availability is a protein complex called hypoxia-inducible factor (HIF). HIF was discovered and named by Dr Semenza, who works at Johns Hopkins University, in Baltimore. In the 1990s Dr Semenza was studying erythropoiesis, the process that generates red blood corpuscles. These are the cells that carry oxygen in the bloodstream, and their number depends on how much oxygen there is around. Professional athletes, for example, often train at high altitude, where the thin air means oxygen is scarce, in order to grow extra red blood cells that will assist their respiration when they compete nearer to sea level.

The hormone that triggers erythropoiesis is called erythropoietin, or EPO. Indeed EPO, which is manufactured as a drug to help those with anaemia, is also used illegally by some athletes to boost their red-cell count without the trouble of visiting high altitudes. (In cycling, for example, it is notorious.) Dr Semenza was looking at a stretch of DNA, located within the gene that encodes EPO, which switches that gene on and off. In doing so he discovered HIF, a protein complex that, by attaching to or detaching from the DNA switch (see diagram 3), does the switch-throwing. Since Dr Semenza's discovery, 300 genes similarly regulated by HIF have been found.

Dr Kaelin's contribution was to discover a further protein, VHL, that regulates how levels of HIF in a cell are controlled by oxygen levels. HIF actually consists of two proteins, now known as HIF-1 alpha and ARNT. ARNT is always present in a cell, but the level of HIF-1 alpha depends on the amount of oxygen present. More oxygen means less HIF-1 alpha. That, in turn, means less of the HIF complex. Genes like that for EPO, which rely on HIF to switch them on, thus remain inactive.

Dr Kaelin, who works at the Dana-Farber Cancer Institute in Boston, was studying an inherited genetic illness called von Hippel-Lindau's disease which greatly increases the likelihood of certain tumours (sometimes benign, sometimes malignant, affecting organs including the kidneys and eyes) developing. VHL is the protein encoded by the gene that, when mutated and thus non-functional, causes von Hippel-Lindau's disease. Dr Kaelin showed that a non-functional VHL-encoding gene caused many HIF-regulated genes to go into overdrive—which is the underlying cause of the tumours in question.

The pieces of the puzzle were then put together by Sir Peter, who works at Oxford University. He showed that VHL and HIF-1 alpha interact with one another, and that this interaction, which incorporates molecules called hydroxyl groups into the mix, makes HIF-1 alpha susceptible to degradation in the presence of oxygen. The degradation is not direct. It is not that HIF-1 alpha is being oxidised, and thus destroyed. Rather, the hydroxyl groups, which are created by a reaction between HIF-1 alpha and oxygen, mark it for destruction by a cell's protein-degrading machinery.

The practical upshot of all this is a better understanding of the biology underlying anaemia, tumours such as those encouraged by von Hippel-Lindau's disease and many other oxygen-sensitive processes. These include the healing of wounds, the growth of blood vessels (one reason for the link with tumours, since these need extra blood vessels in order to grow), and the likelihood of heart attacks and strokes. With luck, drugs tailored to regulate the actions of the various HIF-controlled genes involved will be able to promote or prevent these phenomena—and, albeit more quietly than is the case for lithium-ion batteries, the intention of Nobel's will will have been fulfilled in this case, too. ■

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Global health

How to defeat AIDS, malaria and tuberculosis

As with other conflicts, money is the sinews of the war on disease

Print | Science and technology Oct 10th 2019

AT THE TURN of the millennium it was clear a new approach was required in the war against three of the biggest threats to human life and development. There was need for a trustworthy international organisation that could solicit donations from rich countries and wealthy organisations, and spend that money on combating those threats in collaboration with the governments of afflicted poor countries, but with appropriate oversight to ensure effectiveness and avoid theft. The result was the Global Fund to Fight AIDS, Tuberculosis and Malaria.

And it worked. Though it is impossible to say what would have happened without the Global Fund, as it is now formally known, the fund's officials claim to have saved 32m lives since it opened in 2002. As with liberty, though, the price of success is eternal vigilence—and many in the field fear further progress is under threat. To remain on course to hit its self-proclaimed target to save 16m lives by 2023, the fund says it will need pledges of at least $14bn by the end of this year. This week, at a so-called replenishment meeting in Lyon, France, it has been setting out its stall.

Fourteen billion dollars is a 15% increase on the fund's current three-year budget. It will, though, be more than matched by $46bn raised to combat the diseases in question by recipient countries themselves. And that spending will be a good deal. The returns on the best health investments are between 900 and 2,000%. Conversely, as with all infectious diseases, if efforts slacken, those illnesses will be back with a vengeance.

