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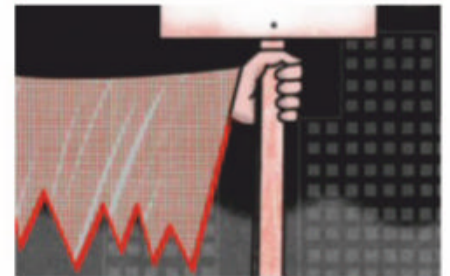
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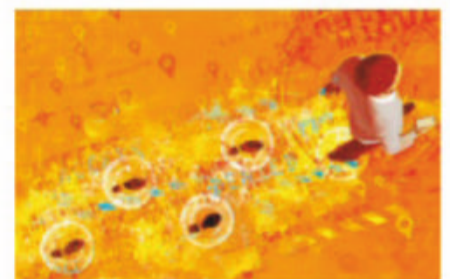
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Early results from **India's** election, which was carried out in seven stages from mid-April, showed that the Bharatiya Janata Party led by Narendra Modi would remain in power. During the campaign, Mr Modi had stressed Hindu nationalism more than economic development.

Pollsters swooned after **Australia's** centre-right Liberal Party narrowly won another term in office at a general election. For months the polls had predicted a comfortable win for the opposition Labour Party over the hapless govern-

ment of Scott Morrison, who is opposed to doing much to tackle climate change in a country scorched by drought and wildfires. Mr Morrison called his win a "miracle victory" for "quiet Australians".

Deadly riots broke out in Jakarta after **Indonesia's** election commission confirmed that Joko Widodo had won re-election as president. The loser, Prabowo Subianto, has refused to accept the result of April's ballot, alleging widespread fraud. That claim has brought his supporters out on the streets, though independent observers have said the election was free and fair.

Taiwan became the first country in Asia to legalise gay marriage, when its parliament passed a bill ahead of a court-imposed deadline. Last November, two-thirds of voters in a referendum said they wanted marriage to be restricted to straight couples.

Chinese courts sentenced three **Japanese** men for spying. One of them, the head of a Japan-China youth group, was reportedly given a six-year prison term. The other two were colleagues who had been investigating possible sites for hot-springs resorts. Since 2015 five other Japanese have been convicted of espionage in China.

Trials and tribulations

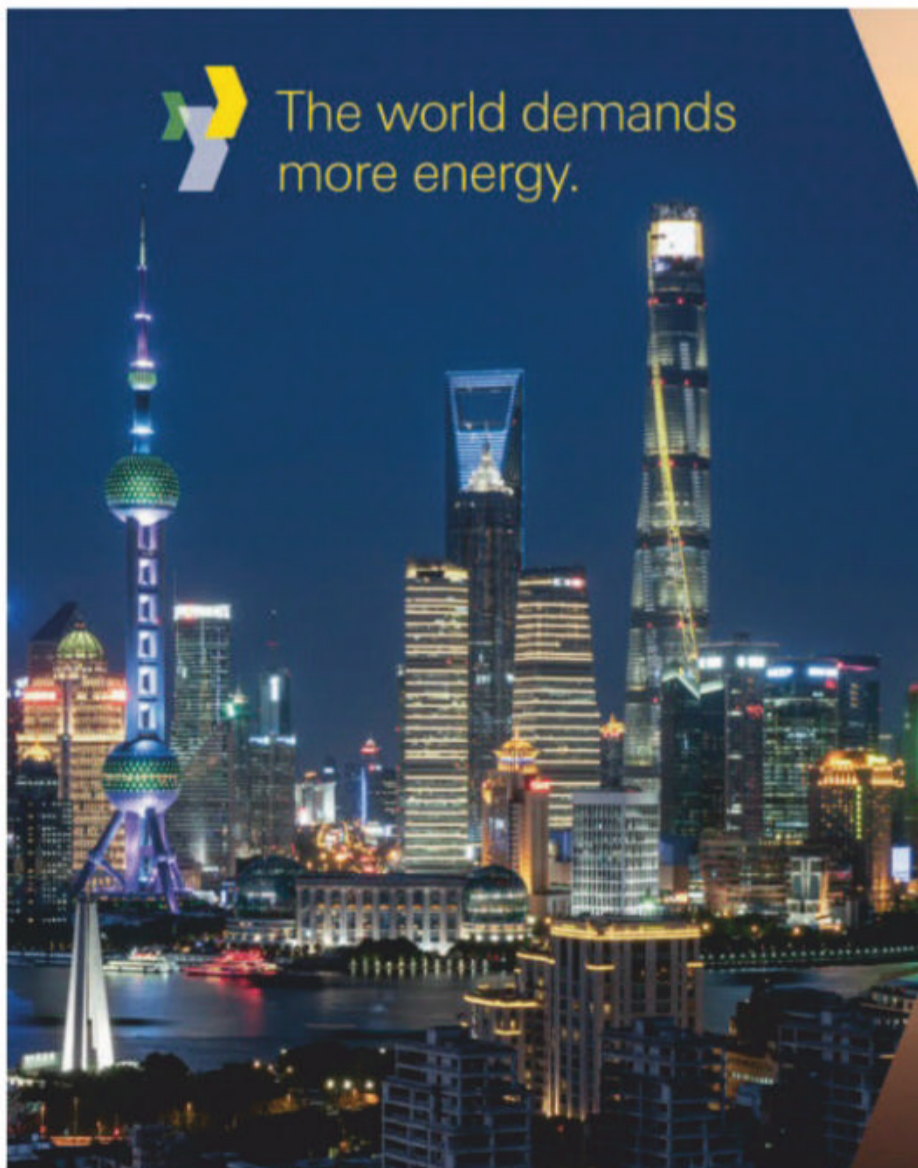
Cristina Fernández de Kirchner surprised pundits in **Argentina** by announcing that she would run for vice-president on a ticket headed by Alberto Fernández, her former chief of staff (and no relation). Ms Fernández, a spendthrift former president, had been widely expected to run for the presidency again, a prospect that frightened investors. She went on trial this week accused of taking bribes for government contracts when in power. She denies the claims.

Fourteen governors in **Brazil** wrote a letter asking Jair Bolsonaro, the president, to retract a decree he signed this month that would make it easier for people to carry guns in public. In a partial nod to critics, Mr Bolsonaro banned the carrying of assault weapons.

Initial data for the first half of May showed 6,880 hectares of forest had been chopped down in the **Amazon**, nearly as much as the total for the preceding nine months.

May's autumn

Theresa May's grip on power looked increasingly shaky, as even her erstwhile supporters abandoned her and her rivals in the Tory party sought to oust her. The catalyst was the British prime minister's attempt to rejig **Britain's** EU withdrawal bill. Mrs May set out changes, including new guarantees on workers' rights, and promised Parliament that if it passed her ▶▶



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▶ bill she would allow MPs a vote on whether to hold a second referendum. But that pleased no one.

Austria's government collapsed, after the leader of the junior member of the ruling coalition, Heinz-Christian Strache of the hard-right Freedom Party, was forced to resign. A video had surfaced, apparently showing Mr Strache discussing the exchange of public contracts for favourable media coverage with a woman who claimed to be the niece of a Russian oligarch. Austria's chancellor, Sebastian Kurz, said he would call early elections.

Volodymyr Zelensky, a tv comedian turned politician, was inaugurated as president of **Ukraine**. He immediately dismissed parliament and announced early elections, hoping that his Servant of the People party will secure a majority in the Rada.

Something rotten

Several **South African** politicians, including its deputy president, David Mabuza, and former finance minister, Malusi Gigaba, declined to take up their seats in a newly elected parliament. Cyril Ramaphosa, the country's president, is trying to clean up corruption within the ranks of the ruling African National Congress. Mr Mabuza was named in a report by the party's integrity commission. Mr Gigaba had previously been found to have lied in court.

A UN envoy warned that **Libya** was "descending into a civil war which could lead to the permanent division of the country." Despite an arms embargo, weapons are flowing into the north African state.

America and Iran continued to exchange threats. Donald Trump tweeted: "If Iran wants to fight, that will be the official

end of Iran." But his acting defence secretary, Patrick Shanahan, said: "This is about deterrence, not about war." Hassan Rouhani, Iran's president, rejected holding talks with America. "Today's situation is not suitable for talks and our choice is resistance only," he said.

In Washington, the State Department claimed there were signs that the regime of Bashar al-Assad in **Syria** used chemical weapons while trying to retake Idlib province from rebels. America and its allies would respond "quickly" if this were proven, said officials.

America is to unveil the economic component of its peace plan for **Israel** and the **Palestinians** at a conference in Bahrain in late June. Saudi Arabia and the United Arab Emirates said they would participate. The Palestinians called for a boycott of the meeting.

A munificent benefactor



The graduating class at **Morehouse College** in Atlanta sat up and paid attention during a commencement speech when the speaker announced a pledge to pay off their student loans. Robert Smith, a technology investor and former banker said by *Forbes* to be the richest black person in America, made his gift to "ensure we have all the opportunities of the American dream". College debt has ballooned over the past two decades in America, and is an issue on the campaign trail.

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America's Commerce Department issued three-month licences to allow American firms to keep doing limited business with **Huawei**, which has been placed on a security blacklist by the Trump administration. The ripples of the ban are spreading. Google is suspending the provision of Android software and technical services to Huawei, which runs its mobile phones on the operating system. Arm, a chip designer, may stop licensing its technology to Huawei. And in Japan and Britain some mobile-service providers said they would halt sales of new Huawei phones.

Qualcomm's share price plunged by 11% after a judge in California ruled that it had illegally crushed competition in the market for phone chips by charging "unreasonably high" royalty rates. The decision is a blow for the chip firm, coming soon after it had reached a settlement with Apple. The judge ordered the company to change its practices and subjected it to seven years of monitoring. Championed by Donald Trump, Qualcomm is the leading provider of 5G chips in America.

Ajit Pai, the chairman of America's Federal Communications Commission, gave his approval to the planned merger of **T-Mobile** and **Sprint**, after they offered assurances to expand their 5G network to rural areas (the full FCC still has to vote). The merger, announced more than a year ago, also has to get the nod from the Justice Department.

Canada and Mexico lifted levies on a range of American goods in response to Mr Trump's decision to rescind **tariffs** on steel and aluminium imports from both countries. The tariffs were an obstacle to getting approval in Congress for the US-Mexico-Canada Agreement, which will replace NAFTA. That new trade agreement faces a rough ride in the House, where Democrats want tougher protections for workers and the environment.

Separately, Mr Trump postponed a decision on whether to impose tariffs on car imports.

In the furnace

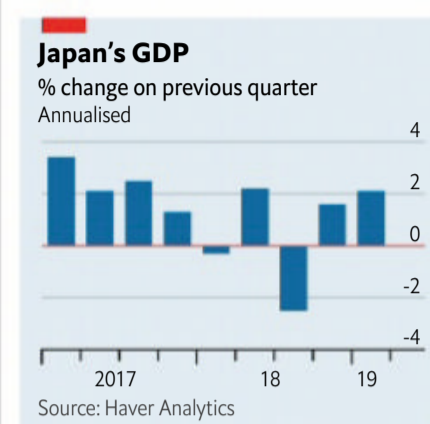
British Steel was declared insolvent after talks with the government to secure another bail-out broke down. Among its many woes, the company was hit by uncertainty over Brexit, which led to a slump in orders from mainland Europe.

Ford announced 7,000 white-collar job cuts, the latest round of lay-offs in the carmaker's effort to become more nimble in a fast-changing industry. It has now shrunk its management structure by 20% in its "goal to reduce bureaucracy".

Pinterest's share price struggled to recover from the battering it took after the company reported a bigger-than-expected quarterly loss and a sales forecast below estimates. The social network is one of a number of tech unicorns to float on the stockmarket this year, completing a successful IPO by comparison with some of its peers.

A sale of shares valued **TransferWise** at \$3.5bn, making it Europe's most valuable fintech startup. Founded in

London by two Estonians, the firm reduces transaction costs through a peer-to-peer money transfer service.



There was some head-scratching this week, as data showed **Japan's economy** growing by 2.1% in the first quarter at an annualised rate, defying expectations of a slight contraction. Most of the growth was explained by a huge drop in imports. Because they fell at a faster rate than exports, GDP rose. Like exports, private consumption and business investment also declined, adding to worries about the health of the economy ahead of a planned increase to the consumption tax in October.

Pret A Manger, a British food and coffee chain, agreed to buy **Eat**, a smaller rival. It will sell vegetarian fare in most of its newly acquired outlets. Meanwhile, the death knell sounded

for Britain's casual-dining revolution with the collapse of the restaurant group founded by **Jamie Oliver**, a consistently chirpy celebrity chef.

It's a jungle out there

Brazil's foreign ministry be-moaned a decision by the international organisation that rules on internet addresses to award the .amazon domain name to **Amazon**. The mighty retailer first requested the use of the domain in 2012, but had to battle stiff opposition from a coalition of eight governments in the Amazon region that wanted the internet name for themselves.

Urban Outfitters joined the fashion for renting clothes by launching a service for female customers, who will be able to rent up to six items a month. Hiring clothes has been in vogue at the high end of the market for some time, but cheap-end retailers face falling sales and a rise in "wardrobing"—customers returning clothes after wearing them. The online market for renting clothes was worth \$1bn in 2017 and is forecast to double by 2023. Urban Outfitters thinks its new service will assist in "a millennial's quest for constant fashion newness".



The great jobs boom

The rich world is enjoying an unprecedented employment bonanza, which capitalism's critics have missed

EVERYONE SAYS work is miserable. Today's workers, if they are lucky enough to escape the gig economy and have a real job, have lost control over their lives. They are underpaid and exploited by unscrupulous bosses. And they face a precarious future, as machines threaten to make them unemployable.

There is just one problem with this bleak picture: it is at odds with reality. As we report this week (see Briefing), most of the rich world is enjoying a jobs boom of unprecedented scope. Not only is work plentiful, but it is also, on average, getting better. Capitalism is improving workers' lot faster than it has in years, as tight labour markets enhance their bargaining power. The zeitgeist has lost touch with the data.

Just the job

In America the unemployment rate is only 3.6%, the lowest in half a century. Less appreciated is the abundance of jobs across most of the rich world. Two-thirds of the members of the OECD, a club of mostly rich countries, enjoy record-high employment among 15- to 64-year-olds. In Japan 77% of this group has a job, up six percentage points in six years. This year Britons will work a record 350bn hours a month. Germany is enjoying a bonanza of tax revenue following a surge in the size of its labour force (see Finance section). Even in France, Spain and Italy, where joblessness is still relatively high, working-age employment is close to or exceeds 2005 levels.

The rich-world jobs boom is partly cyclical—the result of a decade of economic stimulus and recovery since the great recession. But it also reflects structural shifts. Populations are becoming more educated. Websites are efficient at matching vacancies and qualified applicants. And ever more women work. In fact women account for almost all the growth in the rich-world employment rate since 2007. That has something to do with pro-family policies in Europe, but since 2015 the trend is found in America, too. Last, reforms to welfare programmes, both to make them less generous and to toughen eligibility tests, seem to have encouraged people to seek work.

Thanks to the jobs boom, unemployment, once the central issue of political economy, has all but disappeared from the political landscape in many countries. It has been replaced by a series of complaints about the quality and direction of work. These are less tangible and harder to judge than employment statistics. The most important are that automation is destroying opportunities and that work, though plentiful, is low-quality and precarious. "Our jobs market is being turned into a sea of insecurity," says Jeremy Corbyn, leader of Britain's Labour Party.

Again, reality begs to differ. In manufacturing, machines have replaced workers over a period of decades. This seems to have contributed to a pocket of persistent joblessness among American men. But across the OECD as a whole, a jobs apocalypse carried out by machines and algorithms, much feared in Silicon Valley, is nowhere to be seen. A greater share of people with only a secondary education or less is in work now than in 2000.

It is also true that middle-skilled jobs are becoming harder to

find as the structure of the economy changes, and as the service sector—including the gig economy—expands. By 2026 America will have more at-home carers than secretaries, according to official projections. Yet as labour markets hollow out, more high-skilled jobs are being created than menial ones. Meanwhile, low-end work is becoming better paid, in part because of higher minimum wages. Across the rich world, wages below two-thirds of the national median are becoming rarer, not more common.

As for precariousness, in America traditional full-time jobs made up the same proportion of employment in 2017 as they did in 2005. The gig economy accounts for only around 1% of jobs there. In France, despite recent reforms to make labour markets more flexible, the share of new hires given permanent contracts recently hit an all-time high. The truly precarious work is found in southern European countries like Italy, and neither exploitative employers nor modern technology is to blame. The culprit is old-fashioned law that stitches up labour markets, locking out young workers in order to keep insiders in cushy jobs.

Elsewhere, the knock-on benefits of abundant work are becoming clear. As firms compete for workers rather than workers for jobs, average wage growth is rising, pushing up workers' share of the pie—albeit not as fast as the extent of the boom might have suggested. Tight labour markets lead firms to fish for employees in neglected pools, including among ex-convicts, and to boost training amid skills shortages. American workers fretted for years about how to shrink disability-benefit rolls. Now the hot labour market is doing it for them. Indeed, one attraction of the jobs boom is its potential to help solve social ills without governments having to do or spend very much.

Nonetheless, policymakers do have lessons to learn. Economists have again been humbled. They have consistently underestimated potential employment, leading to hesitant fiscal and monetary policy. Just as their sanguine outlook on finance in the 2000s contributed to the bust, so their mistaken pessimism about the potential for jobs growth in the 2010s has needlessly slowed the recovery.

The left needs to accept that many of the criticisms it levels at capitalism do not fit the facts. Life at the bottom of the labour market is not joyous—far from it. However, the lot of workers is improving and entry-level jobs are a much better launch pad to something better than joblessness is. A failure to acknowledge this will lead to government intervention that is at best unnecessary and at worst jeopardises recent progress. The jobs boom seems to be partly down to welfare reforms that the likes of Mr Corbyn have vociferously opposed.

The right should acknowledge that jobs have boomed without the bonfire of regulations that typically forms its labour-market policy. In fact, labour-market rules are proliferating. And although the jury is out on whether rising minimum wages are harming some groups, such as the young, they are not doing damage that is large enough to show up in aggregate.

The jobs boom will not last for ever. Eventually, a recession will kill it off. Meanwhile, it deserves a little appreciation. ■



India's election

Hindu juggernaut

Narendra Modi should make better use of his latest electoral triumph

FOR THE second time in a row, the Bharatiya Janata Party led by Narendra Modi has swept an Indian election. As *The Economist* went to press, early projections suggested the alliance it leads had won well over 300 of the 545 seats in the lower house of parliament. The BJP itself looked set to claim a slender majority in its own right, of more than 272 seats (see Asia section).

To put the scale of the BJP's success in perspective, the last politician to lead a party to two successive electoral majorities in India was Indira Gandhi, in 1971, at the helm of the Congress party. Congress, now led by Indira's grandson, clawed back a little ground after its disastrous performance at the previous election, in 2014, in which it won only 44 seats. But with a haul of perhaps 50, it remains a distant also-ran in Indian politics. In a country where previously routine anti-incumbency had generated decades of fissiparous politics, the BJP appears to have become the natural party of government, just as Congress was in the first years after independence.

Investors cheered the result, sending the main share index to a record high. The BJP's victory holds out the prospect not just of stability, but also of development and reform. Its manifesto pledged lavish investment in infrastructure, including 100 new airports and 50 metro systems. By 2030, the BJP says, India will be the world's third-biggest economy (it now ranks sixth).

Yet the BJP has little to say about the biggest obstacles to growth, such as the poor education of many workers, the lack of clear title to much of India's land and the domination of the banking system by sclerotic state-owned firms. Its activists tend to focus on less practical matters, to say the least. It has long promised to build a temple to the Hindu god Rama in the city of Ayodhya, for example, on the site of a mosque demolished by Hindu zealots in 1992. This time around, for good measure, it pledged to keep women out of a big temple in the southern state of Kerala, in contravention of the Supreme Court's orders. It also



wants to revise the constitution to take away special privileges granted to India's only Muslim-majority state, Jammu & Kashmir. One of the BJP's likely new MPs is a woman awaiting trial for aiding a terrorist attack that killed six Muslims.

This is the ambiguity on which the BJP thrives. To the world, and to upwardly mobile voters, it presents itself as a modern, reformist party, determined to fulfil India's potential. But it derives equal support from its claim to be a muscular champion of Hinduism, that will not flinch from putting Muslims—and their foreign embodiment, Pakistan—in their place.

In its five years in office, Mr Modi's government did not quite live up to either identity, to the dismay of business and the relief of minorities. It did enact two urgently needed reforms, introducing a uniform national sales tax and streamlining bankruptcy proceedings. But it also appalled businessmen (and economists) by abruptly voiding most banknotes in a quixotic quest to catch tax-dodgers. By the same token, it did not build the temple at Ayodhya or preside over the sort of anti-Muslim pogrom that stained Mr Modi's tenure as chief minister of the state of Gujarat. But it did inflame the Muslim

areas of Jammu & Kashmir with brutal policing, launch risky airstrikes against Pakistan and wink at alarmingly regular beatings and lynchings of Muslims and low-caste Hindus for various perceived insults to the religion of the majority.

Mr Modi's second term gives him another chance to hasten development and turn India into a genuine global power—goals that appeal to both his enterprising supporters and his religious ones. But to do so he will have to focus on the economy. The sectarian concerns the BJP has been stirring up during the election campaign are a harmful distraction. So far, Mr Modi has governed in perpetual campaign mode, with more emphasis on slogans than outcomes. He needs to show Indians that he is not just good at winning elections, but at putting his victories to use. ■

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Big Tech and the trade war

Circuit breaker

The tech cold war is turning red-hot. That is a danger to investors and consumers—and to America

WHEN TRADE talks between America and China fell apart on May 10th, the effect on financial markets was muted. Most firms and investors are betting on a long struggle between the superpowers but not a sudden crisis or a financial panic. As the conflict over the tech industry escalates, however, that assumption looks suspect. On May 15th America's Commerce Department said that companies would need a special licence to deal with Huawei, China's hardware giant, which it deemed a threat to American interests (it later said the order would not take full effect for 90 days). Fears that other Chinese tech firms will be blacklisted have caused their shares to tumble. A chain reaction

is under way as a giant industry braces for a violent shock.

The hawks in the White House may believe that isolating the tech industry will slow China's long-term development and that isolation is a good negotiating tactic, since China has more to lose in the short term than America does. In fact the brutal fallout from a full-blown tech war would rapidly be felt by financial markets as well as by America's allies and the world's consumers. In the long run it may even make China self-sufficient.

The tech confrontation began in earnest in April 2018, when America blacklisted ZTE, a Chinese hardware firm, for breaching sanctions on Iran and North Korea and then lying about it. Un- ▶▶

able to buy American semiconductors and other components, or to deal with Western banks, ZTE almost collapsed (President Donald Trump reversed the ban). Since then the scope of American actions has broadened and the burden of proof fallen. The Huawei ban comes after a campaign to stop American allies from using its 5G gear. Further bans are likely. According to the *New York Times*, the blacklisted firms will include Hikvision, which makes systems used for surveillance of the beleaguered Uighur minority in Xinjiang. Suppliers and customers are cutting these firms off. Google and Arm, a British chip-design firm, have both said they will limit supplies to Huawei. Telecoms firms in Britain and Japan have said they will stop selling some Huawei phones.

The confrontation is a reminder of America's awesome power. By stopping foreign firms from using its intellectual property and financial system, it can put them out of business. The White House is also right that the bill for a tech war will at first be asymmetric. American firms will lose perhaps \$10bn a year of licensing revenue for chips and components. But much of China's hardware-manufacturing industry depends on American components that cannot easily be sourced from elsewhere or produced at home. Huawei carries only 80 days of inventory and has 188,000 staff (see Business section). A hiatus in the trade of tech goods would cause huge job losses in China's coastal cities.