Of the three targets, tuberculosis (TB) is the worst. Every year, it is estimated, more than 10m people catch the bacterium which causes this illness, and 1.6m die of it. Tuberculosis, though, is an odd infection. Often, the bacteria remain dormant and an individual hosting them presents no symptoms. As a consequence (and also because some people delay seeking treatment) nearly 40% of cases are missed. At the same time, there has been a worrying rise in drug-resistant forms of TB. These are a challenge everywhere—including rich countries—and cause a third of all deaths from the disease. The UN's goal is, with 2015 as the baseline, to reduce the number of deaths by 95% and the incidence of the illness by 90% by 2035. That goal, most agree, will be missed without shifts of strategy.

One such shift may be to screen the whole population of high-burden countries. A study published recently in the *New England Journal of Medicine* tested this idea in part of Vietnam. Researchers collected saliva from people once a year for three years—and offered treatment to the infected. If this intervention were widely deployed it could, they calculate, decrease prevalence by 15% a year, rather than the 3-7% typical in currently affected places.

What would really transform prospects for TB, though, would be a vaccine. Here there is good news and bad. The good is that a vaccine made by GlaxoSmithKline, a big drug company, has showed promising results in a trial in southern Africa. The bad is that since this result was published 18 months ago little has happened.

In the case of malaria there has been great progress. Between 2000 and 2015 6.8m deaths were averted and 20 countries eliminated the disease altogether. However, malaria is now on the rise again. The fund says this is because spending on prevention has stalled in countries with rapid population growth.

On top of that, there is concern about increasing resistance to insecticides among the mosquitoes that spread the malarial parasite. In particular, these insecticides are used to coat bednets employed to keep mosquitoes away from people when they are asleep. Here, a new bednet called the "Interceptor G2" will help. It is coated with two insecticides instead of one. Resistance is also on the rise, though, to the drugs used to treat people infected with malaria. The most successful and widely deployed of these are based on a chemical called artemisinin, but in parts of South-East Asia resistance to artemisinin is spreading. If such resistance were to spread from there to India and Africa it could be a catastrophe.

The fund's third target is AIDS. As with malaria, there has been much progress. The number of new cases is falling every year and the number of lives saved by antiretroviral therapy is rising. But, again, demography is moving the goalposts. In sub-Saharan Africa, the number of young people is expected to increase by 40% over the next decade. And the young, who are the most sexually active part of the population, are those most at risk of infection by HIV, the AIDS-causing virus.

The lesson from malaria, where constant funding levels have led to a decline in the amount of money available per person, is that if spending does not increase, HIV will bounce back—taking human lives with it. Moreover, the burden of infection will fall heavily on girls and women, 1,000 of whom are infected every day around the world. In sub-Saharan Africa, for example, girls and young women aged 15-24 are now eight times more likely than men of the same age to be infected, because of sexual violence, lack of economic opportunity and educational disadvantages.

All these problems are solvable with innovation, effort and cash. But there also has to be political will. That seems to be forthcoming. Britain, one of the fund's biggest supporters, pledged £1.4bn ($1.7bn) in advance of the meeting in Lyon. That is a 16% increase on the last three-year round. Other countries are also upping their contributions. Denmark's has increased by 16.6%, Sweden's by 14%, Italy's by 15%, Germany's by 17.6% and Canada's by 15.7%. As *The Economist* went to press, an American congressional delegation was proposing to offer $1.56bn a year—a 15% increase. This would provide a third of the fund's needs. There are few guarantees in life. But it is safe to say that if the Global Fund receives all the cash that it has been promised, it will be money well spent. ■

Natural materials

How spider silk avoids hungry bacteria

No antibiotics are involved

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TOUGHER THAN any fibre made by humans and extraordinarily good at transmitting vibrations to the predators that weave it, spider silk has been a source of inspiration for the development of everything from scaffolding for regenerating bones to bulletproof vests, remote sensors and noise reducers. Yet one of its most remarkable attributes, its resistance to decay, has received little attention. Some researchers speculate that spider silk keeps hungry bacteria at bay by being laced with antibiotics. But work by Wang Pi-Han and Tso I-Min at Tunghai University, in Taiwan, published in the *Journal of Experimental Biology*, suggests this is not the case. Rather, silk manages to avoid being eaten by locking the nutrients it contains behind an impenetrable barrier.

Spider silk is made of proteins that ought to be attractive to microbes. Moreover, because webs are often built in environments, like forests and bogs, that are rife with these bugs, there should be ample opportunities for bacteria to settle on the strands and feast. Remarkably, this does not seem to happen.

Dr Wang and Dr Tso were curious about how spiders manage this. They began their investigation by putting bacteria and spider silks together in laboratory conditions perfect for bacterial growth. They worked with silk strands collected from three species of spider that build their webs in different environments, and set these down on nutrient-rich plates. Each plate had one of four bacterial species growing on it. The team then used microscopes to monitor the behaviour of the bacteria over the course of 24 hours.

After repeating the experiment three times, they found that the bacteria never fed on the silks. They also found, however, that the strands were not immune to having bacteria grow over and around them—suggesting that those strands were not laced with antibiotics.

The two researchers then tried growing their bacteria directly on silk strands, by providing them with a range of nutrient supplements. Only one of these supplements, nitrogen, encouraged consumption of the silk. When the strands were lathered in a nitrogen-rich solution, bacteria ate them. Without nitrogen, they were held at bay. This is odd, because proteins (of which silk is made) are, themselves, rich in nitrogen.

That led Dr Wang and Dr Tso to conclude that the antibacterial properties of spider silk are caused not by any sort of antibiotic but, rather, the structure of the silk itself. Natural selection, it seems, has driven spider silk to store the proteins it is composed of behind a layer made impenetrable by its physical rather than its chemical structure.

What, exactly, that structure is the two researchers have yet to determine. Once it has been elucidated, though, the discovery should pave the way for artificial antibacterial materials that do not use antibiotics to keep the bugs away.

Adventures in books
The library of ice

The library of ice

An expedition reveals the perils of reading Dostoyevsky in Antarctica

Holed up for a polar winter, a group of explorers got through a lot of books

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FORTY YEARS ago, in the autumn of 1979, a group of British explorers set out from London on a seemingly impossible mission: a circumpolar navigation of the Earth. Over the three years of what was known as the Transglobe Expedition, they would struggle against high seas in the Roaring Forties, evade hungry polar bears, negotiate mountainous sand dunes and forbidding jungles. There was another danger, more insidious and less photogenic than any of these, but which nonetheless posed a threat to their endeavour—boredom. This was to be particularly acute in Antarctica, where, after traversing Africa, the group was obliged to spend months huddled in icy darkness.

Sir Ranulph Fiennes and the team he had assembled undertook their journey in a much less technological age. There was no satellite navigation; messages to and from their base camp were sent in Morse code by Sir Ranulph's wife, Ginny, who was in charge of communications. Nor were there any Kindles. A big part of the cargo aboard the *Benjamin Bowring*, the expedition's ice-breaker, was books.

Fortified by this reserve, the team undertook two adventures at once—one of the body and one on the page, both involving extreme conditions, endless vistas and unsettling claustrophobia. Both laid bare the personalities of the participants, and both left their marks.

Strange seas of thought, alone

The plan for Antarctica was to spend the first brief summer getting the main group—Sir Ranulph, Ginny and two former members of the SAS, Charlie Burton and Oliver Shepard—up onto the lofty Antarctic Plateau, where they would wait out the eight-month polar winter before embarking on their crossing of the continent in the spring. They succeeded in establishing themselves on the 3,000-metre-high ice shelf. "I dug an awful lot of snow, dug tunnels, dug slop pits and latrines," Sir Ranulph, now 75, recalls. The Antarctic leg "required an enormous amount of time crouched over maps. But there was time for reading, and we read a lot."

At Eton he had been taught French by David Cornwell, the alter ego of John le Carré: "He developed in me a lasting love of literature, of the sound of great language." Penguin, the publisher, had offered to sponsor them, Sir Ranulph explains. He took 50 volumes by classic British authors—Dickens, Scott, Thackeray and Trollope ("Dickens was always a bit like coming home"). For his part, Burton requested a boxful of Westerns. Mr Shepard, meanwhile, had "hardly read at all when I went out there". Before the expedition he had worked in the wine trade; he now lives in France. But "we were in a hut the size of a garden shed," he recalls, and reading "was the only form of escape I had."

His preference was for an epic tale of adventure, played out against a hostile and perilous landscape. "I read 'The Lord of the Rings' trilogy seven times," Mr Shepard says. "It seemed to appertain so closely to what we had decided to undertake." He believes that this prolonged engagement with literature left a lasting impression. More than simply being a diversion, it "put me on the path of an avid reader". He remembers "War and Peace" and Kafka as "hard work" but "worth it". (Ginny Fiennes died in 2004, Burton in 2002.)

At least the main expedition crew was partly occupied by anticipation of the polar crossing. The team had also established another camp, just inland from the ice-packed Southern Ocean. There two young men, Anto Birkbeck and Simon Grimes, were to guard the fuel and food supplies that would be airlifted to Sir Ranulph and his colleagues when winter was over.

At the time Mr Birkbeck, who is now a fund manager, was just 22 and straight out of university; he leapt at the chance of spending an exotic winter in the polar darkness. He and Mr Grimes, who had never met before they set out, were crammed into an even smaller hut than their counterparts on the plateau. There were two desks, two bunks and over 200 books.

"Our hut was a bubble on the ice shelf, miles of flat whiteness with a hundred foot of ice beneath us, and the sky above and the sea beyond," Mr Birkbeck recollects. These were abnormal—and, it turned out, risky—circumstances. "The more I think about it, the more really odd it was to be parked in a box with some very good books and great ideas...You do end up looking too deeply into the Eye of Sauron," the malign antagonist of "The Lord of the Rings".