Tech is not like the other industries, such as steel and soybeans, that obsess the White House's trade warriors. The supply chain is so complex that it more closely resembles the interconnected global financial system before the crisis of 2007-08. Tech hardware firms around the world, which mostly depend on pro-

duction in China, have a total market value of \$5trn. Apple, which makes a fifth of its profits in China, could find itself banned or its products boycotted; its cash-rich balance-sheet could survive the shock, but its shares would slump. Hundreds of smaller suppliers with rickety finances could go bust.

The ripple effect would hurt America's allies in Asia, because they host factories that supply China's tech-manufacturing hubs and are home to companies that operate in China. In October 2017, for example, components for smartphones accounted for over 16% of exports in Malaysia and Singapore and over 33% in Taiwan. Two Taiwanese giants, TSMC (which makes chips) and Foxconn (which assembles devices), straddle the fault line of the tech cold war, having production and customers in both America and China. The same is true of South Korea's champion, Samsung. America's allies face an impossible test of loyalty.

Consumers will suffer, too. Until now, the cost of the trade war has been masked, because tariffs are paid by producers who absorb their cost or pass it on stealthily to consumers. Now the bill could become visible. Huawei has sold 300m handsets outside China in the past five years. Their buyers may soon find that their phones no longer work properly. And just imagine if Americans were suddenly unable to buy Chinese-made iPhones.

The cost of a rupture means that both sides are likely to back down. Yet the battle will hasten the race to develop an indigenous capacity to supply every vital technology in China—and in every aspiring power, including India. America's hold over the digital economy lets it enforce its will. But by unleashing its power so clumsily, it will hasten the end of its own dominance. ■

Climate of fear

How to think about global warming and war

They are linked—and that is worrying

DID CLIMATE change cause the war in Syria? Or the genocide in Darfur? Obviously, that is not the whole story. Suppose Syria's despot, Bashar al-Assad, or Sudan's former tyrant, Omar al-Bashir, were to find themselves on trial in The Hague and tried to blame their country's carnage on global warming. Such a risible defence would flop. No conflict occurs without leaders to give orders and soldiers to pull triggers. No atrocities are committed unless human beings choose to commit them.

Nonetheless, future-gazers are right to warn that global warming has made some wars more likely than they would otherwise have been, and will make others more so in the future. It is never possible to pinpoint a specific war and say that it would not have happened in the absence of climate change, just as it is impossible to say that a particular flood or typhoon was caused by it. Rather, climate change is causing environmental upheaval that destabilises regions and raises the risk of bloodshed (see International section).

Some worry that the Arctic will be a flashpoint. As the ice cap shrinks, NATO and Russia bolster their military presence there. China is building a nuclear-powered icebreaker. At the Arctic Council on May 6th Mike Pompeo, America's secretary of state, downplayed climate change but waxed indignant about Russia's "aggressive behaviour" in reopening military bases in the re-

gion. If the North-West Passage opens to shipping or enough valuable minerals are found beneath Arctic waters, expect a tussle between great powers for polar pre-eminence.

But none of that is likely to lead to war. Nuclear-armed states are wisely wary of provoking each other too much. The bigger danger of climate-induced conflict lies farther south, in hotter, drier zones, and involves mostly civil wars in poor countries, not international ones.



Some things are clear. Accumulating greenhouse gases in the atmosphere are increasing the frequency and intensity of extreme droughts and floods in some regions. Seasonal rains and monsoons are becoming more variable and less predictable. As one area grows parched, its inhabitants encroach on land traditionally farmed or used for grazing by others.

Disputes erupt, some of which are already turning violent, especially in the Sahel, a huge strip of Africa below the Sahara. Environmental stress plays a role in deadly conflicts in Burkina Faso, Chad, Cameroon, Mali, Niger, northern Nigeria and South Sudan, not to mention non-Sahelian states such as Yemen. As global temperatures continue to rise and the weather becomes more erratic, such conflicts could grow more common.

Several other factors tend to foment war, including poverty, stagnation and bad government. Ethnic differences, religious

▶ zealotry and the availability of minerals to loot are often assumed to increase the risk, but they typically do so only in countries that are too poor, stagnant and ill-governed to keep violence in check. The good news is that, as poverty has receded worldwide, the proportion of humankind who die in wars and civil strife has fallen sharply, from nearly four per 100,000 each year in the 1980s to less than one in the past decade. The bad news is that climate-related disruption is likely to get worse. And if it leads to more conflicts, it can start a vicious cycle, since war makes regions poorer, and poverty fosters future wars.

Climate-induced war is one more reason for governments to take global warming seriously. However, as Australia showed on May 18th, when it elected a coal-cuddling conservative government, voters are not yet willing to pay much to avert planetary peril. Cheaper ways to reduce emissions are urgently needed, along with incentives to remove carbon from the atmosphere.

Alas, none of this will help end conflicts today or prevent them in the short term. For that, poor countries need the help of

the rich to build early-warning systems and pay for peacekeepers. Outsiders should also impose sanctions on warmongers and offer aid for governments that sincerely seek to rebuild themselves after wars, thereby reducing the risk of a relapse. For every dollar spent on such intervention, roughly \$10 of harm can be averted, estimates Paul Dunne of the University of Cape Town. This is good value for money, and fits well with efforts by America, France and others to curb jihadism in Africa.

Since climate change will make some areas uninhabitable, people will leave them. Not many will move to rich countries—starving farmers cannot afford such a costly journey. Many more will move to towns or cities in their own country. It makes no sense to try to stop or discourage such migration, as many governments do. Moving is a rational way to adapt to a changing environment. Better for governments to manage the influx, building roads and schools to accommodate the newcomers. If people cannot act globally in a global emergency they will have to make do with acting locally. ■

British politics

The end of the road

The prime minister has run out of options. She will leave the country even more divided than she found it

TERESA MAY has devoted her time in Downing Street to a single task: getting Britain out of the European Union. In November she cleared the first hurdle when she signed a draft Brexit deal with her opposite numbers in Brussels. But its terms were so much worse than those she had promised at home that she has been unable to get the deal through Parliament. MPs have rejected it three times, by crushing margins. Under pressure from her party, Mrs May has promised to quit if she fails on her fourth and final attempt. Even though the vote is not due until next month, it became clear this week that the deal was indeed doomed when her last-ditch attempt to win over doubters backfired spectacularly and triggered the resignation of a senior minister (see Britain section). At the same time, the Conservative Party is set to take a drubbing in European elections at the hands of Nigel Farage and his new Brexit Party. Britain will soon have a new prime minister.

Historians may be a fraction kinder to Mrs May than today's commentators. But the prime minister's ineptitude has rendered the fiendishly hard Brexit project almost impossible. Faced with the many painful trade-offs that Brexit entails, Mrs May refused to accept that compromise was necessary until too late—after others' positions had hardened and compromise was defined as losing. Many Leavers now believe that a perfect, costless version of Brexit exists, which they are being denied only through some mix of incompetence and conspiracy. At the same time many Remainers, seeing the government constantly in retreat, believe that Brexit could yet be cancelled altogether.

This polarisation is Mrs May's legacy—and it will bedevil her successor. In the aftermath of the referendum, nearly three years ago, many Brexiteers might have accepted a deal in which Britain left the single market and ended free movement, with temporary membership of the customs union as the only tie. Most now see such an outcome as an intolerable betrayal (never mind that

some of them still seem unsure what a customs union actually is). In the same way, Remainers might once also have been satisfied by the prospect of a customs union, so long as it was tied to a vote in Parliament on whether to hold a second referendum. But when Mrs May belatedly offered such things this week, it was dismissed by all sides as inadequate. The scope for compromise has drastically narrowed from where it stood in 2016. Talks with the Labour opposition and indicative votes among MPs on possible Brexit options have gone nowhere, in large part because they were initiated so late in the day. Mrs May inherited a divided country which urgently needed to be coaxed back together. Her approach has driven its two tribes still further apart.

She has no cards left to play. A change of leader might give

new momentum to talks in Westminster, which have stalled in the past few weeks, despite the EU's urging of Britain to get on with it. Boris Johnson, the favourite among the Conservative Party members who will choose the next leader, represents a dangerous gamble for the country (see Bagehot). But he may be more capable than Mrs May of the political and ideological flexibility that will be required to get Britain out of the



trap in which it has placed itself.

No one should assume that Mrs May's exit will solve Britain's Brexit problems. Mr Johnson proposes to renegotiate the withdrawal agreement, but the EU is sure to refuse him. At home, most Leave-voters detest the current deal so vehemently that they would rather quit with no deal at all (another dreadful legacy of Mrs May, who spent two years saying Britain could prosper with no deal, before admitting that she was wrong). Upstart parties on both the Leave and Remain sides are tugging Labour and the Tories towards the extremes. The possibility of cross-party agreement seems more remote than ever. And as the chances of no deal edge up, the pound is sliding. Mrs May has had a wretched time in office. Her successor will find it no easier. ■



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BHP

The problem with antibiotics

It is right to direct attention to the serious problem of antimicrobial resistance, but it is wrong to suggest that an unending supply of antimicrobial agents are simply waiting to be discovered if only the proper funding model can be devised (“Netflix and pills”, May 4th). The antibiotic pipeline may not have an infinite reserve of raw material on which to draw. For example, selective evolutionary pressure caused by the use of antibiotics could enable microbes to resemble their host environments in important ways that frustrate targeted approaches to treatment, raise development costs, or increase toxicity.

It is unclear whether a system dependent on endlessly churning out new and ever-more expensive medicines will be either economically feasible or scientifically possible in the long term. Greater priority should be given to implementing more permanent solutions that are not limited to slowing resistance. No single approach is likely to be sufficient, so governments should begin by reviving the moribund vision of using the vaccines, treatments and other tools that are already at hand to eradicate disease and thereby stop—not slow—the development of resistance. Eradication may not currently be possible for every disease, but for those diseases where it is possible, the window of opportunity may fast be closing.

JONATHAN DARROW
Harvard Medical School
Boston
TIMO MINNSEN
Director
Centre for Advanced Studies in Biomedical Innovation Law
University of Copenhagen

City limits

“Capital gains” (April 20th) discussed the push for Washington, DC, to become a state. One solution to this perennial thorny issue is to pare back the District of Columbia to just the White House, the Capitol and

the Supreme Court. The remainder of the District could then be transferred to the adjacent state of Maryland. Such a retrocession has a precedent. A sizeable portion of the District was returned to the state of Virginia in 1847.

Maryland and Washington already have nearly identical median household incomes, so neither jurisdiction would be made worse off by the addition of the other. And Maryland is already a stalwart Democratic state, so the national electoral calculus would not be affected.

ALEX CABOT
Boston

China’s youth of today

Your article about the 100th anniversary of the May 4th Movement in China drew some broad comparisons between that event, the 1989 student protests and current campus activists (“Tiananmen 1919”, May 4th). However, it overlooked one salient fact, namely China’s ageing population. All large-scale incidents of youth mobilisation for political protest in China over the 20th century occurred under conditions of a “youth bulge” when 15- to 25-year-olds made up more than 30% of the adult population.

Since 1989, the youth share has halved to just 15% of the population. It is unlikely that another Tiananmen will occur because the centre of gravity has shifted to more mature age cohorts holding more conservative attitudes. China is a rare case of an authoritarian system that has grown old before it transitioned to democracy.

BJÖRN ALPERMANN
Chair of contemporary Chinese studies
University of Würzburg
Würzburg, Germany

1876 and all that

I am sure that Henry Louis Gates junior covered it, but your review of his latest book implies that after America’s civil war, Reconstruction ended because “the North tired of browbeating the South” (“A kind of freedom”, April 27th).

Another way of looking at it is that a crooked presidential election in 1876, disputed by both Democrats and Republicans, led to an agreement whereby the Democrats conceded the election to Rutherford B. Hayes, in return for the Republicans pulling the remaining federal troops from the southern states. Once those troops were out, Reconstruction officially ended, and 100 years of vicious, unrelenting torment for black citizens in the South began.

GLENN KRASNER
New York

Earning your business stripes

“The trouble with tech unicorns” (April 20th) discussed the lack of profits at the startups that are coming to market. There is another animal in the business menagerie: zebras. These are companies that actually generate profits and usually do some good for society at the same time.

When investors chase mythical unicorns instead of nurturing real zebras, they hurt those smaller, profitable companies. So in a very real sense, unicorns gore zebras. Zebras are also the manifestation of a new species of startup, one that is real and can sustain itself. Zebras do not enrich their funders quite so much, but instead create value for consumers and themselves with less artificial subsidy.

STEVE BACHAR
Managing partner
Empowerment Capital
Denver

Regarding comparisons of the unicorns to the dotcom bubble of the late 1990s, I lived in Berkeley at the time, just two traffic jams north of Silicon Valley, and worked for seven internet startups. Then as now, we worried about economies of scale, entry barriers and profitability. Then, the mantra was “get big fast”. Today it is called “blitzscaling”. Both mean buying customers at any price and deferring profits in favour of user numbers that will impress investors.

We operated on the as-

sumption that we would find ways to monetise the customers we had paid for, even if we didn’t yet know exactly how our business model would work. None of the firms I worked for got it right before the money ran out.

All frenzies are distinct. The scale is different today, and interest rates are lower. But the mindset is the same: fast growth, fast money, fast IPO before the venture capitalists’ money runs out. Like all bubbles stretching back to tulips, I expect the results will be similar.

CARL THELEN
San Pablo, California

The ties that bind

I was shocked to read Bartleby’s unfounded claim that the tie was “a functionally useless garment that constricted male necks for a century” (May 4th). True, the tie is no longer regularly used to protect the neck during close combat, but it retains a vital function for the modern male: wiping and cleaning one’s eyeglasses.

PROFESSOR MICHAEL MALLOY
McGeorge School of Law
Sacramento, California

Glenn O’Brien observed in “How to Be a Man”, that the necktie’s “almost transcendental uselessness” is, in fact, its essential quality. A necktie’s sole purpose is beauty. Or as Mr O’Brien put it: “The functionless tie is to the wardrobe what the functionless soul is to the body. It is pure poetry.”

BEN CLICK
Washington, DC

The demise of the male tie is somewhat premature. It has a function that is necessary and desirable: the partial cover-up of an extended gut, of which we have many.

ANDREW RUTTER

Tucson, Arizona

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



Our Client is an independent Nigerian oil and gas exploration and production company. The Company seeks to maximise the commercial and economic value of oil and gas resources and aid growth in oil, gas, condensate and NGLs production. The Company is currently looking for astute Executives to join the team in the following roles:

Managing Director/Chief Executive Officer

Job Summary:

The MD/CEO will lead and ensure the growth and profitability of the Company

Key Responsibilities:

The individual will be directly accountable to the Board of Directors for all activities of the company. He/she will champion the shaping of the vision, goals and objectives of the company and ensure these are achieved through articulating and executing clear and relevant business strategies and plans.

The MD/CEO will be responsible for ensuring superior return to shareholders as well as search for new strategic opportunities. In addition, the MD will establish and foster strong relationships with key stakeholders across the entire value chain of the oil and gas industry in Nigeria.

Requirements:

- Twenty to twenty-five (20 – 25) years professional experience (at least fifteen years in an executive capacity) within the E&P industry
- Bachelor's Degree in Petroleum Engineering or any relevant discipline
- An MBA is also highly desirable
- Relevant professional certifications from a reputable professional institution e.g. Nigerian Association of Petroleum Explorationists (NAPE), Society of Petroleum Engineers (SPE) etc.
- Exposure to multi-million Commercial deal-making in the E&P industry across several geographies or businesses
- Proven experience in liaising with key investors, bankers, regulators and senior government stakeholders
- Familiarity with diverse business functions such as operations, finance etc
- In-depth knowledge of corporate governance and general management best practices
- A track record on asset improvement initiatives and/or major project delivery

Skills and Competencies

- Business & Commercial Acumen with an eye for cost leadership
- Stakeholder Relationship Management – Ability to secure consensus among various stakeholders in complex circumstances
- High level of integrity
- Strong People Management and Interpersonal skills
- Project and Programme management skills

Finance Director/Chief Financial Officer

Job Summary:

This role exists to provide comprehensive professional financial and management services to the Organisation and the executives to facilitate the achievement of the Company's corporate objectives.

Key Responsibilities:

As a senior executive the post holder will act as a business partner and be fully involved in planning, budgeting and company strategy (financial and business). The individual will provide strategic recommendations to the MD/CEO and members of the executive management team.

In addition, the individual will lead, establish and maintain the company's corporate governance compliance programme and all associated controls. He/She will ensure proper management and integrity of financial matters, plan cash flows and ensure proper funding of operations and capital investments. The individual will also be responsible for the provision of treasury services to meet near and long-term financial obligations.

Requirements:

- The post holder must be a Qualified Accountant (ACA, ACCA).
- An MBA is also highly desirable
- Experienced professional in commercial or finance discipline, with minimum of 20 years of relevant experience (at least 10 years in an executive capacity) within the E&P industry

Skills and Competencies

- Effective influencing and communication skills to break internal barriers and support effective relationships with the Nigerian National Petroleum Corporation (NNPC), the Nigerian Petroleum Development Company (NPDC), the Company's Partners as well as internal customers.
- Sound Financial management background in particular control frameworks and management information,
- Strategic Cost Leadership
- Strategic Relationship Management
- Financial and Commercial Acumen

Qualified candidates should apply by visiting www.pwc.com/ng/executive-search



Under-Secretary-General for Global Communications

The United Nations is seeking a leader of outstanding stature who has the vision and capability to create, implement and lead the Organization's global communications strategy to ensure that the work of the UN is responsibly, meaningfully and powerfully communicated to global audiences in multiple languages.

Applications must include a detailed curriculum vitae with full contact information (e-mail and telephone) and must be sent to eosg2019dgc@un.org by 10 June 2019.

**Applications from women
are strongly encouraged.**

For more information on this position and other senior leadership vacancies, visit: www.un.org/sg/en/vacancies



THE EUROPEAN COMMISSION IS RECRUITING FOR THE FOLLOWING POSITIONS IN BRUSSELS:

Director, Directorate-General for Energy (COM/2019/10385)

The Director will be responsible for developing and coordinating the European energy policy, including monitoring its implementation in Member States, steering international relations and enlargement policy, providing economic analysis, models and financial instruments as well as communicating on energy policy issues, in particular on the Clean Energy for all Europeans package.

Principal Adviser, Directorate-General for Financial Stability, Financial Services and Capital Markets Union (COM/2019/10384)

The Principal Adviser will provide advice on the articulation and development of financial services policies or policy orientations, ensure consistency of the international strategy across all its policy initiatives and oversee the overall implementation of third country regulatory framework equivalences.

Principal Adviser, Directorate-General for Agriculture and Rural Development (COM/2019/10386)

The Principal Adviser will contribute to the ongoing assessment of the Common Agricultural Policy and its adjustments, analysing how food security, sustainability, migration, trade agreements,

climate action and environmental preservation frame future activities and will provide advice on the promotion of the European agricultural sector in world trade and international policies.

Principal Adviser, Directorate-General for Trade (COM/2019/10387)

The Principal Adviser will provide advice on EU negotiations at bilateral, regional and multilateral levels and will ensure the overall coherence of EU trade relations with key trading partners and with other areas of EU policy relevant to current debates around trade and multilateralism.

The European Commission applies an active equal opportunities policy aimed at further increasing the share of women in management functions and it particularly encourages applications from women.

Please consult the Official Journal C 166 A of 15 May 2019 for the detailed vacancy notices (1 for each position) as well as the eligibility and selection criteria.

Registration for applicants:
<https://ec.europa.eu/dgs/human-resources/seniormanagementvacancies/>

The closing date for registration is
14 June 2019, 12 noon Brussels time.



INTERNATIONAL
ENERGY CHARTER

The Energy Charter Secretariat, located in Brussels, is the administrative body responsible for facilitating the implementation of the Energy Charter Treaty (ECT) and further developing the Energy Charter Process under the supervision of the Energy Charter Conference.

Further details on the Energy Charter process and on the vacancy listed below can be obtained from the International Energy Charter website at www.energycharter.org

ASSISTANT SECRETARY GENERAL

Under the supervision of the Secretary General, the successful candidate will be responsible for direction and co-ordination of the work of the Experts and the administrative assistants of the Secretariat, as well as daily office administration and carrying out other related tasks of the internal management of the office as assigned by Secretary General; monitoring and assisting the implementation of the ECT; preparation of the Budget, various financial documents and reports, co-ordination of relations with external Auditors.

Requirements include at least five years professional experience in a senior capacity within a national government, an intergovernmental organisation, academia, NGOs or industry with direct experience in senior or project management and financial administration; excellent oral and written communications skills, the ability to successfully lead a multi-cultural team and complete fluency in English.

The post is offered on a basis of a three-year fixed-term contract with the possibility of prolongation and an attractive tax-free remuneration package (A5 level on the OECD scale).

Applications should be addressed to the Secretary General,
at secgen@encharter.org to arrive no later than 31 July 2019.

Only those candidates selected for the interview will be contacted.

SENIOR LEADERSHIP POSITIONS AT NCI AGENCY (BRUSSELS, BELGIUM)

The NCI Agency General Manager, Mr Kevin Scheid, is looking to recruit for his senior leadership team the following positions:

Director of Acquisition (ref. 190372)

As an expert in your field, you will represent the Agency and advise the General Manager on all aspects of acquisition services in support of NATO's digital endeavour. You are expected to operate with the upmost integrity, delivering a high quality, fair and efficient procurement process. The Director of Acquisition (DACQ) acts as primary POC with NATO resource community and committees and it is the principal interface to industries. A promoter in enforcing the Agency default strategy of competitive bidding, you will provide direction and guidance to the Agency Acquisition functions at the geographically dispersed locations.

Chief of Contracts (ref. 190311)

The Contracting team is responsible for interacting with NATO Committees and Industry of 29 NATO nations on all procurement procedures and contractual issues. In this role, you will supervise a team of senior contracting experts using your influencing and judgement skills to negotiate the highest level of standards and best value across our portfolio of current and future suppliers. You will be an expert in contract management and will be expected to advise the Director of Acquisition on the full range of contractual issues from solicitations, contract awards to contract management.



Further information concerning the positions and details of how to apply can be found on www.nato.int/recruitment

Closing date for applications: 12 June 2019



About Us

ASEAN+3 MACROECONOMIC RESEARCH OFFICE (AMRO), an international organisation with full legal personality, located in Singapore, is a regional macroeconomic surveillance organization that aims to contribute to securing the macroeconomic and financial stability in the ASEAN+3 region. AMRO's vision is to be an independent, credible and professional regional organization acting as a trusted policy advisor to members in the ASEAN+3 region, which includes 10 member states of the Association of Southeast Asian Nations (ASEAN), and China; Hong Kong, China; Japan; and Korea. To fulfil its mandate, AMRO focuses on three core functions: conducting macroeconomic surveillance, supporting the implementation of the Chiang Mai Initiative Multilateralisation (CMIM), and providing technical assistance to members.

AMRO is currently looking for candidates for two Deputy Director positions, to start work in AMRO from September 2019.

DEPUTY DIRECTOR (ADMINISTRATION)

DEPUTY DIRECTOR (CMIM, STRATEGY & COORDINATION)

For full details of the Terms of Reference and Qualification Criteria, please refer to:

AMRO career website: <http://www.amro-asia.org/career/>
or Charterhouse job portal:

<https://www.charterhouse.com.sg/job/deputy-director-administration/>
<https://www.charterhouse.com.sg/job/deputy-director-cmim-strategy-and-coordination/>

Qualified candidates should send (a) CV, (b) brief description on the relevant working experiences, and (c) earliest possible starting date of employment at AMRO, by **19 June 2019** to:

For Deputy Director (Administration) position:
AMRO_DD1@charterhouse.com.sg

For Deputy Director (CMIM, Strategy & Coordination) position:
AMRO_DD2@charterhouse.com.sg

We will acknowledge receipt of all the applications. However, we regret that only shortlisted candidates will be notified.