Mr Birkbeck started off with a clear plan for his days: an hour of physical exercise in the morning, followed by an hour of physics, an hour of Spanish study and then an hour reading poetry. The rest of the day would be spent with a novel. "As winter wore on," he says, "the novels took over. I started getting up at midday and just reading a novel until bedtime."

He had asked friends to recommend their desert-island books, and duly worked through all of Tolstoy, Hardy and George Eliot, plus “Don Quixote”, “One Hundred Years of Solitude” and Joyce’s “Ulysses” (as well as Homer’s “Odyssey”). As well as the poetry (Chaucer, Milton, T.S. Eliot and “Sir Gawain and the Green Knight”), there was philosophy (Nietzsche, Hegel, Bertrand Russell and Aristotle). And, almost fatefully, he read Dostoyevsky.

There was one moment, towards the end of the winter, when Mr Birkbeck had just finished reading “Crime and Punishment” and found himself walking behind Mr Grimes on the ice. In his memory, the events of that day are now murky. “I find it very difficult to know whether it is a figment of my imagination or not,” he says. “There’s no question that if you put two people in a hut the size of a caravan and shut them up for nine months, you will generate intense frustration,” for which “the other person is the obvious focus.”

On this particular day, “I don’t remember ever having a row, but I do remember being intensely irritated by him.” Mr Birkbeck also recalls having an ice-axe in his hand as he trailed his hut-mate through the whiteness. “I remember getting deeply into the mind of Raskolnikov and thinking hard about this cold-blooded murder,” which Dostoyevsky’s anti-hero commits with an axe. At the same time he was pondering the question of whether good and evil truly exist. “I don’t really know whether [Mr Grimes] was in danger or not.”

Now, thinking back after four decades on what he calls a “*Boys’ Own* adventure”, Mr Birkbeck says the experience was “more powerful and meaningful” than he had realised. Over the years the two feats involved, one mental and one physical, each formative in its own way, have come to chime and blur. “It was not just about the South Pole,” he concludes. “It was also about Dostoyevsky and James Joyce,” and about “the lasting power of great books”. ■

Bad company

The astonishing and violent rise of the East India Company

William Dalrymple's history poignantly evokes India's embattled Mughal rulers

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The Anarchy: The Relentless Rise of the East India Company. By William Dalrymple. *Bloomsbury; 576 pages; $35 and £30.*

AT THE START of his new book William Dalrymple notes that it is "always a mistake to read history backwards", and to assume that what happened was inevitable. Readers are unlikely to make that mistake with his subject—the dramatic rise of the East India Company (EIC)—a tale so improbable as almost to defy belief.

A private company granted a monopoly on trade with Asia, the EIC launched its first expedition in 1601. Armed with "40 muskets", its crew of second-raters promptly got stranded in the English Channel for two months. At the time India accounted for a quarter of global manufacturing, and backward Britain just three percent. By about 1800 the EIC commanded the most powerful armed forces in Asia; its armoury in Calcutta held 300,000 muskets. In the intervening centuries it had grabbed control of India, killed and impoverished many of its people, enriched Britain and raised questions about the boundary between the state and commerce that still resonate.

Mr Dalrymple sails through this story in fine style. The first substantial contact between the EIC's grubby emissaries and northern India's sophisticated Mughal rulers took place in 1614, with the British grovelling for commercial privileges; soon the flow of spices to Europe by sea upended centuries of overland trading routes through the Middle East. After that comes the decay of the Mughal empire, the development of Madras and Calcutta and wars between the French, British and local rulers. The battle of Plassey in 1757 was pivotal: the EIC secured control over Bengal, and thus the ability to exploit its population.

By the end of the 18th century the company's cruelty and cronyism caused outrage in London, and the British government began to exercise more direct oversight. There followed a final drive for territorial dominance. In 1792 the EIC controlled only 9% of the subcontinent's area; by the early 19th century it ran most of it. In 1859 the EIC formally handed over power to the British government.

Luck played a huge role in all this; several times the company flirted with disaster. But it also had some competitive advantages. Until the mid-18th century it relied on naval power and commercial savvy. After that new weapons and military tactics became critical, until eventually some local rivals achieved military parity. The Tipu Sultan of Mysore, perhaps the EIC's most effective adversary, used French technology. At that point the EIC's financial clout became vital; it could tap into a network of lenders in Bengal. Following the American war of independence, Britain discouraged the growth of a settler class in India who might rebel. And the British were expert manipulators. "Know you not the custom of the English?" wrote Tipu. "Wherever they fix their talons they contrive little by little to work themselves into the whole management of affairs."

Like other modern historians, Mr Dalrymple repudiates romanticised conceptions of colonialism. But in this case, he is not breaking new ground: accounts of the EIC's murderous blend of commerce and government are nothing new. Adam Smith called it a "strange absurdity". Edmund Burke accused it of "cruelties unheard of". The first page of John Keay's history, published in 1991, describes its venal reputation. At times Mr Dalrymple's narrative, with its romping descriptions of battle scenes, itself verges on Hornblower.