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We would like to meet senior communications executives in a highly visible leadership role with proven strategic experience in both external and internal communications. You will have experience working in an international environment with the ability to influence at a senior executive level and will build strong relationships both internally and externally.

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Working it

MALAGA, SAN FRANCISCO AND TOKYO

Across the rich world, an extraordinary jobs boom is under way

THE SECOND volume of “My Struggle”, Karl Ove Knausgaard’s enormous, maddening, brilliant autobiographical novel, contains some depressing life advice. “If I have learned one thing,” he sighs, “it is the following: don’t believe you are anybody. Don’t bloody believe you are somebody...Do not believe that you’re anything special. Do not believe that you’re worth anything, because you aren’t.” We like to tell ourselves that we deserve our successes, Mr Knausgaard’s book suggests, yet they are largely the product of forces over which we have no control. When he wrote those words he probably was not thinking about the boasts of politicians in the OECD, a club mainly of rich countries, about their jobs markets. But he might as well have been.

“Unemployment numbers best in 51 years. Wow!” tweeted Donald Trump, America’s president, last month. Theresa May, the British prime minister, bragged in February that “employment is at a near-record high and unemployment at a near-record low.” The month before, Scott Morrison, Australia’s prime minister, crowed

that “more than 730 jobs were created every day last year under our government.” Around the same time his Japanese counterpart, Shinzo Abe, let it be known that “the employment rate for young people is at a level surpassing all previous records.” Hence the swagger of politicians, who believe that they are special. But they are not. Jobs abound because of forces that largely have nothing to do with them.

And abound they do. Across the OECD a jobs bonanza is under way. In the past five years the group has added 43m jobs. The unemployment rate—the number of people looking for work as a share of the total labour force—is at its lowest in decades (see chart 1 on next page). Not every member can celebrate. Unemployment in Italy, Spain and Greece remains higher than before the financial crisis of 2008-09. America’s rate of labour-force participation is still well off its all-time high. But most can. In 2018, the employment rate among people of working age was the highest ever in Britain, Canada, Germany, Australia and 22 other OECD countries.

The boom is broad based. Unemployment among unskilled workers and the young is tumbling, as is long-term joblessness. The share of people working part-time because they cannot find jobs with longer hours remains higher than it was just before the financial crisis of 2008-09 but has fallen sharply since 2013 (see chart 2). America’s Bureau of Labour Statistics produces perhaps the widest official measure of unemployment, which includes involuntary part-timers as well as those who have dropped out of the labour force but nonetheless want to work. It is currently well below its long-run average.

A good job, too?

No one can argue about the scale of the jobs boom. But it has become a shibboleth at either end of the political spectrum that the quality of jobs on offer has nosedived. Driving Uber taxis or delivering meals are not really jobs at all, the argument goes. It is true that what Mr Trump regards as “jobs”—traditional, male-dominated occupations, such as those in manufacturing—have withered. Between 1995 and 2015 such middle-skilled jobs fell as a share of OECD employment by ten percentage points. Next month sees the publication of a book by David Blanchflower of Dartmouth College, and previously a member of the Bank of England’s monetary-policy committee, called “Not Working: Where Have All the Good Jobs Gone?”. Perhaps the growing difficulty of finding stable, well-paid employ- ▶▶

ment in academia and journalism explains why the popular discourse about modern labour markets is so gloomy.

The despondency might be justified were not popular perceptions about the world of work so obviously wrong. Consider the notion that work is ever more precarious. In fact, official estimates of America's gig economy, whereby short-term freelance work is accessed through online market places, put it only at about 1% of total employment. Temporary employment may be a little higher than it was in the 1990s, yet the rate has been falling for a decade. In France the share of new hires given long-term permanent contracts recently reached an all-time high of 50%.

The belief that people increasingly flit from job to job is also not borne out by fact. Over the past two decades the share of OECD workers who have been in their job for less than a year has hovered around 20%, with no clear trend up or down. The demise of jobs for the middlingly skilled has not proved a disaster either. Although it has meant that low-skilled jobs have risen as a share of OECD employment they have done so to a far lesser extent than high-skilled ones, which have boomed.

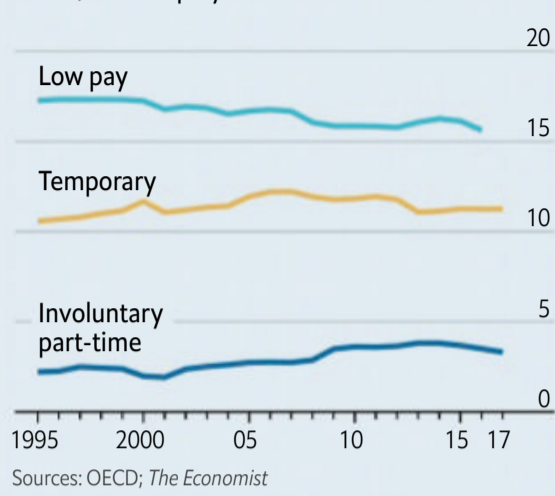
Until recently a missing piece of the puzzle was wage growth. Economics textbooks say that times of low unemployment go hand in hand with juicy pay rises as employers compete harder for staff. Yet for much of the post-crisis period the "Phillips curve" appeared broken, with falling unemployment in 2014-16 failing to translate into higher wages.

The relationship has started to rekindle. As unemployment has continued to fall wages are at last accelerating. A broader measure of whether work pays, where the total of all compensation is expressed as a share of national income, is rising in many rich countries, including America and Britain. Pay is still increasing more slowly than might have been expected given the tightness of the labour market. For that, blame weak productivity growth. And it is wrong to conclude that workers are ever more ex-



Employment history

OECD, % of employment



ploited. The incidence of "low pay"—workers who earn less than two-thirds of the median—has been falling for two decades.

Red-hot labour markets do not solve every problem. Malaga's restaurants are buzzing and its streets are clean. You would hardly know that the Spanish city's average unemployment rate over the past five years has been close to 30%. The one sign that there may be lots of people with not much to do is the number of gaming arcades. The rough sleepers and empty lots of San Francisco scream of a city with an unemployment problem; in fact the rate is 2.6%.

Others make deeper criticisms of the rosy jobs numbers. Shouldn't societies aspire to work less, rather than more? People who do not need to engage in wage-labour can indulge in other, more fulfilling activities. David Graeber, an anthropologist, goes further. In "Bullshit Jobs", a book published last year which has become akin to a holy tract for millennial socialists, he claims that a big chunk of modern employment is pointless and soul-sucking. "Huge swathes of people, in Europe and North America in particular, spend their entire working lives performing tasks they secretly believe do not really need to be performed," he argues.

It is hard to dismiss the feeling that drudgery is the price Japan has paid for an average unemployment rate over the past half-century of just 3%, the lowest in the OECD. At the baggage-collection area of Haneda airport, a woman spends her day straightening suitcases after they are placed on the conveyor belt. At an empty bar in Tokyo's fashion district a world-beating gin martini (the addition of a single drop of orange bitters is a revelation) is mixed by three people, who then stand around as it is drunk. Mr Graeber would surely argue that this is less a sign of social progress and more that capitalism has conspired to turn people into drones.

But societies benefit from strong labour markets. More workers means more people paying income tax and fewer receiving benefits. Studies suggest that the unem-

ployment rate is positively correlated with rates of property crime and even with violent crime. Having a job gives people a sense of purpose which is also good for all sorts of social outcomes, including mental and physical health. And being in work makes another, better job easier to get. Capitalism has not been able to tell many good-news stories of late. This is one of them.

The reason for the strength of the OECD's labour market is a puzzle, however. In recent years many governments have loaded employers with extra costs, even as it is becoming ever easier to replace people with robots. A study in 2013 by Carl Benedikt Frey and Michael Osborne of Oxford University concluded that 47% of jobs in America were at risk of being automated. Rules have proliferated on equal pay, anti-discrimination, health and safety, and maternity and paternity leave. Across 24 OECD countries for which there are long-run data, the value of the minimum wage has risen from 44% of full-time median earnings in 2000 to 50% today.

Hives of industry

Why are labour markets so buoyant? This is in part a cyclical phenomenon. Economic growth tends to push unemployment down. The recovery from the financial crisis is a decade old. In part because of appropriately lax monetary policy, America is about to achieve its longest-ever period of economic expansion. Meanwhile, lingering uncertainty related to the financial crisis and the rise of populism may mean that firms are keener on hiring staff than on devoting large amounts of capital to investment, which is harder to undo. The post-crisis period has also been characterised by rapid growth in the service sector, which is more labour-intensive than industry. For all these reasons it is no surprise that unemployment is relatively low.

But not this low. In October 2013 the IMF made economic forecasts for advanced economies for the following five years. On the assumption that annual GDP growth would average 2.4%, they concluded that by 2018 the rate of unemployment would be 6.9%. It turned out that the IMF was too optimistic on growth and too pessimistic on unemployment, which by 2018 had fallen to around 5%. That suggests it is not only a cyclical phenomenon. Long-term structural changes to demography, technology and policy play an equally significant role.

Take demography. The OECD is ageing. Young people on average are more likely to be registered as unemployed than their elders, in part because they are less skilled but also because older folk who lose a job may retire and thus drop out of the labour force. Several studies draw a link between more young people and higher unemployment. In the 1980s, a time of relatively high joblessness, 25% of the rich world's work-



► ing-age population was aged 15 to 24. That has since fallen to around 17.5%.

Demographic change, in other words, means that today's unemployment rate is not directly comparable with those of the past. By one estimate, had America's demographic structure in 2000 remained the same today, the current rate of unemployment would be around 0.5 percentage points higher. Oxford Economics, a consultancy, finds results for the euro zone that are similar.

Yet tumbling unemployment is about much more than statistical trickery. The second big factor, technological change, is genuinely strengthening labour markets. Better tech improves the "matching" of employers with potential employees. Not long ago those hiring put an advert in a local newspaper or spread the word by mouth. Now employers can shoot from the hip, posting vacancies on a slew of jobs websites. In the ten years to 2016 the cost of filling a vacancy fell by 80% in real terms. And candidates are more likely to spot a job that suits them. A study in 2011 by Peter Kuhn and Hani Mansour found that using the internet to look for a job reduced the time spent unemployed by about a quarter. OECD countries with high worklessness are often those where online job searching is less common. Only 40% of unemployed Italians do it, compared with over 95% of South Koreans.

The gig economy, even if it is relatively small-scale, also raises employment by creating work that would not otherwise exist. In the past fixing a tap would have been a DIY job; now with the tap of a screen it is possible to pay someone else to do it.

Work in progress

A series of small, incremental changes to policy over many decades is the third factor behind a jobs boom for which the current crop of politicians are so keen to take credit. Governments have offered carrots and sticks. Carrots include making it easier for women to combine work and family. In many countries rights for part-time work-

ers have been strengthened and parental leave made more generous, with the state often bearing the cost. Mr Abe's economic-reform package includes providing more day-care centres for children.

Such policies can have a large impact on labour-force participation, particularly for women, suggests research by Francine Blau and Lawrence Kahn, published in 2013. Female employment rates have been edging up across the OECD for decades. While in America female employment has since fallen, across the OECD as a whole the pace of growth has quickened (see chart 3).

Another carrot is education. The share of OECD workers with some form of higher education has risen from 22% in 2000 to nearly 40% today. These workers are more likely to be in employment than poorly qualified folk. Higher education usually instils a superior work ethic and such workers have more transferable skills.

Governments have wielded the stick, too. Many have reduced the power of trade unions and collective-bargaining agreements. That may have made wages more responsive to market conditions. A larger share of workers appears to be experiencing nominal wage reductions than was the case a few decades ago. Receiving a pay cut is unpleasant and embarrassing. But if bosses can trim pay during bad times, they are less likely to fire workers. Wages in Japan move down almost as easily as they do up. An unusually large share of workers' take-home pay is made up of bonuses, which can be withheld fairly easily during times of economic trouble. In Japan's hospitality sector in 2009, workers' end-of-year bonuses were cut by over 40%.

In countries that have failed to update old-fashioned labour practices, the cost of doing so has been high. In Italy nearly 350 national industrial agreements cover the vast majority of firms and formal employees. They take little account of regional differences in the cost of living and productivity. That prices many workers in the poor south out of the labour market. Spain's collective-bargaining agreements are often rigid in the face of changing conditions. In 2008-09, when a building bust pushed the economy into recession, nominal wages in construction rose by 5%. Bosses had little choice but to shed staff.

Governments have also made it difficult to live off handouts. In 2001 a single childless person earning the average wage, who then became unemployed for a year, would have received benefits worth 48% of previous earnings. By 2018 that had fallen to 41%. Would-be recipients of benefits face ever-tougher eligibility tests. Over the past two decades the number of Britons receiving jobless benefits, as a share of those out of work, has fallen from 80% to 50%. That may, in turn, have made wages more flexible. Workers will take wage cuts if neces-

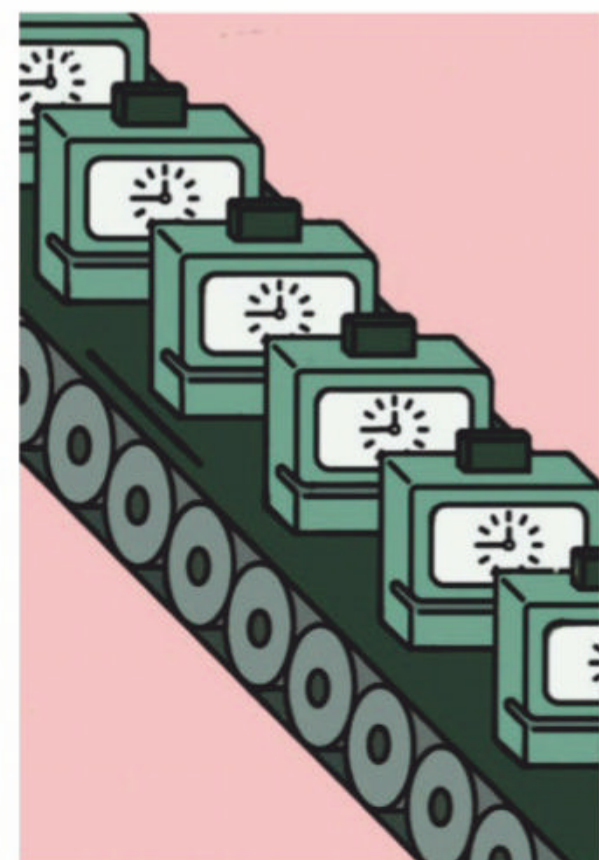
sary in order to avoid unemployment.

Reforms such as these are harsh and their implementation has often been botched. Yet they can have a big effect on jobs. In one paper Marcus Hagedorn, Iourii Manovskii and Kurt Mitman look at what happened in America in 2013, where the time for which some people could claim unemployment benefit fell from 73 weeks to 25. They estimate that the benefit cut led to the creation of some 2m jobs in 2014 about two-thirds of total employment growth that year.

No end to the grind

The strength of the labour market calls into question gloomy predictions about the future of work—that increasingly sophisticated computers will consign growing numbers of workers to a life of enforced idleness. Messrs Frey and Osborne could still be proved correct at some point in the future. Accelerating wage growth will certainly persuade more companies to automate jobs.

Yet the lesson of the past half-millennium is that technological change complements jobs rather than destroys them. Sky-high employment rates today suggest that nothing has changed. And there is plenty of evidence pointing in the direction of more improvements. The current period of economic expansion seems to have further to go. If there is a lesson from the 1960s, when unemployment in some OECD countries fell as low as 1%, it is that there remains more scope to reduce underemployment and inactivity. Mr Knausgaard finds room for some practical advice amid the detailed accounts of his struggles: "So keep your head down and work." If everyone follows it, the rich world's jobs market could have more surprises in store. ■





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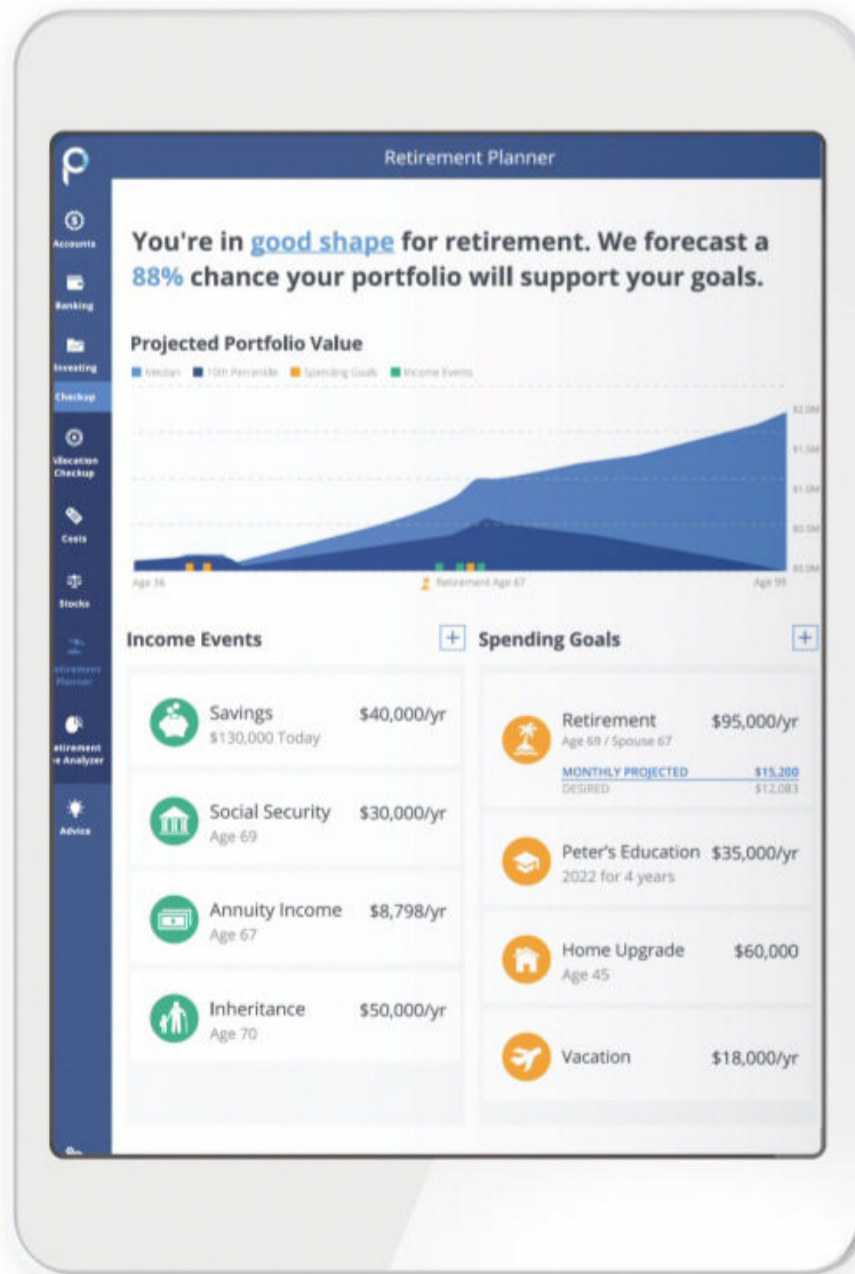
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6

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Pictured: Heroes from Marvel Studios' *Avengers: Endgame*. Survivor photos by Kevin Lynch.



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Policing and technology

Files, not faces

JACKSONVILLE

The technology with the greatest potential to change policing is also the least visible to the public

THE SALESMEN and women at the International Association of Chiefs of Police technology conference last week were as enthusiastic as ever. This in-car tablet had a tougher coating and less intrusive bezel; that radar gun had a clearer display and a faster processor. But conference veterans noted the lack of truly ground-breaking gear. Attitudes to police technology are changing—not only among American civilians but among the cops themselves.

Until recently Americans seemed willing to let police deploy new technologies in the name of public safety as they saw fit. But crime is much rarer than it was in the 1990s, and technological scepticism is growing. On May 14th San Francisco became the first American city to ban its agencies from using facial-recognition systems. That decision was profoundly unpopular at the police conference. Jack Marks, who manages Panasonic's public-safety products, called it "short-sighted and reactive". The technology exists, he said; "the best thing you can do is help

shape it." Other cities, including Somerville in Massachusetts, may soon follow San Francisco's lead all the same.

Companies are under scrutiny, too. On May 22nd Amazon saw off two challenges by activist shareholders. They wanted the board to commission an independent study to determine whether Rekognition, its facial-recognition platform, imperils civil, human and privacy rights. The activists also wanted to ban the firm from selling Rekognition to governments until the company's board concludes, "after an eval-

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uation using independent evidence", that it does not erode those rights.

Senior police officers argue that the technology is a useful crime-fighting tool. Daniel Steeves, chief information officer for the Ottawa Police Service, says that a robbery-investigation unit spent six months testing a facial-recognition system. It lowered the average time required for an officer to identify a subject from an image from 30 days to three minutes. The officers could simply run an image through a database of 50,000 mugshot photos rather than leafing through them manually or sending a picture to the entire department and asking if anybody recognised the suspect. Other officers stress that a facial-recognition match never establishes guilt. It is just a lead to be investigated.

Yet officers sense that the technology is in bad odour. A deputy police chief from an American suburb with a security system that uses facial recognition around the local high school says: "We knew that facial recognition wasn't going to fly, so we called it an Early Warning Detection System."

Many distinguish between the sort of facial-recognition software that Mr Steeves's department used, which matches suspects to mugshots already in a police database, to the more widely feared version—used in China, for instance—that blankets cities with cameras that employ facial recognition and monitors citizens accused of no crime. ▶

Others think the distinction less clear-cut. Matt Cagle, a lawyer with the American Civil Liberties Union of Northern California, fears that “facial recognition is vulnerable to mission-creep and growth”. Even a system like the one in Ottawa requires building a database that could be used for less ethical purposes. Testifying before Congress on May 22nd, Clare Garvie—a facial-recognition expert at Georgetown Law’s Centre on Privacy and Technology—argued that because facial recognition can subject people to persistent secret surveillance, it presents “a unique threat to our civil rights and liberties”. Ms Garvie’s research has found that, conservatively, half of all Americans have their faces in databases to which the police can get access. Often the image is a drivers’ licence photo. She also noted that the technology is bad at identifying non-white faces.

Sometimes scepticism about technology comes from the cops. Earlier this year the *Washington Post* reported that many small police departments were abandoning body-worn-camera programmes because of the cost. Although the cameras are cheap, officers can generate 15 gigabytes of video per shift; storage costs mount. Police unions often oppose body-worn cameras, fearing they imperil their members by giving superior officers licence to search them for punishable behaviour. Other officers complain about the amount of time required to review and redact footage in response to public-information requests. They also seem not to work. A study from George Mason University released in March found that body-worn cameras had no “statistically significant or consistent effects” on people’s views on police, or on police or civilian behaviour.

None of this means that policing will become less technologically sophisticated, however. Even as the public and the police turn against some visible technologies, other ones are quietly being deployed. The most important innovations are invisible to most citizens.

Police have long gathered immense amounts of data, but have not always organised them well. Police complain about the amount of time they spend doing paperwork; others lament how hard it is to get accurate data from police departments. Several firms fishing for business at the conference in Jacksonville offered tools designed to organise the huge amounts of information that police take in, rather than gadgets that generate more of it. Such tools are supposed to present officers with as much information as possible as soon as they need it, and make data taken from disparate sources easily accessible and searchable. They are also supposed to organise data in such a way that the cops can see where they need to improve.

Chris Fisher, executive director of stra-

tegic initiatives for the Seattle Police Department, recently oversaw the building of a data system linking previously siloed streams of information, such as emergency-call records, stops based on reasonable suspicion, and police use of force. This let the department know precisely where disparities occur. Before, says Mr Fisher, they often relied on guesswork and anecdotal evidence to fill in the blanks. “Now we can know: in how many of our dispatches did it end up that a person was in crisis, and in that subset, how often did we use force?”

Axon, which makes body-worn cameras and Tasers (the police weapon that gave the firm its former name) is building a system for managing records. Jenner Holden, the firm’s chief information-security officer, says that “what we can do to help officers improve most isn’t the sexy stuff. It’s helping them be more efficient and spend more time on the street.” ■

Presidential approval

Tinted glasses

WASHINGTON, DC

The true state of the economy is nearly irrelevant to voters

JAMES CARVILLE, who worked for Bill Clinton’s presidential campaign, hung a sign in his Arkansas headquarters in 1992. Designed to keep the candidate on-message, it read: “Change vs. more of the same. The economy, stupid. Don’t forget health care.” The second injunction has become famous. It is common knowledge that a strong economy helps an incumbent, whereas a weak one is a liability. But this is less true than it used to be.

Between 1952 and 2009, when Barack Obama became president, the popularity of

America’s leaders was quite strongly influenced by the economy. Excluding the first six months of every president’s term (a honeymoon period when ratings tend to be high) a quarter of the variation in monthly presidential approval ratings could be explained by variation in the index of consumer sentiment. Ronald Reagan had an approval rating of 42% when Americans were suffering under high inflation in the summer of 1982. By the time the economy rebounded four years later, his rating had increased by 25 percentage points.

Under Barack Obama the relationship broke down. After the highs of the first few months, his approval rating moved between 40% and the low 50s. Americans felt much the same about him in good times and in bad. President Donald Trump also seems stuck in the polls, despite a booming economy. If the normal relationship between consumer confidence and popularity held, about 60% of Americans would approve of him. The latest Gallup poll suggests that only 42% do.

One explanation is that partisanship now colours Americans’ reading of the economy, as it colours their views on many other things. Polling on behalf of *The Economist* by YouGov shows that Republicans are four times as optimistic as Democrats about the state of the stockmarket, which Mr Trump often cheers on. Liberals complain about high housing costs and low wage growth—never mind that wages are growing more strongly now than towards the end of Mr Obama’s term.

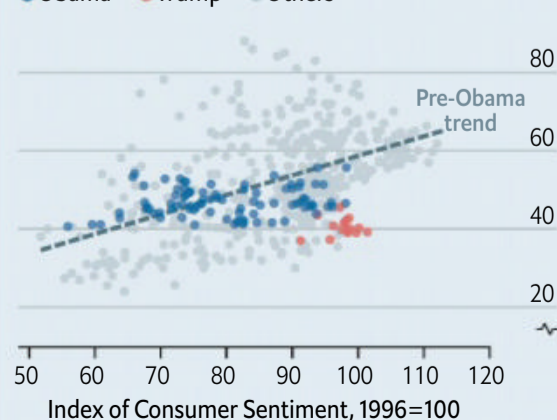
Mr Trump’s election in 2016 was followed by a rapid switch in attitudes. From the six months before the election to the six months after, YouGov measured a 45 percentage-point increase in the share of Republican-aligned Americans who believed the economy was getting better. Democrats became sharply more pessimistic. So it’s not any longer the economy, stupid. It’s the partisanship. ■

First, pick a side

United States

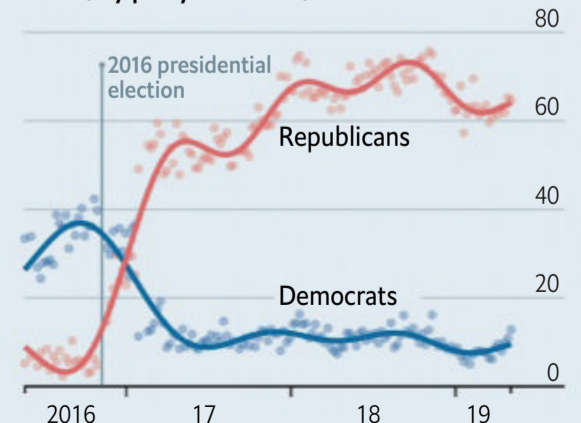
Monthly approval rating*, by president, 1952-2019

● Obama ● Trump ● Others



Sources: Gallup; University of Michigan Surveys of Consumers; YouGov; *The Economist*

Americans who think the economy is getting better, by party affiliation, %



*Not including the first six months of each term

Threatened wetlands

Save the swamp

MUSCATATUCK, INDIANA

The kidneys of the Midwest need more protection, not less

EACH SPRING visitors flock to the Muscatatuck wildlife refuge in Indiana. Even under scudding clouds, a shallow lake shimmers. It brims with aquatic plants and is lined with reeds and willows. At least 33 types of dragonfly jostle for space. Four-toed salamanders, muskrats and beavers call it home. Box turtles brave roads to reach it. Even the odd human pops by.

Farmers gave up on this marginal land in the last century, defeated by frequent floods. In the 1960s the area won national protection. An earthen berm was built to keep the lake in place. The restored wetland was a rare success. Tramping around its muddy edge, Adam Ward of Indiana University says that nine-tenths of the state's wetlands have been filled in, farmed or built over. In some other midwestern states the loss is almost total.

Insects, migrating birds and other wildlife lose their habitats as a result. And humans can feel the loss of wetlands, too. Todd Royer, also of Indiana University, points out that they have many uses, from recreation to storing flood water. Upstream wetlands once slowed the release of rainwater to rivers. Without them, deluges are more likely downstream, such as those now swamping cities and farms along the Mississippi. In Baton Rouge, Louisiana, officials said this week that the river had been at "flood stage" for more than 136 days, surpassing a record set in 1927.

Wetlands also clean water, removing pollutants that leach into rivers and contaminate wells. Mr Royer calls wetlands "the kidneys of the landscape". Rivers used to be fouled by "point source" pollution from outlets such as tanneries or factories. National laws like the Clean Water Act of 1972 mostly ended that. The lingering problem is "non-point" pollution, mostly nitrates washed from fields and suburban lawns, or phosphorus, pathogens and other nasties in urban wastewater.

Water overloaded with nutrients is a curse. It takes roughly two weeks for a drop entering the Wabash river in Indiana to wend its way, via the Mississippi, to the Gulf of Mexico. Each summer algae blooms in the river, fed by nitrates. As these die they feed bacteria which suck oxygen from the water. The result, when the Mississippi gushes into the brine of the Gulf, is a huge oxygen-free dead zone. Last summer the hypoxic area covered 2,700 square miles.

As the cost of losing wetlands is better

CHRIS WELCH has been experimenting for months. Restrictive fishing quotas designed to protect herring, the preferred bait for lobster, have pushed him and other Maine lobstermen to various expediciencies—less herring, different bait, different bait bags. Nothing is working well so far. Some lobstermen are stockpiling herring, expecting prices to rise during the summer.

Last year Maine's 4,500 lobstermen hauled in 54,000 tonnes of the critters, one of the highest landings in the state's history. So important is it to Maine's economy and self-image that the state offers a licence plate depicting the crustacean. Demand remains strong, says John Sackton, an analyst and publisher of *Seafood News*. Lobster is not just for posh restaurants and New England lobster shacks any more. McDonald's, a fast-food chain, offers lobster rolls. But this season has been stormy.

The bait shortage is only one pro-



Those in peril on the sea

understood, the case for protecting them should strengthen. Mr Ward fears the reverse is happening. The Environmental Protection Agency last year proposed a rule to redefine—and almost certainly reduce—which waters come under the Clean Water Act. Its final plan, which will probably appear this autumn, is expected to give landowners and officials, rather than scientists, more say on whether a body of surface water counts as a flowing stream worth looking after.

Protection of many wetlands, in turn,

Lobstermen

Shellacked

KENNEBUNKPORT

Tariffs and regulations pinch Maine's best-known industry

blem. In 2017 the European Union lifted the 8% tariff on Canadian lobster while keeping it for the American kind. Last year China imposed 25% tariffs on American goods including lobster. "We lost 80% of our business in mainline China and saw 50% of EU sales erode," says Tom Adams of Maine Coast, one of the largest live-lobster shippers.

Maine's lobstermen will soon have to rethink how they catch lobsters. For more than 200 years they have used baited traps, also known as pots, to snare lobsters crawling on the ocean floor. Lines connect the traps to buoys on the water surface. Scientists say that these lines have trapped and killed some North Atlantic right whales, an endangered species. Maine must cut the number of lines by 50% to adhere to new federal regulations designed to save the whales.

How this will be achieved has yet to be determined. One possibility is to insist that many traps are attached to a single line to the surface—something that is easier for big boats to handle. Ropeless options are expensive and time-consuming. A collapsible buoy that could inflate itself using compressed air might work better. Lobstermen have a history of conservation and self-regulation—in 1872 they stopped catching egg-bearing females. Kristan Porter, a lobsterman, is sympathetic to the plight of the right whales, of which there are only 400, "but I've never even seen one."

Patrice McCarron, founder of the Maine Lobstermen's Association, an advocacy group, has not witnessed such a tumultuous year in her 20 years in the industry. As for Mr Welch, whose grandfather was a lobsterman and who has been fishing since he was 14, he is not sure that the industry as he knows it will exist for his son. That is often the fisherman's lament.

depends on their being close to protected streams. If the EPA pushes on with its plan this year, as much as 39% of the existing wetlands in the Wabash river basin could lose federal protection, estimate Mr Ward and his colleagues in a recent paper. States could continue to protect water. But without strict federal rules, "I doubt all states would protect wetlands as they do now," says Mr Ward. Idyllic corners such as Muscatatuck may become more precious than ever, and the dead zone in the Gulf of Mexico may grow. ■

Pregnancy and prisons

Lock up the toddlers

GIG HARBOR, WASHINGTON

More states are letting mothers bring up their babies behind bars

LIKE MANY people in prison, Ada Lynn listens more than she speaks, spends most of her time with people she knows best and is deeply wary of strangers. In fact, when she sees one she tends to burst into tears—because, unlike most people in prison, she is ten months old. Natalie Myers, Ada Lynn's 23-year-old mother, was pregnant when she was imprisoned for vehicular homicide. Washington is one of just a few states that offer residential nurseries for women who give birth while behind bars. Ms Myers loves the programme. "This is the best thing that has ever happened to me," she says. "I always thought I'd never be a functional person because I dug myself into such a hole. But here I'm figuring out who I am with my daughter."

Not everyone shares her optimism. Carolyn Sufirin, a professor at Johns Hopkins University, worries about the effects on children's development. Prison is prison, no matter how prettily the nurseries are decorated. Others believe that the programmes would not survive a court challenge brought on behalf of a baby imprisoned without due process.

According to the Bureau of Justice, 225,000 women were behind bars in 2017, 99,000 of them in state prisons (jails contain people awaiting trial or serving short sentences, whereas prisons house people convicted of more serious crimes). That is around one-tenth the total number of people incarcerated, but it is nearly ten times as many women as were locked up in 1978. As the number of convicts in America has

fallen since 2008, in most states the female prison population has either continued to grow or declined more slowly than the male population.

According to Dr Sufirin's study, as of December 2016, 3.8% of newly admitted women prisoners were pregnant. In 1976 the Supreme Court ruled that states must provide health care for prisoners, but what that means in practice varies, particularly for pregnant women. They are sometimes shackled while giving birth—a practice that often continues, according to Amy Fetting, a lawyer with the American Civil Liberties Union, even after states outlaw it.

New York opened the first prison nursery in 1901; today 11 states have them. Admission rules vary, but in general women convicted of child-related or violent crimes are ineligible, as are women with behavioural or mental-health problems, or with a poor disciplinary record in prison. To be accepted into Washington state's scheme, women must be pregnant at the time of their imprisonment and have less than 30 months to serve from the time of delivery; mothers and children are released together.

Prison nurseries seem to be the best of several bad options facing pregnant inmates. Researchers have found that they are associated with lower rates of reoffending, compared with women forced to give up their children, and with fewer behavioural and disciplinary problems than among women in the general prison population. But whether that is because of the programmes, or because women capable of complying with the strictures that prison-nursery programmes impose were heading down the right path anyway, is unclear. That raises another question. "If women meet these conditions, what are they doing in prison?" wonders Dr Sufirin. "I think it's essential to find ways to maintain family bonds. I just think we need to do it in ways that don't involve barbed wire." ■

Trump's financial records

All the president's books

NEW YORK

Congress is likely to get hold of Donald Trump's financial records

THE BARRICADES are up at the White House, where President Donald Trump has vowed to fight "all the subpoenas" flying from Democrats in the House of Representatives. Early engagements have not gone well for Mr Trump. This week he lost two crucial skirmishes.

On May 20th a judge in Washington rejected Mr Trump's request to block a subpoena instructing Mazars USA, his accounting firm, to hand over financial records stretching back to 2011. Two days later a judge in New York thwarted an attempt by Mr Trump, three of his children and the Trump Organisation to stop Deutsche Bank and Capital One from delivering banking records to two House committees.

In the first case, a committee demanded records after Michael Cohen, Mr Trump's longtime lawyer, testified in February that his former boss altered the estimated value of his assets and liabilities to suit his needs. These allegations, legislators said, may point to conflicts of interest that "impair his ability to make impartial policy decisions". They could also provide evidence that Mr Trump has profited from his office, in violation of the constitution's foreign-emoluments clause.

The president assured reporters that the ruling was "crazy" and "totally the wrong decision by, obviously, an Obama-appointed judge". Judge Amit Mehta was indeed appointed by Mr Trump's predecessor. But his 41-page ruling is a straightforward application of a 90-year-old Supreme Court precedent recognising that Congress's power to secure "needed information" is "an attribute of the power to legislate". It is not "fathomable", Mr Mehta wrote, that the constitution would grant Congress "the power to remove a president for reasons including criminal behaviour" but deny it "the power to investigate him for unlawful conduct". Both Mr Mehta and Judge Edgardo Ramos, who said the Deutsche Bank suit did not raise "any serious questions", refused to put their rulings on hold while Mr Trump appeals.

The cases could eventually go to the Supreme Court, where Mr Trump has installed two justices. But Laurence Tribe, a scholar of constitutional law at Harvard University, cannot imagine the president prevailing there. And if the president defies a court order, the constitutional crisis that some Americans have predicted since 2016 will arrive at last. ■



Whither shall I wander?

The Economist

EVENTS

CLIMATE RISK SUMMIT

Sink or swim

July 2nd 2019, London

Speakers include:



HARRIETT BALDWIN
Minister of state for international development
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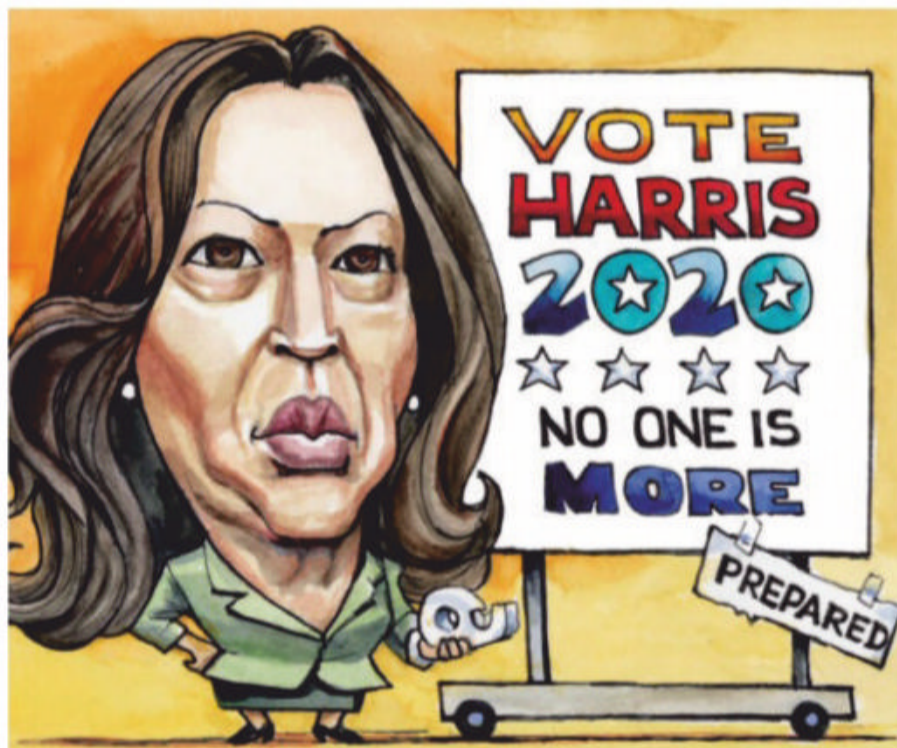
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Lexington | Lucky Kamala Harris

The misfiring senator from California looks better-placed in the primary than she deserves to be



ONE OF THE reasons—maybe the biggest reason—why Joe Biden is ruling the Democratic primary field is an apparent paucity of convincing alternatives. Pete Buttigieg is dripping with talent, but struggling to reach beyond the liberal MSNBC crowd. Elizabeth Warren is an intellectual heavyweight, yet making little headway in a contest that seems increasingly defined by a single question: can you beat Donald Trump? In that tremulous environment, the reassuringly experienced former vice-president is putting everyone else in the shade. He leads his nearest rival, Bernie Sanders, by 20 points. Yet there is one candidate of whom more brilliance might have been anticipated. Kamala Harris, the first-term senator from California, is stuck in single digits despite a strong launch and early fundraising. She is the contest's most conspicuous under-performer. Lexington went to watch her campaigning in Las Vegas last week to try to work out why.

Her events there, first a meeting with Asian-American leaders in a Vietnamese restaurant, then a gathering of Hispanics in a Mexican one, pointed to a reason why much is expected of her. A high-achieving daughter of an Indian mother and Jamaican father, whose state has more Hispanics than any other, Ms Harris encapsulates the changing Democratic Party. "First and foremost, seeing you as a woman who identifies as Indo-Caribbean makes me happy!" said a woman nursing a baby at the first rally. And Ms Harris's focus on Nevada, an early-voting state next to California, reflects a primary schedule that is another potential strength. If she can emerge from the opening contests in Iowa and New Hampshire looking competitive, the next tranche, including large and diverse states such as California, could put her over the top.

Her room-grabbing presence, also on show in Vegas, is a bigger advantage. A diminutive former state attorney-general, she combines the authority of a prosecutor with the all-aglow enthusiasm, for whoever is put in front of her, of a skilful retail politician. It helps that she looks and sounds good, a quality Barack Obama once remarked on, in a rare faux pas, when introducing her as "by far the best-looking attorney-general in the country". To be sure, a black woman vying to take on Donald Trump also faces hurdles. After the president's misogynistic treatment of Hillary Clinton, some Democrats consider an elderly white man, per se, a safer bet for

their nominee. The fact that Mr Trump has already labelled Ms Harris "nasty"—an adjective he applied to Mrs Clinton—suggests they might be right. Yet those who believe Ms Harris is being unfairly judged on her race and sex should hold fire.

First, because on the slippery question of "electability" her profile and attributes have already given her a sizeable, not particularly fair, advantage over similarly qualified candidates. Why else did she enter the race with such a lead over Cory Booker and Amy Klobuchar? Accomplished though she is, Ms Harris's Senate career has been brief and unmemorable, aside from a few tough exchanges with administration officials in the Judiciary Committee. Moreover, as her performance in Las Vegas also attested, she is doing an indifferent job of capitalising on her opportunity.

She has accrued a reputation for excessive caution. Asked about reparations for African-Americans, votes for prisoners or any other hot-button issue, she almost invariably expresses a keenness to contemplate the matter further. She has attributed this tendency to a lawyerly fastidiousness about the facts; yet she is sometimes rash. Under the tutelage of her sister Maya (Mrs Clinton's former policy guru), she seems determined not to get outflanked by the left on any issue, whether she fully grasps it or not. Hence her support for Medicare for all, free college, fining companies that fail to narrow their gender pay-gap, and her embarrassing, later retracted, suggestion that she would scrap private health-care insurance. And still no one believes she is a proper leftist.

She spent most of her career as a tough-on-crime prosecutor (she famously criminalised the parents of truants). And when not vowing to support the latest left-wing fad, she sounds strikingly unideological. Her stump speech, which is based on an idea that America needs more "truth and justice", is a painfully contrived effort to marry her strengths to a critique of Mr Trump. It neither informs nor inspires. It has nothing of the revolutionary fire that consumes Mr Sanders. The overall impression is of a talented, centre-left opportunist who has not quite found her place in her party, let alone the distinctive voice voters crave. Her attempt to fight the primaries on the left, where she has shallow roots, has only made this more obvious. It is probably also mistaken, given Mr Biden's success and the moderate instincts of the non-white voters she is banking on. "Asians just want someone who won't throw us out of the country," said a Chinese-American businessman at Ms Harris's first event. Ideally, he said, that person would be a moderate—as he thought Ms Harris probably was.

Karma Kam-eleon

At least the ambiguity surrounding Ms Harris gives her room for manoeuvre. In imitation of Mr Biden, she is ramping up her attacks on the president, including by arguing for his impeachment. This is another bid to underline her ability to "prosecute the case against Trump", as she says. But it is unclear who would be likelier to vote for her as a result. Most Democrats want the candidate they consider likeliest to beat Mr Trump, which requires general-election votes, not pugilism. Yet the shift could at least give her space, if she is wise, to reappraise her default leftishness.

She probably cannot beat Mr Biden that way. By the same token, however, his surge looks even more daunting for inflexible leftists such as Mr Sanders. That could make it a net gain for Ms Harris. Ill-prepared and too calculating though she seems, she still looks well-placed to take over from Mr Biden if he stumbles, as he easily may. Ms Harris seems to be a lucky politician. Whether her luck would hold out against Mr Trump is another matter. ■



→ Also in this section

34 Bello: Fernández & Fernández

Guns in Latin America

Law and ordnance

MEXICO CITY AND SÃO PAULO

Latin America is awash with guns, many from the United States

LIKE A CRIMINAL and his fingerprints, every gun leaves its mark on the ammunition it uses. Such traces are what Sergio Sandoval de la Peña pores over daily in Mexico City's ballistics lab. A series of dark-green circles, like the sub-woofer of a speaker, appear on his computer screen. It is a digitised three-dimensional model of a cartridge, found at the scene of a robbery this year and placed under a microscope. Checking the marks against hundreds of thousands of potential matches, Mr de la Peña concludes that the gun that ejected it was also used in a murder last year.

The ballistics technology employed to work such wonders comes courtesy of the United States. Alas, so does the gun, according to Mr de la Peña's database. A study of weapons found at crime scenes suggests that 70% of gun crimes in Mexico involve American-bought weapons. The share of homicides in Mexico involving a firearm grew from 16% in 1997 to 66% in 2017. That suggests around half of Mexico's 33,000 murder victims last year were killed by a gun manufactured in the United States, which had 14,542 gun homicides in 2017. An American-made gun is more likely to be used in a murder in Mexico than at home.

Mexico is far from alone. Across Latin America, the share of murders involving guns is creeping upwards. Many countries already beset by organised crime and weak states have their troubles compounded by their proximity to America, the country with the rich world's most permissive gun laws. Changes signed by President Donald Trump may only worsen the situation.

Guns and doses

Most guns enter Mexico after being legally bought in the United States. Criminal groups typically use associates to buy them, smuggling guns in the opposite direction to drugs. Beyond Mexico, American guns often arrive through ports from Florida, hidden among other imported goods. In Honduras, where half of all unregistered weapons come from America, smugglers have been known to wrap guns in foil and submerge them in paint to avoid detection from x-ray machines. Less creative, bigger groups simply pay off customs officers.

Does the availability of American guns boost murder rates? The expiration in 2004 of an assault-weapons ban in the United States provided a real-world experiment. A study found that in Mexican municipal-

ities bordering Arizona, New Mexico and Texas, where the guns were put back on sale, the murder rate shot up soon after. Murder rates adjacent to California, which maintained a ban, stayed flat.

But even in the unlikely event that the United States were to repeal the second amendment, Latin America's gun problem would not abate. Many national armies and police forces have a habit of losing their weapons. In Guerrero, a state in Mexico, one weapon in five belonging to the state police ends up "lost or stolen". Central American police forces are notorious for selling seized weapons they should destroy, says Mark Ungar of Brooklyn College.