What stands out is rather his sympathetic portrayal of India's embattled Mughal rulers. He renders a poignant depiction of Shah Alam, an emperor in name but for much of his life a puppet of the EIC, who expressed himself through beautiful poetry. The book's major omission is a full analysis of the Asian trading system centred around Bengal—the role of commercial agents who acted autonomously from the company; the position of Calcutta as an entrepot; and the strong links between the EIC and Chinese trade. Stamford Raffles, who founded Singapore, was a clerk in the EIC. William Jardine, who would co-found a firm that led the opium trade with China, first worked as an EIC ship's surgeon.

What relevance does the EIC have today? The reader will find plenty that echoes in modern India. The well-to-do in Kolkata (formerly Calcutta) still grumble about Marwari money-men. India's practice of running its federal administrative service with a tiny group of elite officers owes something to the EIC. Centuries of domination by the Mughals and then the British remain part of modern political debate, especially for Hindu nationalists.

Ultimately, Mr Dalrymple makes a bolder claim: that the EIC was an augury of today's Western multinationals and tech giants. That is far-fetched. A better comparison is with China's state-led expansion abroad. While it lacks the EIC's habit of violence, modern China shares both its strategic ambition and its commercial veneer. Asia is still grappling with that awkward mix, four centuries after the EIC's motley crew sailed from the foggy Thames. ■

Axes of evil

Lies, damn lies and charts

Alberto Cairo explains how to avoid being duped

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How Charts Lie. By Alberto Cairo.*W.W. Norton; 226 pages; $25.95 and £15.99.*

"IF ANYTHING ON this graphic causes confusion, ignore the entire product." This footnote appeared on an official (if impenetrable) spaghetti-like weather map tweeted by Donald Trump on September 4th. It was not on the crudely doctored version that he wheeled out at the White House on the same day, to justify his mistaken warning that, among other places, Alabama would "most likely be hit (much) harder than anticipated" by Hurricane Dorian. But perhaps it should have been. The fiasco arose in part because of the "cone of uncertainty" sometimes used to delineate the possible paths of a storm—a template which, as luck would have it, is one of many maps and charts patiently explained by Alberto Cairo in "How Charts Lie".

His book could not be more timely. Charts and maps pepper traditional and social media more than ever, but there have been few attempts to improve what Mr Cairo calls the "graphicacy" of their consumers. His corrective begins with a chapter on how to read a chart, and this basic notion—that, to be understood, graphs must be read, not merely glanced at—permeates the book. He outlines the essential "scaffolding" of a chart (scales, legend, source and so on), before describing the many ways that data can be built upon it. Only once readers know what a solid structure looks like can they learn to spot a façade.

There are plenty out there. In one of the author's examples, global warming is all but erased when the annual temperature for the past 130 years is plotted with a baseline starting at zero, resulting in a reassuringly flat line; in another, a dual-axis chart appears to show a shocking rise in abortions carried out by Planned Parenthood, a health-care provider, while their life-saving cancer-screenings plummet. In both cases, the structure is designed to mislead. Mr Cairo enjoins searching questions: Who made the chart? What is their agenda?

Deception can begin before the axes are drawn, when the content is selected. Truncating a time-scale to exclude awkward data—for instance, to omit a downturn in profits—is a well-known shady practice. So is overloading a graph to obscure an inconvenient truth. Sometimes the numbers are just plain wrong. In 2014 a blogger made a splash when he plotted state-level data from Pornhub, a website, and found Kansans were viewing far more porn than other Americans. Later it emerged that Pornhub's geolocation tracker was bamboozled by people accessing the site through a VPN, which led the gizmo to register them all in the geographical centre of the contiguous United States: a field in north Kansas.

Mr Cairo uses this incident to consider the fallacy of drawing conclusions about individuals from group data. He commends the blogger for admitting his mistake, pointing out that this increases perceptions of trustworthiness. And his book reminds readers not to infer too much from a chart, especially when it shows them what they already wanted to see. Mr Cairo has sent a copy to the White House. ■

Big game hunted

Gertrude Legendre led a charmed life—until her capture by the Nazis

The heiress's fellow prisoners included Charles de Gaulle's sister and two former prime ministers of France

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A Guest of the Reich. By Peter Finn. *Pantheon Books; 240 pages; $28.95.*

FOR MUCH of her long life, Gertrude "Gertie" Legendre enjoyed a charmed existence. Born in 1902 to extreme wealth (her father had inherited close to a billion dollars in today's money), for her the 1920s were "a blur of parties, dances, theatre and music". Boredom was kept at bay by travel—ranging from Africa, where she and her future husband Sidney dined with Emperor Haile Selassie in Addis Ababa, to Indochina—and by a passion for hunting that kept America's museums stocked with specimens from around the world. As Peter Finn notes in his beautifully paced book, she inspired a Broadway play and a film starring Katharine Hepburn as "an amusing, cocky, sometimes abrasive society girl who wants to escape the confining expectations of her family's fabulous wealth".