In Honduras the profits from gun sales to private individuals, over which the army has a monopoly, are the second-biggest contributor to soldiers' pensions. Many American weapons used in crime in Brazil are trafficked through Paraguay, which has loose gun controls. Between 2013 and mid-2018 Paraguayan companies legally imported 648,000 guns and 331m rounds of ammunition, a large share from the United States. Last year America briefly banned commercial arms sales to Paraguay to reduce the smuggling, prompting the country to impose its own controls.

Jair Bolsonaro, Brazil's president, has signed two decrees this year making it easier for Brazilians to own and carry guns. Shares of Brazil's large gun firms have soared. Mr Bolsonaro has said he will legalise imports of American guns too. Legal weapons can become illegal ones with ease through theft or corruption, observes An Vranckx of Catalistas, a consultancy. Bra- ▶

► zil's murder rate dipped after 2003 when new rules made it harder to buy a gun.

One place American guns are turning up less is Venezuela, largely because there is a ban on their export there. A ready supply of weapons from elsewhere has helped push the country's murder rate to the world's highest. Lately the economic crisis may have stemmed the flow: the import of weapons, like all other imports, has probably dropped. A decline in productivity at the state-owned factories which make bullets may explain why the murder rate has slipped back of late.

What can be done to stop the flow of weapons? One idea floated in Mexico was to ban American steel firms and other businesses that supply gun manufacturers from Mexican government contracts, and to make workers from any firms that sell guns apply for visas if they want to visit Mexico. But that idea lost steam when Mr Trump became president. Indeed since his election things have got worse. In January Mr Trump said responsibility for approving arms exports would shift from the State Department to the Department of Commerce, which applies looser rules.

So Latin American countries will have to do more themselves. National, inter-linked databases of registered weapons can help police keep hold of their guns. Purging the dirtiest cops, as Colombia has done, helps to keep weapons out of criminal hands. Rather than waiting for the United States, Latin America will have to place its own institutions under the microscope. ■

Correction: With last week's story about Colombia ("Sorry Uncle Sam", May 18th) we printed a picture of the wrong FARC leader: Iván Márquez instead of Jesús Santrich. Sorry.

Bello Fernández & Fernández



A populist ex-president says she wants to be vice-president

HÉCTOR CÁMPORA, a dentist and second-rank politician, won an election in Argentina in 1973 with the slogan "Cámpora to the presidency, Perón to power". Having served his purpose as a placeholder, Cámpora resigned after 49 days. Juan Perón returned from long exile and went on to win an election himself. This episode is etched on Argentine memories. It explains why some scoffed when on May 18th Cristina Fernández de Kirchner, a populist former president, made the surprise announcement that she was running in October's election—but for vice-president on a slate headed, at her invitation, by Alberto Fernández (no relation), who was briefly her cabinet chief.

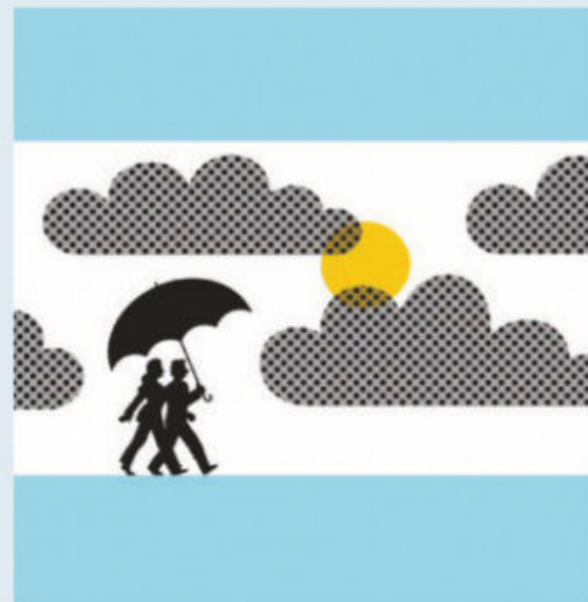
So is this a ruse, or an act of brutal political realism? Ms Fernández divides Argentines. When in 2007 she succeeded her (late) husband, Néstor Kirchner, as president, Argentina was riding the commodity boom. She slammed taxes on farmers and spent the proceeds on padding the public sector, on welfare and on subsidies for fuel and transport. When the economy overheated, her government imposed price and exchange controls and fiddled the inflation numbers. When money got tight it raided the central bank and pension funds. Through it all, insiders made corrupt fortunes. Ms Fernández herself went on trial this week in the first of several corruption cases (she denies wrongdoing). Around a third of Argentines (mainly the poorer ones) love her; many of the rest abhor her.

That she had a chance of regaining power owes everything to the travails of her successor, Mauricio Macri, a liberal businessman turned politician. He set out to restore reality to the make-believe mess left by Ms Fernández. To ease the pain of adjustment he borrowed, until

investors turned tail. In the past year, the peso has lost half its value and inflation has surged to over 50%. Mr Macri has secured a \$57bn IMF bail-out. Strict monetary and fiscal policy is starting to bring stability, but at the cost of a deep recession. Real incomes are down by about 10%.

With Mr Macri wounded, a national poll last month put Ms Fernández clearly ahead of the president for the first time. So why has she turned to her namesake? He is a more conciliatory figure, with friends across the broad church that is Peronism. He had turned into a withering critic of his former boss. Of her second term, he said in 2015: "It's extraordinarily difficult to find anything good." He is better placed to win over Peronist provincial governors, who are a pragmatic lot and have little love for her, and to squeeze the vote for a third way, represented by Roberto Lavagna, Mr Kirchner's moderate first finance minister, who declared his candidacy this week.

Second, although Ms Fernández had a chance of winning, "governing would have been almost impossible" for her, says Sergio Berensztein, a political consultant.



Conditions are now very different. The IMF agreement, huge debts and high inflation all mean that Argentina needs fiscal sobriety, private investment and export-led growth, as Mr Fernández recognised this week. Third, Cristina's choice may have an element of self-defence. If she is convicted, Mr Fernández could pardon her; a president may not be able to pardon herself.

The question is whether voters will find Cristina's pragmatic turn and her voluntary demotion credible. Or will they see Mr Fernández as another Cámpora, a puppet rather than the boss? Whereas in Brazil three vice-presidents have taken over in the past 35 years, in Argentina two vice-presidents have resigned over the same period, points out Andrés Malamud, an Argentine political scientist at the University of Lisbon. Presidents command great power and resources. A first test of which Fernández would be in charge will come in drawing up their slate for congress.

Mr Macri's team insist that Mr Fernández, who is an experienced back-room operator but not a crowd-puller, is a worse candidate than she is. Nevertheless, the race may have become more difficult for the president. His allies may press him to try to incorporate Mr Lavagna's camp.

There is a silver lining for Argentina in Ms Fernández's decision. Mr Macri has been trying to polarise the campaign as a contest between him and her. That is economically risky: when she nosed ahead, the peso trembled (it rallied this week). The opposition is now trying to woo voters in the centre. And as Mr Berensztein points out, almost everyone is now talking about the need to seek broad national agreements. Out of crises come opportunities.



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India's election results

Modi's miracle

DELHI

The BJP's remarkable victory is down to the prime minister, not the party

AFTER A HARD-FOUGHT re-election campaign, an American president might thwack some balls down a fairway, or go shoot turkey with the boys. Narendra Modi is different. As India's gruelling election marathon reached its seventh and final round of voting, leaving a break before the final tally on May 23rd, its prime minister headed instead to a hermit's cave at the foot of a Himalayan glacier. Or rather, Mr Modi led a posse of cameramen to the scenic Kedarnath Temple, where they dutifully snapped him in a range of poses, from deep meditation cloaked in a saffron shawl, to striding purposefully against a backdrop of snow-capped peaks, sporting a grey woolen cassock and felt cap, a silken tiger print cast over his shoulder.

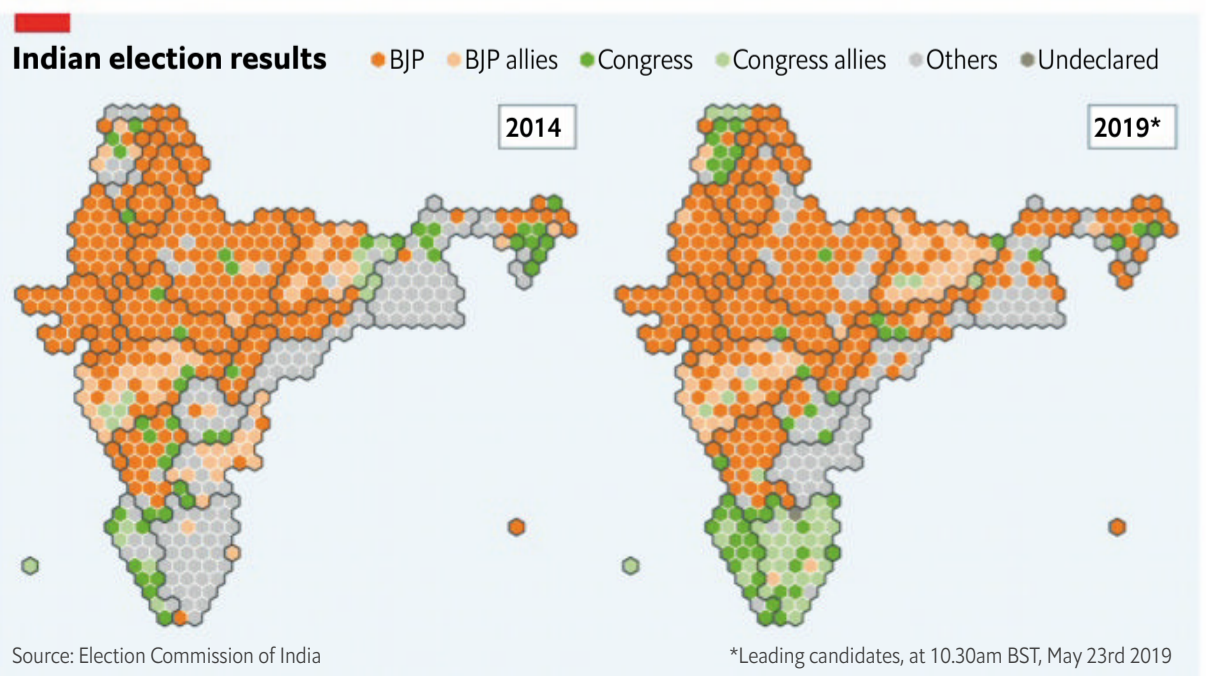
The image, half Olympian god and half kung-fu wizard, suits a man who appears to have pulled off a miracle. For such, in the permanent subtropical storm of Indian politics, is the rarity of two consecutive full parliamentary majorities. As *The Economist* went to press, the Bharatiya Janata Party (BJP) looked set to boost its share of votes from 31% in 2014 to 40%, and to increase its number of seats in the Lok Sabha, or lower house of parliament. With plenty of small-

er regional parties as allies, Mr Modi will enjoy another walloping majority.

There are many reasons why the BJP has again outplayed its rivals. At the top, however, is Mr Modi's charisma. The relentless ubiquity of his face, in print, on screens and in streets, may be something that money and power can buy—and the BJP has plenty of both. What takes talent is to

create a role as an ancient-yet-modern captain of an imaginary Team India, and then to play it out with unbounded conviction. In adopting an almost mythical persona, Mr Modi appears to rise heroically above his foes. He becomes a vessel for dreams, not only of national glory but also individual dignity. He involves his followers in a story that promises a happy ending.

But with his wagging finger and gravelly snarl, Mr Modi is also a vessel for anger. In speeches over recent weeks, one count showed he spent 53% of his time attacking opponents, a further 18% talking of national security, and only the remainder touting *vikas*, or development—the central theme of his 2014 campaign. In the town of Gondia in the state of Maharashtra in early April, he blasted critics for questioning his ▶▶



▶ decision to strike at Pakistan, following an attack in February claimed by Pakistan-based militants. “People who sit in air-conditioned offices in New Delhi claim the nation has forgotten Balakot [the site of the attack]. Have we forgotten Balakot?” In Mysore, he declared that all terrorism in India was linked to Pakistan, but the rival Congress party kept talking about “Hindu” terror. Back in Maharashtra, he asked first-time voters to dedicate their ballots to Indian martyrs. “What can be more sacred than giving your vote to the nation?” he cried. “Exercise your choice, and decide who can serve the motherland.” Then, at a rally in Uttar Pradesh, he asked the crowd if it felt good when India hit Pakistan, or tested a new satellite-killing missile.

Without Mr Modi, reckons Sanjay Kumar, director of CSDS/Lokniti, a Delhi think-tank, the BJP would probably have lost. Despite some successful social programmes, the Hindu nationalists’ five years in power have largely failed to live up to promises, and in fact caused widespread distress, particularly to minority groups. Polling data show that in the populous Hindi-speaking heartland, where the BJP recently lost three state assemblies to the rival Congress party, a high proportion of voters this time voted for the prime minister rather than his party.

Yet Mr Modi’s strutting, sneering nationalism remains only part of the story. His opponents aided their own defeat. As in 2014 they largely failed to form cross-party alliances, allowing the BJP to win numerous three-way races with a mere plurality of votes. Congress, the only national rival amid a sea of regional parties, vainly tried to chip away at Mr Modi’s image, and to present itself as equally Hindu, but failed to provide a compelling new narrative. Its leader, Rahul Gandhi, had in fact narrowed his popularity gap with Mr Modi from a dismaying 35 percentage points in May 2017 to just ten points a year later. But when the terror attack in February, followed by Mr Modi’s retaliatory strike, triggered a reflexive nationalist surge, the gap yawned again to 19%.

The perfectly timed clash with Pakistan was hardly the BJP’s only extra advantage. Indeed Shivam Vij, an astute media commentator, suggests that given his hand of jokers it is surprising that Mr Modi did not win 100%. Not only did the BJP wield immensely more money than rivals, it has a far better-greased party machine, backed up by the street power of hundreds of Hindu-nationalist voluntary groups. Madhya Pradesh, a state just captured by Congress five months earlier, nevertheless returned a huge BJP majority to parliament, largely because it mobilised enough voters to register a ten-point surge in turnout.

Some of Mr Modi’s crucial support might not be described as voluntary. Con-

Japanese politics

Cometh the hour, cometh the man’s son

TOKYO

A political dynast is favoured to be the next prime minister

GLANCE AT THE members of the Diet and this much is clear: Japanese politics is a business for old men. The average age of a member of parliament is around 55, and prime ministers tend to be even older than that. So it is striking that people are talking about a 38-year-old, Shinjiro Koizumi (still a man, of course), as a potential successor to Shinzo Abe, the incumbent prime minister, who must step down by 2021 according to the rules of the ruling Liberal Democratic Party (LDP).

Mr Koizumi is the son of a prominent former LDP prime minister, and, like many MPs, won the seat his father vacated when he retired from politics. In the decade since he was elected, however, he has made a name for himself in his own right. He has charisma and is a good orator. It doesn’t hurt that Mr Koizumi is fodder for glossy magazines thanks to his film-star looks (his brother is an actor).

Mr Koizumi has been trying to show he has substance, not just star appeal, even though he has never had a job in the cabinet. His most important role in the government to date has been monitoring

the reconstruction effort after the Tohoku earthquake in 2011—a task he is said to have done well. He is also an enthusiastic advocate of reforming health care and pensions, a step he says might help Japan get over its gloom about its ageing and shrinking population. He speaks of transferring resources from the old to the young, by making people work longer, for example, and by making child-rearing easier.

He earned a master’s degree at Columbia University and speaks fluent English—a rarity in the Diet. He is hardly an iconoclast, rejecting immigration as a balm for the country’s demographic ailments, as most politicians do. He is woolly on other social issues. But he says he wants to push diversity. “If I hadn’t gone to the US, I wouldn’t really understand what diversity is,” he says. “It is hard to feel in Japan.”

Many Japanese take it for granted that Mr Koizumi will eventually become leader of the LDP and prime minister (the two jobs tend to go together); the question is when. The LDP’s leadership race involves votes among both its MPs and its broader membership. Polling suggests he is the most popular choice among the public; the media refer to him as Japan’s Macron. It helps that there are few strong alternatives.

Mr Koizumi has to tread a delicate line by being enough of an insider to gain support within the party, but enough of a critic to earn the respect of the public at large. He praises Mr Abe’s reforms, but did not vote for him in LDP leadership elections in 2012 and 2018.

Mr Koizumi is coy about whether he will stand in 2021: “Let’s see.” But he points out that on the one hand, young people are becoming estranged from politics, and on the other that the LDP attracts more young voters than any other party. “Japan is getting ready to see more young leaders in politics,” he says, with a dash of self-interest.



Land of the rising son

veniently, government statisticians tried to bury reports of a surge in unemployment before the vote. Just as helpfully, the Indian air force refrained from spoiling Mr Modi’s martial bombast, delaying the revelation that during February’s brief dust-up with Pakistan it had shot down one of its own helicopters. At a time of rising world oil prices, meanwhile, state-owned fuel distributors kept the cost of petrol for Indi-

an consumers artificially low (not surprisingly, they are beginning to rise). Not least, the Election Commission of India, a powerful body with seven decades of accolades for fair and efficient management of the world’s most logistically daunting democratic exercise, has in recent months issued a long series of decisions that advantaged Mr Modi. But perhaps it is not surprising that the gods get all the luck. ■

The Javanese

Polite and powerful

JAKARTA

How the mores of Indonesia's biggest ethnic group shape its politics

NO ONE BEATS about the bush quite like the Javanese, an ethnic group from Indonesia's most populous island. Chronicling their mores in 1960 Clifford Geertz, an American anthropologist, noted that proposals for arranged marriages often start with the groom's father visiting the bride's family and saying something as vague as: "The frost in the morning means rain in the evening." More metaphors ensue as the conversation slowly meanders towards the point. The future in-laws then counter with false protests, saying that their daughter is unworthy. This ritual is repeated a few times. When the bride and groom finally meet, direct eye contact is avoided and no one talks of weddings.

Indonesia is a vast archipelago with hundreds of ethnicities spread across 13,000 or so islands. But Javanese dominate, with 95m people, or 40% of the population. There is much that is distinctive about Javanese culture, from shadow-puppet plays to *tempeh*, a fermented soybean cake. The Javanese language is the 12th-most-spoken tongue in the world. Traditional Javanese religion blends Hinduism, Buddhism and Islam. To this day, the sultan of Yogyakarta, a Javanese royal, throws nail and hair clippings into the sea and a volcano each year to appease the gods.

Most noticeably, Javanese have a distinct etiquette. "We are a polite people who do not like conflicts," explains Prabandari, a Javanese woman from Yogyakarta, which is considered a centre of Javanese culture. Her friend, a Javanese businessman, says he finds arguments so distasteful that he cannot bring himself to haggle. Asih, a Javanese teacher, complains that she is expected to "camouflage" her true thoughts. Geertz recounts the tale of a husband who wanted a divorce but thought it unseemly to say so. Instead he inflamed an old quarrel between his wife and a villager and, without saying anything directly, failed to side with his wife. She soon left him, in what he saw as a triumph of politesse.

Javanese are softly spoken, too. Ellia Wamese, a student from Maluku, an eastern province, recalls giving a presentation to a group of Javanese. Although he spoke at what he considered a normal volume, they thought he was irate and shouting.

Java plays a disproportionate role in the economy and politics. It is home to Jakarta, the capital, and generates 58% of GDP. Party bigwigs tend to be Javanese. Their dislike of



Love means never having to say anything clearly

conflict has helped create a parliamentary system run by consensus, rather than majority rule. Cross-party committees shape laws and the budget. This means law-making can be tediously slow and often ends in a woolly compromise.

Political parties have only the vaguest of ideologies, and tend to fall in line behind the president of the day. The coalition supporting Joko Widodo, the current president, who is known as Jokowi, will probably command 60% of seats in the new parliament. His predecessor managed 75%.

And before his re-election in April Jokowi contemplated striking an alliance with Prabowo Subianto, who had run against him in 2014 and ended up running against him this year. That would have done away with the need to hold an election at all.

This week, after the official results of the election were released, Mr Prabowo's supporters mounted protests in which at least six people died. This disorder, too, is very Javanese: what better way to show a leader is illegitimate than to prove he cannot preserve peace and harmony? ■

Social engineering in Singapore

Baby strike

SINGAPORE

The government struggles to promote procreation

"REAL LOVE works", a sign outside the entrance to Singapore's marriage registry assures visitors. Inside, however, shelves of pamphlets imply that love needs a little help. One leaflet details generous housing benefits for newlyweds. Another recommends a list of subsidised marriage counsellors. A third gives advice on addressing marital differences ("Think win-win") and family planning ("Make time for sexual intimacy").

The registry gets fewer visitors than it did in the past. A third of Singaporeans aged 30-34 are not married, up from a fifth in 1980. That trend is matched by a decline in the number of babies. The fertility rate, a measure of how many children the average woman will have over her lifetime, fell to just 1.14 last year, among the lowest in the

world. The city-state's population of 4m would be falling were it not for a continual influx of immigrants.

It wasn't always this way. After Singapore won independence in 1965, many feared that overpopulation would hamper economic growth. The government launched family-planning campaigns and encouraged sterilisation and abortion. Meanwhile, more women were going to university and joining the workforce. Over the ensuing decade, the fertility rate plummeted from 4.5 to 2.1, the level at which the population is stable.

This created other problems. Lee Kuan Yew, Singapore's prime minister from 1959 to 1990, lamented the fact that improved schooling for women had created a "lopsided" pattern of procreation, where the

▶ better-educated had fewer children. The government tried to correct the balance by, among other things, giving tax breaks to graduates with big families and cash to less-educated women who got sterilised. Because ethnic-Chinese Singaporeans, who make up three-quarters of the population, are highly educated, the measures smacked of eugenics and were unpopular. They were gradually rolled back.

Today the state takes more of a back seat. The Social Development Network, a government body set up in 1984 to play matchmaker for graduates, now provides grants and oversight to Singapore's 13 approved dating services. One is working with public universities and AI Singapore, a government tech unit, to develop a matchmaking algorithm and relationship-advice chatbot. Prodding about breeding has been farmed out to NGOs. The posters of one such outfit, I Love Children, which is mostly government-funded, depict ovaries as ticking clocks alongside messages like "Fertility is a gift with an expiry date".

The clearest pro-family policy is in housing. It works through the Housing & Development Board (HDB), which administers the government-subsidised flats in which four-fifths of Singaporeans live. Large grants help married couples buy flats. Those with children get extra handouts. It is virtually impossible for singles to get HDB housing until they are 35.

Despite such enticements, birth and marriage rates continue to fall, abetted by countervailing government policies. Surveys find that Singaporean workers clock the longest hours in the world. This is helped by a "lack of constraints on employers", says Michael Barr of Flinders University in Australia. Labour laws are weak. There is no minimum wage and strikes are rare. Statutory paid maternity leave is 16 weeks, more than in the United States but less than in most of Europe. A recent survey found that most married couples would like to have more children, but work and the cost of raising a child get in the way. Two-fifths of singles said they do not date because they want to focus on their careers.

Another problem is the government's narrow view of what constitutes a family, says Jean Yeung Wei-Jun of the National University of Singapore: two heterosexual parents with a male breadwinner. Many regulations support this definition. Most divorce proceedings can only begin three years after marriage. Those who split move to the back of the queue for HDB flats and get fewer grants. Children born out of wedlock get fewer financial benefits, and their fathers get no paid parental leave. The government argues that these policies reflect social norms in Singapore, citing a survey which finds that 83% of young singletons intend to get married.

Nonetheless, the government's most re-

cent push for procreation suggests a shift in those norms. In 2014 it lengthened parental leave and increased support for unmarried parents. It has also made it easier for divorcees to buy HDB flats and it plans to double spending on child care between 2017 and 2023.

This may not have had the desired effect, however. Overall fertility rates have continued to decline, with one exception: ethnic Malays. They are the poorest of Singapore's three main ethnic groups, and so may be more susceptible to financial incentives. The Malay fertility rate has risen steadily since 2013 and now stands at 1.9, almost twice the Singaporean-Chinese rate of 0.98. They are the future, it seems. ■

Elections in Australia

Upset down under

MELBOURNE

The ruling coalition wins an unexpected victory

EVEN BY THE admission of the prime minister, Scott Morrison, it was a "miracle". His centre-right Liberal Party was expected to lose a federal election on May 18th. Instead, it has been returned to power with more MPs than it had before. Counts are still trickling in, but the Liberals and their rural partners, the National Party, look set to take 78 seats in the lower house of parliament. That gives their coalition government, now entering its third term, a majority of three.

The result blindsided Australians, because pundits, bookmakers and even a supposedly clairvoyant crocodile had all

predicted victory for the main opposition party, Labor, which had led the coalition in the polls since soon after the previous federal election, in 2016. The Liberals have been consumed by infighting, with centrist and conservative wings perpetually at one another's throats, leading to the toppling of two sitting Liberal prime ministers by their own MPs. Many Australians had seemed inclined to punish the government both for its incessant feuding and for its failure to curb greenhouse-gas emissions, which have been rising under its tenure. The coalition had been given a drubbing at a recent state election in Victoria and at several by-elections.

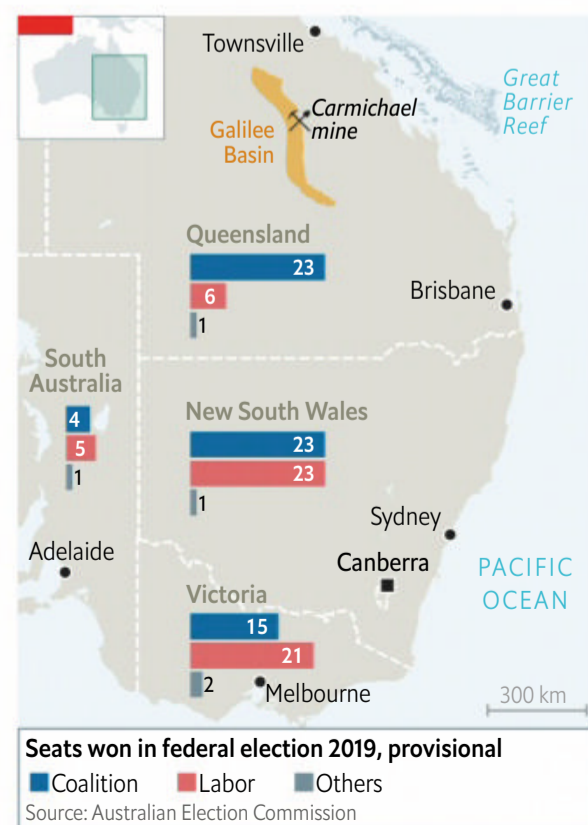
The Liberals did indeed do badly in affluent inner-city areas full of green voters. In Sydney Tony Abbott, a former prime minister who once called climate change "crap", was ousted from his formerly safe seat by an independent who had promised to cut emissions. In Victoria there were big swings away from the Liberals in leafy suburbs—but the seats in question are so solidly conservative that their MPs survived all the same.

In the end, the election was won in Queensland, a state full of marginal constituencies. Global warming is exacerbating its frequent floods and droughts, and has devastated big parts of the Great Barrier Reef, which stretches along its coast. But the state's economy is dependent on exploiting natural resources, notably coal, and many of its voters are wary of environmental regulation.

Labor had wanted to set binding caps on emissions. This would have involved generating more electricity from renewable sources, rather than coal, which still fires most of Australia's power plants. But the party's toing and froing on another issue—whether to permit the development of the vast new Carmichael coalmine by an Indian conglomerate, Adani—probably did more to hurt its standing with voters.

Adani's mine is in the Galilee Basin, a part of outback Queensland which is home to some of the world's biggest untapped coal reserves. Whether these should ever be dug up is a point of bitter national contention. The Liberals support the mine, as well as others in the basin. Labor, in an attempt to appeal both to would-be miners and green metropolitan types, has waffled about its intentions, alienating everyone.

The party thought it might pick up a handful of marginal seats in Queensland. Instead it lost two, leaving it holding on to just five of the state's 30 constituencies. Voters turned out in force for nativist fringe parties, which have a bigger presence in Queensland than elsewhere, transforming coalition seats around the Galilee Basin that had previously been held by wafer-thin majorities into conservative ▶▶



► strongholds. Nativists won some working-class votes from Labor and, under Australia's preferential voting system, funnelled them to the Liberals. Angry environmentalists have begun calling for "Quexit", to secure more progressive government for the rest of Australia.

It did not help that Labor's leader, Bill Shorten, is unpopular. (He stood down immediately after the election as head of the party, but will stay in parliament.) Mr Morrison is hardly beloved either. But he adopted a studied everyman persona, which seems to have gone down better

than Mr Shorten's equally studied efforts to look statesmanlike.

The Liberals were too divided to agree on a substantial platform. Mr Morrison's only notable pledge was to lower income taxes. He focused instead on accusing Labor—quite implausibly—of imperilling the economy with its plans to cut emissions and close tax loopholes that benefit the wealthy. Those reforms frightened pensioners and owners of investment properties, in particular. Many of them turned on Mr Shorten.

This may be the last time an opposition

party tries "a big-ticket campaign", says Anne Tiernan of Griffith University. But now the campaign is over, Mr Morrison has a chance to be more ambitious than his bland campaign suggested. The defeat of Mr Abbott, the leader of the Liberals' right wing, gives the prime minister an opportunity to pull the government back to the centre, argues John Hewson, another former Liberal leader. Whether he will take it is anyone's guess. Having saved the party from disaster, without making many clear pledges, he has far more room for manoeuvre than his recent predecessors. ■

Banyan At last

The tortuous path to gay marriage in Taiwan

WHEN TAIWAN became the first country in Asia to legalise gay marriage on May 17th, it was not only the tens of thousands of rainbow flag-waving demonstrators outside the legislature who cheered. Advocates of equal rights across Asia declared Taiwan a beacon of inspiration. Jerome Yau of HK Marriage Equality, which is calling for same-sex marriage in Hong Kong, says Taiwan's achievement "sends a strong signal that same-sex marriage can happen elsewhere in Asia".

It surely can. Yet circumstances in Taiwan were uniquely favourable and, even then, progress did not come easily. The gay pride parade in Taipei, the capital, is far and away the region's biggest. Taiwan has a vibrant democracy and civil society. Tsai Ing-wen, the president, when campaigning for the job in 2015, declared herself a firm supporter of same-sex marriage. And in 2017 the constitutional court ruled that barring same-sex couples from marrying violated their right to be treated equally. It ordered parliament to pass legislation permitting same-sex marriage within two years. The deadline was May 24th.

Yet Ms Tsai had not reckoned on a fierce and organised backlash from conservative Christians in particular. Protesters converged on the offices of lawmakers perceived to be supporters of gay marriage, while others stormed the gates of parliament before kneeling, praying and singing hymns.

Ms Tsai was already on the defensive having begun pushing for other controversial reforms. Fearing a pummeling in municipal elections in November, she dumped same-sex marriage. The ballot also featured referendums on three questions drafted by anti-LGBT groups. One sought to overturn the mandatory

inclusion of homosexuality in sex education; another sought to define marriage as between a man and a woman only.

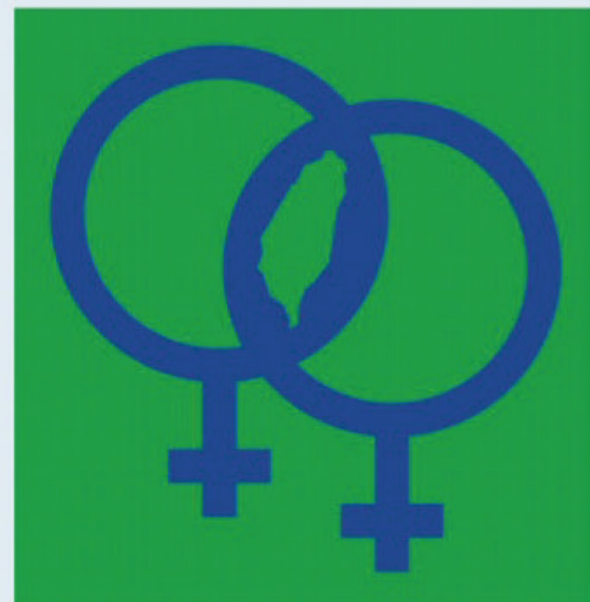
Ms Tsai's Democratic Progressive Party (DPP) was pummeled anyway, and voters approved the referendums, leaving marriage equality's prospects uncertain again. It took the court's impending deadline to banish Ms Tsai's vacillation. The government put forward a bill as the courts had demanded, but conservative opponents did not give up, proposing alternatives that did not even mention marriage, speaking instead of "same sex family relationships" or "same sex unions". Ms Tsai's bill passed, but it does not afford wholly equal rights for same-sex spouses. It bars them from adopting children to whom they are not related and permits marriages with foreigners only from countries that allow gay marriage.

Reactionary forces are much stronger elsewhere in Asia. Think of Brunei, which recently instituted death by stoning for gay sex. Taiwan does offer inspiration to Japan, which is socially tolerant but has a limp civil society. In February, 13 gay and

lesbian couples there filed lawsuits against the government, claiming that the constitution required it to recognise same-sex marriage. The suits were brought simultaneously in district courts in Nagoya, Osaka, Sapporo and Tokyo on Valentine's Day. "They are following Taiwan's strategy," says Victoria Hsu, a leader in Taiwan's gay-marriage campaign.

In Hong Kong Mr Yau says Taiwan's experience underscores the importance of winning hearts and minds. Equal-rights proponents are adamant that the basic rights of minorities should not be subject to a vote by the majority. But, says Mr Yau, there is a need to engage with the most vocal critics. It helps that homosexuality is no longer a taboo among the young. Public opinion is moving in favour of same-sex marriage. The courts have helped, by recognising the marriages of foreign gay couples for residency purposes. The territory's overly cautious politicians might warm to the cause, says Fern Ngai of Community Business, a group that aims to make the private sector more inclusive, if they see it as necessary to maintain Hong Kong's status as a hub of global business. Some 60 of Hong Kong's biggest companies, with 110,000 employees between them, have signed up to Community Business's tenets on LGBT inclusion.

Back in Taiwan, conservatives vow to roll back gay marriage. Yet in other jurisdictions, that has proved harder than getting it legalised in the first place. Societies tend to get used to the change quickly. In India critics still huff and puff about last year's legalisation of homosexuality. But the *Times of India*—a staid bastion that still publishes lots of matchmaking classifieds—this week launched an Out & Proud advertising section.





Farming

Aporkalypse now

BEIJING

African swine fever hits the home of half the world's pigs

WHILE THE Chinese zodiac celebrates the year of the pig, for the Earth-bound variety it is a terrible time. African swine fever, harmless to humans but fatal to porkers, has spread across the country. Hong Kong's first case was reported on May 17th. The epidemic has affected colossal numbers of pigs, pushing up pork prices steeply. It has walloped the tens of millions of Chinese who depend on pig-rearing for their livelihood. There is no effective vaccine. Experts say that it may take years for China to control the disease.

African swine fever is so named because the first known case was detected in Africa over a century ago. The virus spreads easily between pigs, which can also catch it from ticks, contact with contaminated surfaces or by eating infected food (cheap animal feed in China often contains pork). It causes haemorrhaging and often kills in less than a week. The death rate is at least 90%. Since 2016 outbreaks have occurred across Europe and Asia. But nowhere have they been more devastating than in China,

which at least until recently was home to half of the world's pigs.

China's first officially acknowledged case was reported in August last year in the north-eastern province of Liaoning. But many people in the industry believe that the virus began spreading, unreported, months earlier. The country (excluding Hong Kong) has a dismal record of transparency relating to animal or human epidemics. In the case of African swine fever, farmers have felt little incentive to report outbreaks. They are supposed to be compensated for pigs they cull to prevent the spread of the disease. But cash-strapped local governments are responsible for handing out most of this money. Pig-farmers worry that they will not receive the promised sums. They often reckon it is better to

keep quiet and sell their infected animals or meat to unsuspecting customers. And so the disease keeps spreading.

Local officials also try to cover up. They sometimes prefer not to alert their superiors to outbreaks because to do so would require implementing onerous disease-control measures. It would also mean having to divert money away from other projects to compensate pig owners. "Officials say they are doing all they can, but they are always a step behind," says a Western agriculture expert.

By the end of April, out of a total herd that was nearly 500m-strong before the epidemic, the government says just over 1m pigs in China had been culled to stop the disease spreading. That number is oddly low. Vietnam, which reported its first outbreak six months after China and has far fewer animals, says it has culled 1.3m. It is likely that many cullings in China are not being reported. Rabobank, a Dutch bank, reckons more than 150m animals in China may have been infected. It expects that the country will lose one-third of its pigs, roughly the number there are in the European Union. A report this month by the UN's Food and Agriculture Organisation said that the disease's spread was "unabated" and that its speed and severity "could prove more pronounced than currently assumed." It said cull rates higher than 20% had been reported in many provinces. It will take a long time for farmers to replace ►►

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▶ animals by breeding more of them. In March the number of sows was declining nearly twice as fast as that of pigs overall.

The impact on the pork supply is already evident. Prices of the meat are about 40% higher than a year ago. Last month they rose by more than 14%. Dealers have responded by releasing frozen stocks. In recent weeks this has helped to stabilise the market. But when frozen pork becomes scarcer, prices are likely to climb further.

Some of the shortfall will be made up by boosting imports. But economists say that for the next two years at least the tight supply is likely to push up inflation. That will be a headache for the government, which is trying to keep inflation under control while stimulating the economy with tax cuts and spending on public works.

In the long run, however, the devastation caused by the disease may have a positive impact. One reason why the virus has affected China so badly is that so much of the industry is small-scale. This has made it difficult to enforce biosecurity standards. Small operators usually lack the expertise or funds necessary to protect their herds. The government has been calling for the development of bigger, more efficient, operations. The ministry of agriculture says farms with more than 500 pigs now account for around 50% of total pork output, up from 38% in 2010. But progress has been impeded by a lack of financial support and training for those wishing to farm on a large scale. The swine-fever crisis may encourage the central government to spend more on solving these problems.

For as long as it takes China's pig industry to recover—which may be years—farmers elsewhere may have cause to celebrate. Foreign producers, whether in Brazil, Europe or America, cannot make up the vast amount of production that will be lost in China, but they will have more opportunities to sell their pork there (American pig-farmers will have a tougher time because of tariffs imposed as part of the ongoing trade war with China).

Noel White, the boss of Tyson Foods,

America's largest meat-packing firm, said this month that in his 39 years in the business he had “never seen an event that has the potential to change global protein production and consumption patterns” as much as China's epidemic of African swine fever. “All of us are rapidly waking up to the significance and the magnitude of this event,” says one boss at Archer Daniels Midland, an American animal-feed firm. China's biosecurity regulators need to do so quickly, too. ■



Coffee-drinking

Full of beans

CHENGDU

In a nation of tea-drinkers, coffee is taking over

ON A SPRING morning in Chengdu, the capital of the south-western province of Sichuan, Zhang Xiaoyu stands in her classroom, teaching the art of coffee-making. On the wall a dozen plaques from the Specialty Coffee Association of Europe certify her proficiency in skills ranging from roasting beans to serving the drink. Seven students, all women in their 20s and 30s hoping to open coffee shops, take sips from tiny cups and make notes on the flavours.

Until the 1990s coffee was rarely served in China except at luxury hotels aimed at foreigners. When Starbucks opened its first outlet there in 1999 it was far from clear that the country's avid tea-drinkers would take to such a different—and usually more costly—source of caffeine. Starbucks tried to entice customers unused to coffee's bitter taste by promoting milk- and sugar-heavy concoctions such as Frappuccinos.

The average Chinese still only drinks five cups per year, says the International Coffee Organisation, a London-based group. That is just 1.3% of the amount consumed by the average Japanese or Ameri-

can. But coffee has become fashionable among the middle class. Starbucks now has about 3,800 outlets in China—more than in any other country outside America. Statista, a business-intelligence portal, says the roast coffee market in China is growing by more than 10% a year. Starbucks and its rivals see big scope for expanding there.

So too, however, do home-grown competitors. A major new presence is Luckin Coffee, a Beijing-based chain. Since its founding less than two years ago it has opened more than 2,300 outlets. On May 17th Luckin's initial public offering on the Nasdaq stockmarket raised more than \$570m, giving it a value of about \$4bn.

Luckin's remarkable growth is a sign of change. No longer do Chinese consumers see coffee as such a luxury. Most of Luckin's outlets are merely kiosks where busy white-collar workers pick up their drinks, having ordered them online. Super-fast delivery can also be arranged through the company's app. But, as demand for Ms Zhang's classes suggests, the posh end of the market is flourishing too. Independent coffee shops are springing up, at which preparation of the drink is taken to artisanal extremes. No longer are whipped cream and sweet sauces essential.

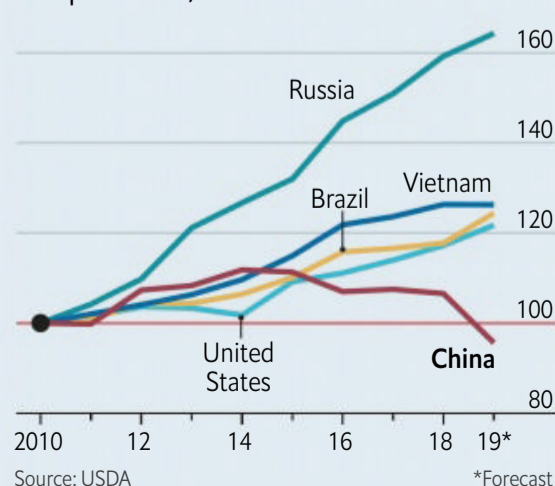
Whale Coffee, a shop in Chengdu's trendy Yulin neighbourhood, is run by Pang Wenlong, who three years ago was among Ms Zhang's first students. On most days Mr Pang can be seen behind the counter perusing manuals on coffee roasting, or examining his beans and separating out defective ones by hand. On a recent visit your correspondent ordered a Square Coffee (so-called because Whale looks out on a square), which combines two roasts of one's choice. Mr Pang said he would favour the Colombia roast, rather than the requested Ethiopia, as a fit with the Kenya.

There may be about 200 small coffee shops like Mr Pang's in Chengdu, Ms Zhang estimates. Their growth is striking given the city's renown for its tea-drinking culture. Many residents like to relax in open-air shops, sipping tea served gracefully by waiters from brass pots with long spouts. Xue Meiling, a Whale regular who owns a bakery, says she is as likely to invite a friend to coffee at Mr Pang's as to tea.

But the two markets are different. The teahouses tend to cater to older people who like to spend long hours in them, playing mahjong and gossiping. At the coffee shops it is rare to see anyone over 40. Young people use them for socialising, but much of their interaction is online—sharing photos of their drinks, of the coffee-making equipment and of themselves in chic interiors. An option on the Chinese rating app Dianping allows users to search for *wanghong* (“internet viral”) coffee houses: ones with particularly photogenic decor. Where better to sip and WeChat? ■

Belly up

Pork production, 2010=100



Chaguan | A propaganda own goal

Chinese leaders think America can be threatened into resuming engagement. That's misguided



THERE IS A lot for Americans to dislike in the Chinese propaganda film “Shangganling”. It is based on a real battle in late 1952, during which American and South Korean forces failed to take a mountain ridge from more lightly armed Chinese troops, who suffered terrible casualties. The weeks-long campaign came near the end of the Korean war of 1950-53, which began when the Stalinist regime of Kim Il Sung invaded the pro-American south and which eventually drew in millions of Chinese and UN forces. Chinese schools teach that China joined the war in self-defence and was victorious. Pupils are told their countrymen showed solidarity with communist brethren in Korea while standing up to American imperialists who were bent on attacking China’s heartland. Official histories avoid the awkward question of who started the “War to Resist America and Aid Korea”, as it is known. China’s internal estimates put the Chinese death toll at 400,000. The public is told that only 152,000 Chinese were killed.

Newspapers have begun to cite the Korean war in editorials, as they brace the public for prolonged trade conflict with America. Filmed in 1956, “Shangganling” is one of several Korean war films shown on national television in recent days. Sporting crude, prosthetic hooked noses beneath their steel helmets, the “Americans” in that film cackle with laughter as they incinerate Chinese troops with a flame-thrower. In their foxholes they ogle photographs of pin-up girls. They fairly swagger as they advance with support from tanks and bomb-dropping US Air Force jets. But their bullies’ bravado vanishes in hand-to-hand combat, depicted in a close-up frenzy of wrestling and stabbing. Soon the Yanks are running away, hands raised in panic, only to meet a murderous American officer, who is shown coldly ordering the fatal machine-gunning of his own troops to frighten the rest back into action.

Perhaps sensing that this Mao-era grotesquery could be misinterpreted, state media have offered guidance. In a tweet, Hu Xijin, editor of *Global Times*, a nationalist tabloid, argued that victory on Shangganling (Triangle Hill, as Americans called it) had enhanced China’s status in its talks with America during the war. “There is no equal negotiation without fighting” is the film’s message to Chinese viewers, Mr Hu wrote. A blog, Taoran Notes, which appears to have official backing for its musings on the trade feud, said refer-

ences to Korea were a way of saying that China is a master of “talking while fighting”, including in today’s contest with America.

To the Chinese public, the Korean war is an easily grasped symbol, signifying that “even if we go head-to-head with the Americans we should not be afraid. We can take them,” says the best-known Chinese historian of that conflict, Shen Zhihua. He hopes that China’s negotiators are signalling toughness to the public in order to leave themselves wriggle room in talks with America.

Mr Shen is an unusually outspoken scholar, whose long research in Chinese, Soviet and Western archives emboldens him to challenge official accounts of the Korean war. He has angered Maoist hardliners by arguing that Stalin cornered Mao into entering the hostilities. The professor says that what the Chinese leader actually wanted was Soviet help to invade Taiwan, the redoubt of the Nationalist regime which was driven to the island at the end of the Chinese civil war in 1949. In 2017 Mr Shen gave lectures calling today’s North Korea, and its nuclear weapons, a liability for China.

Propaganda should not be confused with history, the professor says, drawing deeply on a cigarette in his office at East China Normal University in a suburb of Shanghai. Chinese academics know about the “huge price” that China paid for a war that ended where it started, with Korea divided along the 38th parallel. Early Communist leaders “knew in their hearts” what happened, too. He is less sure that today’s still do. As for the general public, they do not know how many died and remember the war simply as a “great success”, he sighs. Mr Shen would like to explore hard questions about why talks to halt the Korean war lasted a year-and-a-half, and who benefited from that drawn-out process. Alas, he suspects, such research probably could not be published in China.

Misreading past and present

Foreign historians do not face such constraints. They argue that Mao deliberately prolonged the war by dragging out talks on an armistice that other combatants were ready to declare, notably by stubbornly demanding the return to China of 14,000 Chinese prisoners-of-war who were desperate to be sent to Taiwan. His aim was, in effect, to talk in order to continue fighting (and receiving modern weapons and aid from Stalin), despite warnings from his own military chief about “massive, unnecessary casualties”. Mao, unmoved by human suffering, predicted early in the war that 400,000 Chinese would die, and told Stalin that his plan was to spend “several years consuming several hundred thousand American lives”. Told about his own son’s demise in Korea, Mao murmured only: “In a war, how can there be no deaths?”

China’s noisiest patriots, vowing on social media to ditch iPhones for Chinese smartphones, have no idea of the true price their country paid in Korea. They know nothing, for that matter, about why America sought peace talks almost 70 years ago. True, America was daunted by China’s willingness to sacrifice lives. In the end, though, America and its allies wanted an armistice because a unified Korea was not an interest worth all-out war, let alone a nuclear one as some hothead generals proposed.