The charmed life came to an abrupt end on September 26th 1944. Legendre's social connections had wangled her a secretarial role in the Office of Strategic Services (OSS). But employment in this forerunner of the CIA did not requite her yen to "smell the fighting" before Germany's inevitable defeat; hence a high-spirited trip with three other Americans to Wallendorf, a small town in Luxembourg. Wallendorf turned out to have been taken back from the advancing American forces by the Germans—and Legendre became "the first American woman in uniform captured by the Nazis".

The question for her captors was what to do with her. Was she a spy? (The OSS was terrified that she might divulge its secrets.) Should she be exchanged? "If only your side wanted to talk, wanted to stop this useless killing right now," one of her interrogators complained, "it could be done with the stroke of a pen." Could she somehow be a link to General George Patton (whom, as it happened, Legendre knew as a dinner and theatre companion)? After six months she "escaped" to neutral Switzerland, almost certainly with the complicity of her captors.

Using Legendre's memoirs, diaries and letters, Mr Finn—the author of a fine book about Boris Pasternak and "Dr Zhivago"—paints an entertaining picture of a remarkable woman. She was equally at ease in a flea-infested jail cell as in the comfortable hotel for "special and honoured" prisoners of the SS; the other guests included Charles de Gaulle's sister and two former prime ministers of France. Mr Finn's own writing shines in his description of pre-war American high society: the sybaritic circuit of parties, night clubs and restaurants that meant everyone knew everyone.

The casual racism of the period can still be shocking. Legendre's journal from a trip that she made with Sidney to Germany in August 1936 makes no reference to the Nazis. A letter to her husband in 1942 praises a Jewish vice-president of CBS, adding: "You know how I hate jews so that is quite a statement from me calling a jew alright." As for the African-American soldiers who were dating white women while they were in Britain, Gertie had a clear view. "The Coloured Troops are much argued about as you can imagine," she wrote from London. "We are going to have a time with them when they get home, as they go over big here in the worst way."

In the 1930s the couple had renovated a South Carolina plantation that became their home. Sidney, who mainly spent the war in Hawaii, died in 1948. Legendre never got over his death, but did not lose her lust for a life that lasted another 52 years. Sadly for the reader, Mr Finn is too scrupulous a writer to speculate on what she made of the changes to her world. ■

The food of love

A new orchestra seeks harmony in the Caucasus

Its young players are drawn from all sides of the region's multiple conflicts

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WHEN DIANA SARGSYAN sat down next to Rashid Aliyev for her first rehearsal with the Pan-Caucasian Youth Orchestra (PCYO), her fellow violinist's greeting shook her. "We are going to hate each other," he predicted. "We are enemies." It was an inauspicious start for the "peace" orchestra created for the inaugural Tsinandali Festival, an ambitious music event held last month on a winemaking estate in leafy eastern Georgia. Or so it seemed.

Ms Sargsyan is Armenian; Mr Aliyev is from Azerbaijan. Their countries have quarrelled over the disputed territory of Nagorno-Karabakh since a war in the early 1990s. Their fellow musicians included Gulin Atakli, an oboist from Turkey—which, as well as being Azerbaijan's ally, is embroiled in a row over whether the mass killing of ethnic Armenians in 1915 constituted a genocide. In a performance of Shostakovich's 9th Symphony, the strings were led by a Ukrainian violinist, Galina Korinets—whose country was invaded in 2014 by Russia, where Vera Nebylova, one of the PCYO's cellists, plays in the national youth orchestra. Russia also occupies two enclaves in Georgia, where Eliso Babuadze, another cellist, studies at the Tbilisi conservatoire.

There were many players in the 80-strong band and the wider Tsinandali Festival who were notionally foes. "There is so much war and conflict in this region," says George Ramishvili, founder of the festival and chairman of its main sponsors, the Silk Road Group, an investment outfit. "We wanted to challenge this." That is not to mention the domestic strife in some of the countries represented. Fazil Say, a Turkish pianist, narrowly avoided jail after criticising the government on Twitter; at the festival he performed two pieces about the protests in Istanbul in 2013.

The PCYO is part of a trend in high-level music therapy. In 2011 the I, Culture orchestra was formed in Poland, aiming to unite musicians from former Soviet satellites. The most prominent ensemble of the kind is the West-Eastern Divan Orchestra, which was set up 20 years ago by Daniel Barenboim, an Argentine-Israeli conductor and pianist, and the late Arab academic Edward Said, bringing together instrumentalists from across the Arab-Israeli divide.

Acclaimed as it is, Mr Barenboim's group suggests the limits of such initiatives. Based in Spain, it cannot play in many countries from which its musicians are drawn. Relations between members are said to be volatile. Still, solving intractable conflicts may be an unfair measure of success. "We are not stupid!" exclaims Claudio Vandelli, the PCYO's assistant music director. "But we hope that this will change the atmosphere, little by little."