Today, America is debating something unrelated: whether openness to a rising China is sensible and even necessary, or an act of self-harm. War talk and broadcasting xenophobic films is a gift to American hawks who argue that China is an ideological foe that cannot be trusted. In their desperation to assure their own people that they are not a pushover, China’s rulers are forgetting the first lesson of propaganda. Real history can be a valuable guide. Falsified history leads countries astray. ■



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The rise of Rojava

Who will rule the north?

KOBANE AND RAQQA

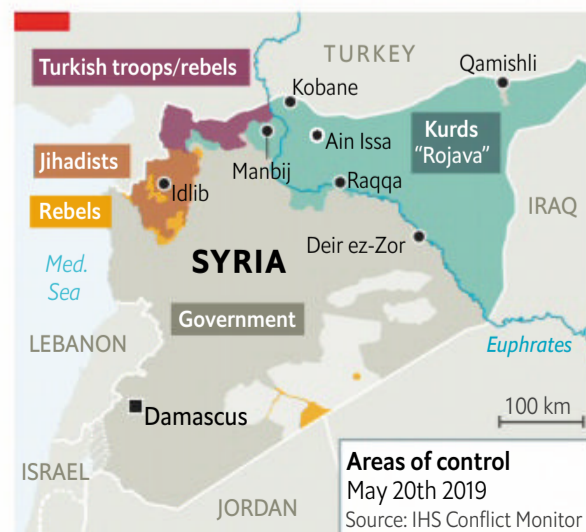
The Kurds are tightening their grip on northern Syria. But enemies lurk nearby

THE KURDS have their own name for northern Syria: Rojava, which means where the sun sets. For decades that seemed fitting. Arab nationalists pushed them off their land and suppressed their language. Then came the jihadists of Islamic State (IS). War with them levelled cities. But with IS defeated those cities are rising again. One of the largest, Kobane, is bigger and taller than before. It sports a towering war memorial and is hosting its second art fair. “We’ve had enough of the pain,” says Brivan Hammoush, a landscape artist.

Over the course of Syria’s multi-sided civil war, which began in 2011, the Kurds captured a third of the country (see map). In 2016 they declared their own autonomous region in Rojava, which contains most of Syria’s oilfields, its highest dams and its bread basket. Trade routes as old as the Silk Road run through the territory. Such valuable land is a boon to Rojava’s Kurdish-led administration. But it also attracts enemies. As they rebuild their region, the Kurds face threats, at home and from abroad. And many fear their strongest ally, America, will abandon them at the

drop of a tweet.

For now things are looking up. Fighting, sanctions and a lack of funds stymie reconstruction in most of Syria, but juggernauts loaded with diggers and cement queue for miles at Rojava’s border with Iraq. Convoys of petrol tankers ply the highways to Damascus. Western-funded aid agencies repair infrastructure, hospitals and schools in the region. The parliament, formed in September, still meets in a high school. But



that also means that politicians are accessible. Your correspondent got a meeting with the two heads of government simply by knocking on their office door.

On social issues Rojava’s leaders are rather progressive compared with those in much of the Middle East. Polygamy is outlawed. A man and a woman co-lead every office in government. A woman runs Raqqa, which is once declared its capital. Few, if any, senior female officials wear a veil. The Kurds, though Muslim, are distinctly relaxed about it—they openly drink and smoke during the Ramadan fast. Faith is considered a private matter. To the delight of America’s evangelicals, a new church has opened in Kobane for the growing number of Christian converts.

But Rojava’s new rulers owe their power to gun-toting revolutionary committees, not the ballot box. They emerged from the Kurdish Workers’ Party (PKK), which is based in northern Iraq and considered a terrorist group by many countries. Rojava has the trappings of a repressive one-party state. Protests are censured and opposition parties harassed. Officials say they are better than the regime of Bashar al-Assad, Syria’s dictator, or the rebels who fought him—a miserably low bar. “It’s just another totalitarian regime,” says a Kurdish journalist who fled abroad.

Rojava’s demography makes ruling hard. There are thought to be between 500,000 and 1m Kurds in the region, compared with at least 1.5m Arabs. So Kurdish officials have tried to broaden their appeal. ▶▶

► In September they replaced the name Rojava with the more inclusive, but wordy, “autonomous administration of north and east Syria” (NES). They also moved the administrative capital from Qamishli, a Kurdish city, to Ain Issa, a drab Arab town. Arabs have been appointed to many senior positions in government. “We’re seeking a geographic federation, not an ethnic federation,” says Polat Can, a commander in the Syrian Democratic Forces (SDF), the local army. Half of Mr Can’s soldiers are Arab.

Still, the Arabs in Rojava feel increasingly alienated. Kurdish forces known as the People’s Protection Units, or YPG, lead the SDF. “Kurd or Arab?” ask guards of visitors at a military base. Arab sheikhs claim the Kurds have seized their land and are imposing their own customs. “They want us to bring our wives to tribal gatherings,” fumes one who considers such mingling of the sexes improper. Some speak of the Kurdish “occupation”. Protesters near Deir al-Zour’s oil wells have blocked access with burning tyres. “The Kurds”, they chant, “have stolen our oil.”

Turkey in the north and Mr Assad’s government in the south prey on the differences. They have each held tribal gatherings in an attempt to win over the Arabs of Rojava. Turkey wants to carve out a buffer zone on its southern border, which might contain Kurdish cities. Rojava, it says, offers the PKK a rear base to continue its 40-year war against the Turkish government. West of Manbij, Turkish tanks train their turrets on Kurdish positions. The Kurds have no air force and little heavy weaponry. They are no match for the Turkish army.

Nor can they challenge the army of Mr Assad, who says he wants to reclaim all of Syria. He is currently focused on Idlib, the last rebel stronghold. At the height of the war Mr Assad pulled his troops from the north to defend Damascus; the Kurds did not fight them. But the regime still holds some sway in Rojava. It runs the mobile-phone network and oversees many courts and schools. In the region’s only civilian airport, controlled by the regime, portraits of the dictator are ubiquitous and travellers who work for the NES risk arrest. A proposal by Russia, which backs Mr Assad, would have the Syrian army return to Rojava and turn Kurdish forces into local police.

Meanwhile, the threat of IS lingers. The jihadists set up impromptu checkpoints on highways. A ban on motorbikes in war-shattered Raqqa has only partially succeeded in curbing attacks on infrastructure. Officials describe camps crammed with displaced and disgruntled Arabs as potential incubators of jihadism. Many women in the region, still fearful of IS, continue to wear niqabs.

The Kurds are reassured by the presence of America. Some 2,000 of its troops are spread across the territory. Its warplanes

Fast food

Full bellies, full bins

CAIRO

Arab governments want their citizens to waste less food during Ramadan

AS MUSLIMS HAVE for centuries, Ahmed Toufiq broke his Ramadan fast by nibbling a date while the call to prayer echoed across the Nile. Then he turned to the heaped plates in front of him. He made short work of a fragrant lentil soup, but his pace slowed as he picked through salads and scooped dips with steaming pita bread. When he walked outside for a cigarette 20 minutes after sunset, a server collected half a plate of untouched kebab and rice. “Before *iftar*, you feel like you want to eat for two,” he said.

Arab states waste a lot of food. A study in 2016 by the Economist Intelligence Unit, our sister company, found that Saudi Arabia bins 427kg per person annually, triple the average in Europe and North America. Some may chalk this up to traditions of hospitality: even a “light lunch” in Cairo or Beirut leaves guests in a torpor. The reasons are more varied, though. Half of the fruits and vegetables grown in Egypt are never eaten because they are often moved to market in open-air trucks and wilt quickly in the heat.

The problem gets worse during Rama-

dan. Residents of the United Arab Emirates each produce an extra 1.8kg of waste per day in the holy month, a 67% increase. Food accounts for 55% of Dubai’s trash, up from 22% in other months. Bahrain’s food waste increases by half to 600 tonnes daily. Buffets are a major culprit, especially in the Gulf, where hotels and restaurants often serve through the night. A study by researchers at Masdar, a state-owned renewable-energy firm in Abu Dhabi, found that just 53% of food at *iftar* buffets is eaten.

This is an expensive waste. Some governments see it as a security risk, too. The region is a net food importer. In the weeks before Ramadan, state-run media admonish their citizens to be less wasteful. On social media diners now swap recommendations not on lavish buffets but on à la carte options. Autocratic regimes that frown on civil society are happy for their citizens to take up the cause of food waste. Wahab, a Qatari startup, sends volunteers to collect leftovers from hotels and restaurants.

A few hotels in Dubai have installed cameras and scales to track what winds up in the bin. Chefs use the data to cook less of the unpopular dishes. One Hilton property says the system cut buffet waste by 70%. Others are doing away with the buffet altogether—if not for *iftar* then for *suhour*, the pre-dawn “dinner”. A growing number of restaurants advertise *prix fixe* menus as a waste-free way to break fasts. These meals are also cheaper. A lavish hotel buffet might cost 200 dirhams (\$54). Set menus are about half that.

Egypt’s national food bank feeds about 1.8m families during Ramadan. Some of the food is sourced from hotels that package leftovers. For health reasons, though, uneaten food from a customer’s plate must be thrown away. After 15 hours of fasting, eyes are bigger than stomachs. Cameras will not help. So one Cairo hotel found a low-tech solution for its buffet: it made the plates smaller.



Fala-full

buzz overhead and its forces deter the Turks. President Donald Trump appears to have backtracked from his tweet in December ordering a pullout from Syria. But uncertainty over America’s intentions complicates life for the Kurds. The local administration has found it harder to recruit and retain Arabs. Even the Kurds are hedging their bets. Rojava’s leaders recently went to Damascus for talks with Mr As-

sad’s intelligence chief. The founder of the PKK, Abdullah Ocalan, has urged them to “take account of Turkish sensitivities”.

Kurdish leaders in Syria aspire to be America’s permanent ally, like the Kurds next door in Iraq. But Rojava, unlike the Kurdish autonomous region in Iraq, lacks UN recognition. “You don’t know how long it’s going to last,” says a teacher in Qamishli. “You feel it’s built on sand.” ■

Bahrain

A Gulf case study

MANAMA

The lessons of Bahrain, a state that tried to wean itself off oil

THE ORANGE helmets are a burst of colour in the desert, where drab aluminium potlines stretch for almost a mile across the sands. Workers at Alba, Bahrain's aluminium smelter, are finishing a \$3bn expansion. A country of just 1.5m people will soon produce 1.5m tonnes of aluminium a year, more than 2% of global output. Alba will add another 500 to its staff of 3,200. Almost 90% are citizens, meaning the firm will employ 2% of the national workforce. The aluminium industry will account for 15% of GDP, says Tim Murray, the CEO. "People don't realise it's that big."

All six members of the Gulf Co-operation Council (GCC) have lofty plans to wean their economies off oil. Bahrain is in many ways a forerunner of this effort. It built a financial sector back in the 1980s. More recently it passed a bankruptcy law, allowed 100% foreign ownership of firms and introduced flexible visas that allow some migrants to freelance. "Everything those guys are doing now, we tried already," says Asumah al-Absi, who heads the labour regulator. The results have been mixed—with lessons for Bahrain's neighbours.

Compared with other Gulf states, the job market in Bahrain looks vibrant. Two-thirds of citizens work in the private sector, compared with 55% in Saudi Arabia and 10% in Kuwait. Unemployment is 4%. In Saudi Arabia, where joblessness is three times higher, the government is raising work-permit fees to drive out migrants. In Bahrain such fees are low. Most migrants toil in low-wage jobs that locals spurn. Bahrainis do not want to lay bricks.

Bahrain ploughs 80% of the take from work-permit fees back into the domestic economy through Tamkeen, which offers subsidised loans and grants to help businesses buy equipment and training. Though it has a few national champions, Bahrain has tried harder than other GCC states to cultivate small firms. Businessmen praise its simpler bureaucracy. A restaurateur says he needs nine licences to operate a fast-food joint in his native Kuwait. Bahrain consolidated its permits into one.

Yet the fiscal picture is bleak. Oil provides about 70% of government revenue—and there is not enough of it. Last year's deficit was a yawning 12% of GDP. Wealthier Gulf countries had to offer a \$10bn bailout. Bahrain trimmed subsidies for power and water consumption in 2016. But more reforms planned for this year were postponed for fear they would trigger unrest.

poned for fear they would trigger unrest.

Cutting subsidies will only get Bahrain so far. But even though Bahrain introduced a 5% value-added tax in January, a corporate or income tax seems politically impossible. Without new taxes the Gulf states will struggle to balance their budgets.

State jobs still pay 70% more than those in the private sector, a figure that has grown over the past decade as the monarchy doled out increases and stipends to buy political calm. The gap fuels unrest in a country where the Shia majority is often frozen out of state jobs. Flexible work permits might slowly drive up wages in migrant-heavy sectors—but unhappy employers are trying to kill the programme.

Oil still accounts for more than half of

exports. Sameer Abdulla Nass, the head of the chamber of commerce, complains that 100% foreign ownership has brought only "retail and restaurants", not industry. Bankers talk giddily about fintech as a growth industry. In a venture-capital firm overlooking the Gulf, though, investors complain that universities do not produce enough entrepreneurs. Nor do they provide the sort of training that might help graduates land well-paid technical jobs.

Bahrain has done well at convincing its citizens to try the private sector instead of counting on cushy state gigs. But it has not upended the social contract, whereby oil pays the bills and foreigners do the manual labour. Some day, it will have to, says Mr Nass. "We have no choice." ■



Politics in Congo

Who's the boss?

KINSHASA

Félix Tshisekedi, the new president, is trying to govern a country still in the grip of his predecessor, Joseph Kabila

VENDORS SELLING mobile-phone airtime and money-changers swinging bags of Congolese francs mill around beneath a billboard in Kinshasa that reads "Kabila forever". It reminds people that Joseph Kabila, who stepped down in January as president of the Democratic Republic of Congo after 18 years, has not really gone. Though Mr Kabila (pictured, left) handed over the sash of office to Félix Tshisekedi, the leader of the main opposition party, he appears still to be calling the shots.

The ascent of Mr Tshisekedi (pictured, receiving the sash) was remarkable. It was the country's first transfer of power via the ballot box; all previous leaders were either

killed or fled. It also involved a novel kind of election-rigging. Mr Kabila's chosen successor was so unpopular that the regime could not plausibly claim he had won. Instead, and presumably after some interesting backroom discussions, it announced that Mr Tshisekedi had won, though impartial estimates suggest he came a distant second with less than 20% of the vote. The real winner with 60%, Martin Fayulu, had promised justice for Congo's many corrupt bigwigs. He now tours Western capitals trying to drum up support for another election, which is unlikely to happen.

Just as important as the jiggery-pokery around the presidential election was the ►►

► theft of the parliamentary one, which implausibly handed almost 70% of the seats in the national assembly to members of Mr Kabila's party. That party also controls the senate, which is elected by members of the provincial assemblies, some of whom were reportedly paid as much as \$50,000 for their votes, according to candidates who withdrew from the race. Mr Tshisekedi tried to take a stand against flagrant vote-buying by blocking the new senators from taking their seats. But after little more than a week he backed down.

With both houses of parliament in Mr Kabila's pocket, Mr Tshisekedi is just "renting the seat of power", says Manya Riche, of the Congo Peace Centre at Texas A&M University. He has little power save for a presidential veto that he can use to block new laws. But this can be overruled by the constitutional court, which is also stacked with Mr Kabila's loyalists. Moreover, Mr Tshisekedi can be kicked out of office by a two-thirds majority in parliament.

Mr Kabila, who says he is enjoying his retirement catching up with his mother, seems confused about what retirement entails. He has refused to move out of the presidential villa or, apparently, hand over the presidential plane to his successor, who is in temporary accommodation and slumming it on commercial flights. Mr Kabila is also holding court, hosting politicians on his farm near Kinshasa. Selfies of the former president and newly elected governors, grinning among verdant bushes, recently circulated on social media. Tellingly, Mr Kabila had glad-handed the governors before Mr Tshisekedi met them.

More ominously, Mr Tshisekedi spent four months bickering with Mr Kabila over who should be prime minister. Parliament only appointed someone this week: Sylvestre Ilunga Ilukamba, a 74-year-old former director of a state railway company and a little-known member of Mr Kabila's party. That it took so long bodes ill. Tensions over who pulls the levers of power and public frustration at the slow pace of change could lead to a "violent stalemate" with bloody protests, frets Kris Berwouts, the author of "Congo's violent peace".

Still, there are reasons for hope. The new president has already gained some popularity by making politics a little less oppressive. He has released some 700 political prisoners and allowed Moïse Katumbi, a former governor and presidential hopeful, back into the country after three years in exile.

Mr Tshisekedi is supported by the EU and America, which had fraught relations with his predecessor. Diplomats say that, although the election was clearly stolen, America and the EU accepted the outcome in the hope that it will weaken Mr Kabila's grip on power and allow for a cleaner vote at the next presidential election due in

2023. To signal its distaste for an election it had endorsed, America slapped sanctions on three election officials.

The suspicion that Mr Tshisekedi was complicit in the theft of the election infuriates some members of his party. They say that he rose to prominence on the reputation of his late father, Étienne, a stalwart of the opposition. "How can a biological son of Étienne do this?" asks Valentin Mubake, his father's former aide, who scoffs that the new president has no power of his own. "He wouldn't even dare remove that Kabila billboard." ■

Uganda

Gold blush

BUSIA

How can a country export so much more gold than it mines?

DEEP IN PITS hewn from the earth dozens of teenage boys slam their hammers into the rock. Other men pan the crushed ore by hand in tubs filled with water and mercury. Uganda does not have many gold mines and most, like this one in Busia, in the east of the country, are neither sophisticated nor especially productive. Yet this small east African nation exports a fantastic trove of the yellow metal.

According to official statistics, gold exports surged to \$514m in 2018 from less than \$10m a decade ago. Last year gold surpassed coffee as Uganda's biggest earner of foreign currency.

The open secret of Uganda's gold boom is that most of this metal is dug up elsewhere. Its central bank reckons that only 10% of the exported gold comes from local mines. It blandly says the rest comes from elsewhere in Africa. Officials insist that the trade is all legal and untarnished. But industry insiders gesture over the border to the Democratic Republic of Congo, whose

lawless eastern provinces are rich in minerals including gold, and which levies a 3% tax on gold exports. They think that more than 90% of Congo's gold production is illegally whisked to neighbours such as Uganda and Rwanda and then onto planes flying to Dubai. Some go direct. In 2016 customs officials in Dubai checked the rather overweight baggage of a Congolese frequent-flyer from Lubumbashi. In it was 150kg of gold. One investigation for the OECD, a club of mostly rich countries, found that airline passengers were regularly stopped by security officials at Entebbe airport trying to sneak off with gold bars crammed into their carry-on bags.

Uganda, too, used to tax gold exports, but in 2014 Uganda's president, Yoweri Museveni, waived the tax. In 2015 Belgian investors spent \$15m building African Gold Refinery after being assured of tax exemptions for both the import of raw gold and the export of refined gold for at least ten years. Since then the refinery has exported more than 31 tonnes of gold to Dubai and Antwerp. Last year a competitor, Bullion Refinery, entered the market, and is now thought to be exporting similar quantities.

Uganda's export boom ought to be a shining example of how governments can spur investment and minerals beneficiation with sensible tax policies. Yet investigators for the UN have singled out Uganda for shame and named both refineries in a report to the Security Council on how gold smuggling funds warlords and militias.

Their report says that middlemen selling gold to the refineries are linked to Congolese smugglers. The Sentry, an American watchdog backed by George Clooney, an actor, last year estimated that \$300m-600m of gold is smuggled out of Congo each year. African Gold Refinery says it selects its suppliers carefully and complies with laws prohibiting the trade in minerals from conflict areas. Bullion Refinery, whose website welcomes "small, medium and large scale suppliers" of "raw gold dust and powder", did not respond to a request for comment.

Most of the gold processed in Uganda comes from areas controlled by armed militias that extort money from artisanal miners. A report for the UN found that one militia forces miners to sell their gold at \$25 per gram, far less than the \$60 they would get on the open market, and charges miners a monthly fee for access to the pits. Rebel militias are not the only ones getting rich. Another UN report alleges that officers in Congo's army illegally own mines or extort gold from miners.

Mr Museveni shows little interest in policing the trade. At the opening of a gold refinery he said he would deal harshly with officials who were "frustrating" investors in the industry. Some locals may profit, but gold smuggling fuels violence in the country's large, unstable, neighbour. ■

All that glitters is not Ugandan

Uganda, gold exports, \$m



Source: Central Bank of Uganda



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The European Parliament elections

Centrifugal forces

BRUSSELS AND MILAN

Fragmentation is coming to the European Parliament

THE SQUARE outside Milan's cathedral was packed, despite an unseasonal drizzle. The punters cheered as the leaders of 11 nationalist parties from around the continent called for a populist revolution against the European Union's establishment. "Our Europe is not 60 years old but millennia old!" bellowed Marine Le Pen from France. Jörg Meuthen of Alternative for Germany called for a "Fortress Europe" closed to immigrants. Matteo Salvini, Italy's deputy prime minister, pledged "common sense in Europe" to chants of "Salvini, Salvini, Salvini" from the crowd.

The five-yearly European elections, the world's second-biggest democratic exercise after India's, began on May 23rd and will conclude on May 26th. They will decide the make-up of the European Parliament, the union's legislature which, though often incomprehensible to outsiders, has gained substantial new powers in recent years. The European Commission, the EU's executive, is the only body that can initiate legislation. But the parliament's assent, along with that of the 28 national governments making up the EU Council, is required to pass the vast majority of it. The outgoing parliament was instrumental, for

example, in shaping the union's powerful new General Data Protection Regulation, a ban on single-use plastics and the EU-Japan free trade deal. Its future matters.

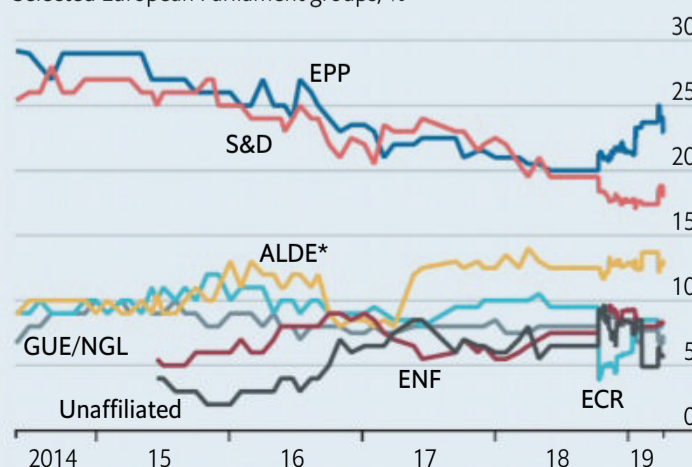
The scene in Milan on May 18th was a glimpse of that future—but not as Mr Salvini intended. Right-wing populists are on the rise in Europe. But they are just part of a wider trend away from monolithic parties.

And the populists are themselves subject to that process. Absent from the Milan rally were Poland's Law and Justice party, who find Mr Salvini too pro-Russian and the Sweden Democrats, who dislike Ms Le Pen for the same reason. Even among those present, the fractures were obvious. Ms Le Pen declared war on "savage globalisation", but Mr Meuthen called for a free-market, free-trade Europe. The political future of the EU is not populist or establishment, liberal or illiberal. It is fragmented.