In this case, the therapy seems to be working. "From the start", says Ms Atakli, "we have seen ourselves as musicians—as internationalists. Music is a universal language." During a rehearsal break the players conversed in Russian and English, the two other languages common to most. At their hotel they played chess and chatted in mixed groups. An impromptu salsa party helped them bond. Ms Korinets, the Ukrainian, finds the idea that she is at war with her Russian friends outlandish.

And it turns out that Mr Aliyev was only joking about Ms Sargsyan being his enemy; he guffaws as he describes her startled expression. Another new Armenian buddy has asked to be friends on Facebook. "I thought, what would my friends think back home if they saw I'd linked up with an Armenian?" Mr Aliyev says. But "that's not my problem, it's theirs." ■

Economic and financial indicators

Economic and financial indicators

Print | Economic and financial indicators   Oct 10th 2019

Anti-Semitism
Drawing the line

Shades of prejudice

Drawing the line between anti-Semitism and criticism of Israel

Polls show the two are correlated, but the strength of the link depends on ideology

Print | Graphic detail Oct 12th 2019

ONE REASON debate over Israel gets heated is that both sides question each other's motives. Supporters of Israel note that anti-Semites often cloak their prejudice in criticism of the Jewish state. They say some views—like saying that Israel should not exist—are by definition anti-Semitic. Pro-Palestinian advocates retort that charges of Jew-hatred are intended to silence them.

Such mistrust has grown in Britain and America, as anti-Semitism has resurfaced at both political extremes. On the left, legislators in America have accused pro-Israel colleagues of dual loyalty, and implied that Jewish money bought Republican support for Israel. In 2012 Jeremy Corbyn, now the leader of Britain's Labour Party, defended a mural depicting hook-nosed bankers.

The right has used similar innuendo, often by linking liberals to George Soros, a Jewish investor. Muddying matters more, Binyamin Netanyahu, Israel's prime minister, has also denounced Mr Soros. In America right-wing anti-Semitism also takes a more explicit, occasionally violent form. In 2017 marchers in Virginia chanted "Jews will not replace us." And in 2018 a shooter at a synagogue in Pittsburgh killed 11 people.

Can criticism of Israel be disentangled from anti-Semitism? Two recent polls in America and Britain that tried to do so reveal a pattern: hostility to Israel and to Jews are correlated, and the link is much stronger on the political right than on the left.

In 2016 Daniel Staetsky of the Institute for Jewish Policy Research, a think-tank, wrote a survey to distinguish these beliefs. It contained one series of statements about Israel as a country, and another about Jews as people. Ipsos MORI then polled Britons to see if they agreed with these views, and Mr Staetsky scored the respondents' hostility based on their answers. At our request, YouGov repeated the survey in America.

Few respondents expressed negative opinions of Jews. About 4% in Britain and 7% in America scored at least five out of eight on the anti-Semitism scale. Nonetheless, these rates imply that 2m Britons and 23m Americans are overtly anti-Semitic.

Moreover, anti-Israel and anti-Semitic beliefs were correlated. Americans with a mark of at least six out of nine on the anti-Israel scale scored 3.4 for anti-Semitism on average, compared with 0.7 for everyone else. In Britain the figures were 2.4 and 0.5.

But this effect's size changed with respondents' declared ideology. In America "liberal" foes of Israel had an average anti-Semitism mark of 2.3. For "conservatives" critical of Israel, it was 5.4. Among anti-Israel Britons, "very left-wing" people scored 1.6 for anti-Semitism on average, whereas "very right-wing" ones averaged 4.4.

The causes of this gap differ by country. In Britain lots of people at both ends of the political spectrum dislike Israel. But those who criticise Jews cluster on the far right.

In America, the left and right are equally anti-Semitic. However, American conservatives mostly support Israel. Many evangelical Christians see Israel's Jewish majority as fellow people of the book. And Republicans' hawkish foreign policy often aligns with Israeli positions. So in both countries, conservatives who do criticise Israel—a smaller share of America's right than Britain's—are often anti-Semitic, too.

None of this means that concern about left-wing anti-Semitism is overblown. The data simply show that most left-wingers who criticise Israel do not dislike Jews as people. Or if they do, they are embarrassed enough to hide their bias from pollsters. ■

Sources: YouGov poll of 1,500 Americans; "Antisemitism in contemporary Great Britain", by D. Staetsky, using Ipsos MORI poll of 5,466 Britons

Obituary

Shuping Wang
The truth-teller of Henan

The truth-teller of Henan

Obituary: Shuping Wang died on September 21st

The first doctor to expose the HIV scandal in central China was 59

Print | Obituary Oct 10th 2019

A SWARM OF battered bicycles and pedicabs, cramming the narrow street, was usually the first sight that greeted Shuping Wang at the Zhoukou Anti-Epidemic Station, in Henan province. Most belonged to poor farmers who had ridden into the city in the small hours, eager to give blood. Every day around 500 would come. They were recruited from their mud-brick villages by local cadres, called bloodheads, who organised them into groups. The aim of this programme, run by the government, was to build up China's stocks of blood and plasma so that tainted blood was not brought in from abroad. How ironic that would seem, in time.

Naturally the government looked to Henan, where Dr Wang had been born: in central China south of Beijing, a remote place of poor but supposedly pure-blooded people. Farmers there struggled to make any sort of living. For each cow or lamb they raised local officials took a fee, and for each infringement of regulations—failing to grow tobacco and cotton together, having more than one child—they imposed a fine. For anyone worried and in debt, as many were, giving blood was easy money. As the official slogan said: Lie down, hold out your arm, make a fist, earn 53 yuan.

When Dr Wang started at the blood bank in 1991, excited to be a front-line doctor like her mother, it had only just opened. The equipment was good and the rules were followed; she saw to that. But blood-collection stations were popping up in Henan like mushrooms, and procedures in some were shocking. There were no preliminary blood tests for donors, though many were coming back several times a week. Tubing, syringes and centrifuges were sterilised only once a day. Blood from several donors, once the plasma had been extracted, was mixed in tubs before it was reinjected. Even in her own clinic nurses messed up, going too fast. At medical school in Beijing in 1988 she had taken a course in field epidemiology run by America's Centres for Disease Control; she knew the dangers of tainted blood by heart. By taking random samples from 64 donors in 1992, she found a hepatitis C infection rate of 34%; locally, more than 80%.

She reported this back to local medical officers, as well as the Ministry of Health in Beijing. She wanted all deficient blood stations cleaned up or closed. Staff should be trained medically and, as important, morally. For blood collection, far from being "sacred" and "glorious" as the government claimed, was just a money machine, not least for the local medical and government officials who sold the plasma to pharma companies. They had no interest in monitoring for disease or bad practices, saying it was too costly, fearing too for their jobs. In the end she was kicked out of the blood bank for being trouble. She had to use her own savings to buy testing kits and to set up a testing centre of her own. But she did it gladly to save the people of Henan—because if hepatitis C was being transmitted, then HIV, leading to AIDS, was clearly coming too.

Here, though, she could make no headway. At least, when it came to hepatitis, the central government introduced screening for all donors from July 1993. But HIV, which she first found in early 1995 in a Mr Guo who had given blood in several stations, was a different story. This was seen as a Western infection, a foreign disease that could not be admitted to. And here she was, a young woman whose father had fought with nationalist forces against Mao Zedong, a spy's daughter, expelled from school, reporting an HIV infection rate in 1994-95 of 13% in the Zhoukou region. Worse than gathering the data, she had taken them to Beijing, when officials both there and in Henan wanted them well hidden. This time officers not only trashed her research, but drove her out of meetings and sent a man to wreck her testing clinic with a birdcage pole.

She was not easily discouraged. Her own name for herself was "Sunshine": a maker of demon-hot sauce with an exuberant laugh, a fondness for jazzy socks and a habit of tickling her much too serious husband. Yet these encounters left her in tears. With her job prospects in Henan demolished, she left for Beijing to do research with the one person there who had treated her warmly, Zeng Yi, the head of the Institute of Virology at the National Academy of Sciences. As a doctor she had to go on helping people, whether anyone liked what she did, and said, or not.

The farmers of Henan stayed on her mind. As central government slowly began to own up to HIV and the AIDS that followed, illegal blood stations continued to flourish down those forgotten, dusty tracks, and officials raked off their money. She had ceaselessly visited the villagers for years, and she went on going in secret, buying cough syrup and diarrhoea medicine to ease their symptoms, though she could not cure them. She also gathered evidence, partly clinical, partly pictorial, for she keenly took photographs anywhere. In several the villagers returned her happy grin. In others, sick and skeletal figures merely stared at her.

She kept none of this to herself. In Beijing she passed her findings carefully to journalists and to officers from the American embassy, explaining too which articles they should read and whom they should see, slipping them secret government reports.

She also passed data to Gao Yaojie, a gynaecologist 30 years her senior who was now the public face of the HIV/AIDS campaign in China. Dr Gao, who became a dear friend, wrote the books and pamphlets and spoke out; Dr Wang, under cover, provided much of the evidence that underpinned her certainty. Then in 2001, when she could no longer return to Henan, she left for America.

Everything there was new: the culture, the language, the techniques. She found a new husband, and a new field of research at the University of Utah. Two things, however, were grimly familiar. Whenever her name was publicly attached to HIV/AIDS in China—as to a play, based on her career, being staged in London this autumn—Chinese state security would begin to pester. And not far from her house in Salt Lake City, under Mount Olympus which she loved and painted, donors would sit in their cars pressing cotton wads to their forearms, outside a blood clinic that offered cash bonuses and never closed, even on Sundays. ■