European politics used to be dominated by two big-tent political families, the centre-right European People's Party (EPP) and the centre-left, currently called the Socialists and Democrats (S&D). Parties belonging to these two groups led most EU countries; in Brussels, the two acted as ▶▶

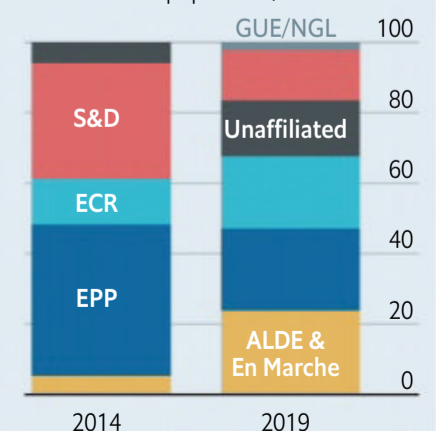
Breaking up

Aggregate EU voting behaviour
Selected European Parliament groups, %



Sources: europeelects.eu; European Council; The Economist

European Council leaders
By political group, weighted by member-state population, %



*Includes En Marche from April 2017

clearing-houses for disagreements. Yet in recent years the EU's societies have become more plural, voters' deference to established institutions has waned and debates over social change and identity have displaced old left-versus-right ones.

In 2014, 76% of EU citizens lived in countries led by parties belonging to one or other of the two big families. Now the proportion is just 38%. In France, for example, the domination of the centre-right Republicans and centre-left Socialists has given way to a contest primarily between Emmanuel Macron's centrist *La République en Marche* and Ms Le Pen's populist National Rally. Italy, Poland and Greece are also led by outsiders. The same trend is present in the European elections: the EPP and S&D will probably lose the most seats and forfeit their joint majority, while the Greens, the centrist Alliance of Liberals and Democrats for Europe (ALDE) and two nationalist groups will probably gain.

Democracy is messy

Attempts to consolidate are under way. On the nationalist right Mr Salvini wants to merge the current outfits into one megagroup with a third or more of the seats. But, as the rally in Milan illustrated, divisions among those parties—on everything from Russia to the EU budget—will probably frustrate his efforts. Meanwhile, Mr Macron wants to build his own centrist megagroup, combining *En Marche* with ALDE and poaching moderate pro-European parties from the EPP and S&D. That has succumbed to dithering, and even the more modest merger that he is now planning will be susceptible to internal differences on matters like the budget.

So the old EPP-S&D duopoly in the parliament is dying, but nothing has yet emerged to replace it. Fragmentation has already come to the European Council, where the 28 member states are represented. Now it is coming to the Parliament. Then it will come to the next commission, which is appointed by the former and approved by the latter in a process that will begin at a post-election EU summit on May 28th. Under a convention established back in 2014 the designated candidate of the largest group in the parliament has the first claim to the commission's presidency. But securing the necessary majority in the fragmented new legislature will be tricky. Manfred Weber, the EPP candidate, whose group will probably be the largest, will need the backing not just of the S&D but of liberals and perhaps some greens—a new centrist “super-grand coalition”. Leaders may pick an alternative figure deemed to have broader appeal, like Michel Barnier, the commission's chief Brexit negotiator. They will be influenced by the quest for regional and ideological balance among the big posts to be filled in the coming months,

which also include those of European Council president, High Representative for Foreign and Security Policy and president of the European Central Bank.

The absence of easy majorities in the next parliament will mean an array of subject-by-subject coalitions, especially on contentious looming subjects like the next seven-year budget, carbon emissions targets, border policies and the rule of law in countries like Hungary and Poland. Simon Hix of the London School of Economics notes that the outgoing parliament has already seen the joint power of the two big groups decline, with a left-liberal coalition winning votes on justice and the environment and a right-of-centre one winning some economic votes. He predicts more of this, though with more horse-trading and uncertainty. A similar shift could occur in the council, with the weakened Franco-German alliance ceding more prominence to new groupings like the fiscally hawkish “Hanseatic League” of northern states.

All of this fragmentation will advance the other tendency of the campaign evident at Mr Salvini's gathering in Milan: European politics is slowly becoming more truly European. The old days of stitch-ups by the EPP and S&D or by Paris and Berlin are fading. Ideological conflicts are crossing borders more often. Much EU business will continue to be done at late-night summits and in little-watched parliamentary debates. But more than in the past they will spill out of these. A more fragmented EU is also a more political EU. ■

The European elections in France

Marching into trouble

CERGY

Emmanuel Macron's party is struggling

THE APPLAUSE in the small auditorium was polite, rather than enthusiastic. A friendly senator in the front row tried to stir electoral fervour, clapping her hands rhythmically over her head as the star guest walked in. But Nathalie Loiseau, Emmanuel Macron's softly spoken leading candidate at elections to the European Parliament, is a technocrat who says that she is “not made for big glittery shows”. And indeed, on stage in a town north-west of Paris, she is not. Despite weeks of non-stop campaigning across the country, Mr Macron's party seems to be stalling.

The election in France matters beyond the country's borders. It is in some ways a test of whether the liberal-democratic centre can hold against the forces of nationalism and populism. Two parties have been



Le Pen and sidekick

neck-and-neck in the polls and well ahead of their rivals: Mr Macron's *La République en Marche*, and Marine Le Pen's National Rally (formerly the National Front). The vote has become a replay of the second round of the presidential election in 2017.

Both sides have played up the stakes. The French president this week rolled up his sleeves and began to campaign, calling the vote an “existential” moment. Europe, he said, faces a choice between unity and disintegration. With Steve Bannon, Donald Trump's former strategist, camped out in a hotel suite in the same road as the Elysée Palace, Mr Macron also warned of foreign interference in the French campaign.

For her part, Ms Le Pen has sought to turn the election into a referendum on the unpopular Mr Macron. Six months after the start of the *gilets jaunes* (yellow jackets) protests, the president's ratings have recovered to where they were before the movement began. But, at around 30%, they remain low. Mr Macron continues to crystallise anger in a fractured country. “Vote against Macron”, instructs one of Ms Le Pen's blue-and-yellow campaign flyers.

Ms Le Pen is an old hand at this game. Her party came top at the previous European elections, in 2014, with 25% of the vote, partly because it plays the mid-term protest tendency well. This time, she has criss-crossed France to visit the sort of small towns and villages—Chassors, Rocquigny, Villeblevin—where the *gilets jaunes* occupied roundabouts, jobs are scarce and anti-establishment feeling runs deep. The far-right leader (who was raised in a mansion outside Paris) promises to “give power to the people”. And she has selected a slick 23-year-old, Jordan Bardella, to head her list. Having grown up in the heavily immigrant suburb of Seine-Saint-▶

Czech democracy

Toughing it out

PRAGUE

Can protesters bring down the Czech prime minister?

IT WAS THE biggest so far of a series of weekly demonstrations against the Czech government. On May 21st some 50,000 protesters, more than double last week's number, gathered on Wenceslas Square, the focal point of the Velvet Revolution in 1989 and the anti-communist revolt in 1968, to rail against Andrej Babis, a billionaire industrialist who has been prime minister since October 2017.

The protesters are incensed by Mr Babis's latest attempt to capture the Czech Republic's institutions by replacing Jan Knezinek, the justice minister, with Marie Benesova, a loyal footsoldier of Milos Zeman, the president and an ally of the prime minister's. Mr Babis is facing criminal charges related to his alleged misuse of 50m koruna (€2m) in European Union funds earmarked for small businesses. Mr Knezinek was pushed out a day after the police recommended Mr Babis be charged for fraud. Protesters fear that Ms Benesova will now slow down or even prevent the prosecutor from indicting Mr Babis (along with his wife and other members of his family, also implicated by the police). If convicted, the prime minister could face between five and ten years in prison. Mr Babis, who portrays himself as the target of a political witch-hunt, has vowed not to resign even if he is indicted.

Protests brought down the government in neighbouring Slovakia last year, but though tens of thousands are on the streets in the Czech Republic, Mr Babis is unlikely to go. The party he founded, ANO (an acronym that also means "Yes" in

Czech), is by far the country's strongest. His media assets help: dubbed Babisconi after a former Italian prime minister, he owns two influential dailies, as well as a radio station and a music television channel. He runs a superb marketing machine that recently came up with Donald Trump-style red baseball caps emblazoned with "Silne Cesko", or "Strong Czechia".

Mr Babis's model seems to be Viktor Orban, the Hungarian leader. Mr Orban changed the judicial system to cement his power over judges in 2018, and got away with a mere slap on the wrist from the rest of Europe.



More to come

▶ Denis, outside Paris, Mr Bardella draws on his back story to insist that opposing immigration is not prejudice but the conclusion of personal experience.

Next to the earnest Ms Loiseau, a former director of the elite Ecole Nationale d'Administration, Ms Le Pen and her troops are offering up comic entertainment at their rallies, deriding Mr Macron, "the globalist", at every turn. Ms Le Pen has also been showcasing her new approach to Europe. Formerly Eurosceptic, to the point of advocating France's exit from the euro, Ms Le Pen now favours a "Europe of nations", with strangely Gaullist echoes. The reason for the pirouette? Her new friends in government, she argues, notably Italy's Matteo Salvini, with whom she campaigned recently in Milan, can now change Europe from within.

In some ways it is remarkable for Mr Macron even to be close on her heels. In 2014 the sitting Socialist president, François Hollande, came in third place, with just 14% of the vote. This time, there is little enthusiasm anywhere for the election, and the turnout is likely to be low. "Abstention is the real threat," says Stéphane Séjourné, Ms Loiseau's campaign director. Up against apathy, Mr Macron has stepped in to try to mobilise his electorate. If he does come second, this would not affect his parliamentary majority, nor in principle his ability to govern. But it would be a symbolic setback. And this campaign is a reminder that his party, like the discontent in the country, centres overwhelmingly on him. As one supporter at the Cergy rally puts it: "The campaign isn't really about Loiseau; it's all about Macron." ■

German politics

Fade to black

BREMEN AND BREMERHAVEN

A seven-decade Social Democrat stronghold may be about to fall

BEAMING FROM ear to ear, Annegret Kramp-Karrenbauer saunters into the airy surrounds of the Klimahaus museum in Bremerhaven, a port city in north-west Germany, to deliver a campaign speech. Ms Kramp-Karrenbauer, leader of the country's ruling Christian Democratic Union (CDU), has been ubiquitous at rallies across Germany in the European election campaign. But the Klimahaus assembly is especially resonant, for the state of Bremen, which comprises the city of that name along with Bremerhaven, may be about to deliver an almighty shock.

On May 26th, while the rest of the EU elects its new parliament, Bremen's voters will also be choosing their next government. The Social Democrats (SPD) have run Bremen, the tiniest of Germany's 16 states, for 72 years, hoovering up votes from dockers, factory hands, civil servants and even merchants in a city-state that still styles itself "free Hanseatic". A carousel of coalition partners provided the only novelty. If the CDU can end the SPD's long reign, as polls suggest, the effects would reverberate well beyond this pair of rainy cities.

The repository for the CDU's hopes is Carsten Meyer-Heder, a lanky IT entrepreneur who joined the party only a year ago with no background in politics. His peppery business patter and limited command of policy detail mean he faces a tough battle against the able but uncharismatic SPD mayor, Carsten Sieling (campaign slogan: he "governs Bremen competently"). But the forces squeezing social democracy across Europe may prove too powerful for Mr Sieling to resist.

It is not hard to see why. Once rich and bustling, Bremen has long been a German problem child. The closure of docks and steel mills decades ago swelled the ranks of long-term unemployed and entrenched hardship: in Bremerhaven 40% of children live in households on long-term unemployment benefit. The bureaucracy has grown tired and inefficient. Schools are notable for crumbling buildings and appalling test scores. In Gröpelingen, a migrant-heavy area walloped by the shuttering of a shipyard in 1983, life expectancy for men is almost eight years lower than in rich parts of town. "It's another world here," says Dennis, an entrepreneur from the area who says he will not vote.

Bremen has plenty of well-paying jobs in sectors like aerospace, but many work- ▶

Delegates attend the opening ceremony of the Second Belt and Road Forum for International Cooperation in Beijing on April 26

A NEW STAGE

The Belt and Road Initiative advances after years of hard work and development

By Yu Lintao

XINHUA

Despite some governments and people in the West conjuring up arguments of “neocolonialism” or a “debt trap” to smear the Belt and Road Initiative, the China-proposed blueprint for common development of the world is becoming increasingly welcome. The success of the second gathering of world leaders to discuss the development of the initiative in Beijing showed that.

The Second Belt and Road Forum for International Cooperation (BRF) held on April 25-27 gathered some 5,000 participants from more than 150 countries and 90 international organizations, including heads of state and government and leaders from the UN and the International Monetary Fund (IMF). The number was much more than the participation in the First BRF two years ago.

Chinese President Xi Jinping proposed to build the Silk Road Economic Belt and the 21st-Century Maritime Silk Road, collectively known as the Belt and Road Initiative, in 2013.

The Belt and Road Initiative is about jointly meeting various challenges and risks confronting mankind and delivering win-win outcomes and common development, Xi said at the opening ceremony of the Second BRF.

“The Belt and Road cooperation embraces the historical trend of economic globalization, responds to the call for improving the global governance system and meets people’s longing for a better life,” he added.

In its sixth year of development, more and more people have become familiar with the Belt and Road Initiative and realize they need to engage with it, Kerry Brown, Director of the Lau China Institute at King’s College, London, told *Beijing Review*. He noted that becoming part of the initiative conforms to the interests of other participating countries, and is a tangible way to engage with China, the second largest economy in the world. Though some countries still don’t, they are in the minority.

During the forum, cooperation agreements worth over \$64 billion

were signed at a CEO conference. To date, 126 countries and 29 international organizations have signed agreements with China under the framework of the Belt and Road Initiative, with Italy and Luxembourg the latest signatories.

Expanding partnership

German Economy Minister Peter Altmaier said during the Second BRF that EU countries have signaled their willingness to participate in the initiative and are planning to sign a memorandum of understanding as a group. This belies the forecast by naysayers that the initiative will only develop into an alliance of developing nations.

Former French Prime Minister Jean-Pierre Raffarin said the European recognition of the Belt and Road Initiative has improved vastly from questioning to understanding it. The countries that stay outside the initiative may lose a historic opportunity for further development, he added.

Yang Jian, Deputy President of the Chinese think tank Shanghai Institutes for International Studies (SIIS), called the initiative an engine of development in a world faced with common challenges such as uncertainties and instability.

“The reason why the Belt and Road Initiative is gaining wider and wider recognition is that besides promoting the development of participating countries, it has also contributed to the recovery of the world economy after the global financial crisis, and conforms to the UN Sustainable Development Goals,” Yang told *Beijing Review*.

Also, the third-party market cooperation that the Belt and Road Initiative advocates enables developed countries to play a vital role, he said. With the participation of more Western developed countries, the misunderstanding over the initiative will be dispelled. Effective resource allocation and deep market

ADVERTISEMENT

integration among developed and developing countries in Belt and Road construction will create a win-win situation, Yang said.

In an interview with the Chinese media before heading to Beijing, Ueli Maurer, President of the Swiss Confederation, said the Belt and Road Initiative is a rare, long-term plan that has created a new dimension for the development of the world economy.

Globalization is the key to global development, and to achieve globalization, infrastructure construction at various levels is indispensable. The Belt and Road Initiative is a future-oriented project that will contribute to globalization. Everyone can benefit from improving and upgrading infrastructure, he said.

According to Patrick Mendis, a visiting professor at Peking University, by its design and nature, the Belt and Road Initiative is the new accelerator for greater cooperation and collaboration among people and nations.

“For European countries, China has already established itself as a reliable partner for mutual benefits,” Mendis told *Beijing Review*.

For a better world

The Belt and Road Initiative was launched to enhance cooperation and connectivity. Under it, a connectivity framework consisting of six corridors, six connectivity routes and multiple countries and ports has been put in place. East Africa has its expressway, the Maldives saw its first inter-island bridge come up, Belarus is producing sedans, and the number of freight trains between China and Europe is on the rise.

Tajik President Emomali Rahmon called the Belt and Road Initiative a multi-faceted “bridge” that can help unlock the transit potential of his landlocked country and enable it to access markets worldwide.

“The Belt and Road Initiative implies creating a new model of international cooperation by strengthening the existing mechanisms, as well as seeking and implementing new mechanisms, with the aim of stimulating the economic development of the countries involved,” Rahmon said.

During the Second BRF, Pakistani Prime Minister Imran Khan said in today’s world of geopolitical uncertainty, rising inequality and trade barriers, the Belt and Road Initiative offers a model of collaboration, partnership, connectivity and shared prosperity. He called the China-Pakistan Economic Corridor not a transaction but a transformation of Pakistani society.

Malaysian Prime Minister Mahathir Mohamad told the media that he fully supports the Belt and Road Initiative. “In the promotion of relations between countries, the distance as well as the speed of travel is very important. With this scheme, I am quite sure more ships will be passing near Malaysia and Southeast Asian countries and therefore it will increase trade between Southeast Asia and China,” he said. “I am sure my country, Malaysia, will benefit from the projects.”

Over the past years, Belt and Road cooperation has expanded from the Eurasian continent to Africa, the Americas and Oceania, opening up new space for the world economy with better-than-expected results. China’s development achievements have been shared with other Belt and Road participating countries as its huge demand for imports and increasing outbound investment has generated enormous growth opportunities.

China’s direct foreign investment in other countries participating in the Belt and Road Initiative has exceeded \$80 billion. The total trade volume between China and those countries topped \$6 trillion in the 2013-18 period, during which more than 244,000 jobs were created locally.

For instance, in Kenya, the Chinese-funded and built Standard Gauge Railway linking Nairobi and Mombasa, called the “project of the century,” has created 50,000 local jobs and boosted the country’s economic growth by 1.5 percent. According to a World Bank study, the Belt and Road Initiative will increase the GDP of East Asian and Pacific developing countries by 2.6 percent to 3.9 percent on average.

Belt and Road 2.0

In his speech, Xi announced a package of proposals to advance high-quality development of the Belt and Road Initiative, calling on the international community to join hands to work out a “meticulous painting” of the initiative.

The principle of extensive consultation, joint contribution and shared benefits should be upheld, Xi said, stressing open, green and clean approaches, as well as high-standard goals for improving livelihoods and sustainable development.

Observers said the Belt and Road Initiative is entering a new stage of development.

“The first stage was setting the framework, docking strategies and building partnerships with other participating countries. Now, the new stage of development means implementation with concrete steps and appropriate approaches. That is what we call from blueprint to meticulous painting,” Zhai Kun, a professor at Peking University, told *Beijing Review*.

Since the participants have different levels of development and different infrastructure systems, it is quite natural that the Belt and Road Initiative will evolve from time to time in order to attract different stakeholders, the professor said.

Mendis said the best organizations in the world are the “learning organizations” that adapt and change accordingly. “As the best corporate practice, the governance of the Belt and Road Initiative must then adjust and refine its policies and actions to meet the needs of changing circumstances on the grounds,” he added.

Yang of the SIIS said Xi’s new proposals will dispel misgivings about the initiative. The open, green and clean approaches as well as sustainable development of the Belt and Road construction that Xi stressed will help alleviate fears about the initiative being a debt trap or a form of neocolonialism. It will also improve transparency of Belt and Road projects.

IMF Managing Director Christine Lagarde hailed the Chinese Government for taking positive steps with a new debt sustainability framework and green investment principle for Belt and Road projects.

“Debt sustainability and green sustainability will strengthen Belt and Road Initiative sustainability,” Lagarde said.

Klaus Schwab, founder and Executive Chairman of the World Economic Forum, who attended the First BRF as well, told the media that when the First BRF took place, the Belt and Road Initiative was “still a child growing up.” But “now the initiative has become an adult, which means that it has become an important factor in the global economy. It has grown up,” he emphasized.

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ers live and pay taxes in surrounding Lower Saxony, commuting daily into the city. Mr Meyer-Heder says a priority will be to entice them back by redeveloping areas like Neustädter Hafen, a port with a lease that is up for renewal in 2027. Thousands more flats are needed, and a dozen new schools planned. Investment is constrained by Bremen's vast debts, a legacy of public hiring sprees enacted to help laid-off labourers. But from 2020, a tweak to Germany's system of redistribution from rich to poor states will channel over €400m (\$447m) to Bremen each year, on top of the €700m subsidy it already gets.

Mr Meyer-Heder's likeliest partner in government are the Greens, with the liberal Free Democrats making up the numbers. For his part, Mr Sieling is pushing for a left-wing coalition with the Greens and far-left Die Linke.

That is not the only national resonance. Losing Bremen after seven decades would be a "knife to the heart" of the SPD, says Lothar Probst, a local political scientist. Andrea Nahles, the SPD leader, may struggle to keep her job, especially if the party suffers in the European elections too. Rarely can Bremen have roared so loudly. ■

The alt-right in Europe

Academic controversies

CERTOSA DI TRISULTI

Steve Bannon's new monastery-based academy faces deepening problems

A PLAN BY Steve Bannon, Donald Trump's former chief strategist, to launch an alt-right academy in an Italian monastery now risks being scotched by the authorities. Evidence has emerged that a key document used to secure tenancy of the property was forged.

Mr Bannon is paying the €100,000-a-year (\$111,000) rent on a former Carthusian monastery, the Certosa di Trisulti, in the mountains east of Rome. The property belongs to the state. But in February 2018 Italy's arts and heritage ministry granted a 19-year lease to a Catholic non-profit organisation then based in Rome, the Dignitatis Humanae Institute (DHI), of which Mr Bannon is a trustee. Two official bodies are investigating the concession: the attorney-general's department and the regional auditors' court in Lazio, the region around Rome in which the monastery is situated. An official says the ministry is not ruling out revoking the lease.

Mr Bannon has described the Academy for the Judaeo-Christian West that the institute plans to open at its monastery in the autumn as a "gladiator school for cultural

warriors". Benjamin Harnwell, the director of the DHI, says that his institute will offer a master's course that includes teaching in philosophy, theology, history and economics. Mr Bannon will be personally responsible for additional tuition in the practical aspects of political leadership.

The DHI took over the monastery following a competitive tender. Accompanying the institute's bid was a business plan and a letter endorsing it, apparently provided by the Gibraltar branch of a Danish financial institution, Jyske Bank. But on May 7th *La Repubblica*, an Italian daily, reported a statement by Jyske Bank declaring the letter to be fraudulent. The managing director of Jyske Bank in Gibraltar, Lars Jensen, confirms the statement. "It is a fraudulent letter, put together by I don't know who," he told *The Economist* this week. The signature purported to be that of "a lady who hasn't been in the bank for years. Her role was that of an assistant and in that letter she's a director or something like that. So it is obviously fraudulent," he said.

Mr Harnwell admits that news of the bank's statement "hit me sideways". But Mr Bannon told *The Economist* that "Everything actually is totally legitimate...all of this stuff is just dust being kicked up by the left." The business plan, however, was crucial to the success of DHI's bid, which the ministry assessed using a points system. To qualify for the tender, the Institute needed at least 60 points. It secured 72.6. But of those, 17.8 were awarded for its business plan. So if that plan is ruled invalid because the "letter of certification" from the bank is found to have been forged, the authorities could revoke the lease.

The controversy over the DHI's business plan is only the latest of several blows to the institute in recent months. Since December the DHI's chairman, Luca Volontè, a former Christian Democrat politician, has been on trial in Milan, charged with taking

a €2.4m bribe from private and public sources in Azerbaijan. Mr Volontè was allegedly paid for helping to block criticism of human-rights abuses in Azerbaijan while a member of the parliamentary assembly of the Council of Europe. Mr Volontè denies any wrongdoing.

Mr Harnwell founded the DHI in 2008 and won support from a variety of prominent Catholics. They included conservatives such as Austin Ruse, president of the Centre for Family and Human Rights in America, and liberals like Lord Alton, a British peer and former Liberal Democrat politician. But Mr Harnwell admits that, as Mr Bannon has taken an increasingly visible role, several of his liberal members and officials, including Lord Alton, have quit. The latest to go was a high-ranking Vatican prelate, Cardinal Peter Turkson.

As Mr Harnwell readily agrees, the Institute's stewardship of the Certosa, or Charterhouse, of Trisulti has brought with it daunting responsibilities. Founded in the early 13th century amid woodlands in a part of Italy renowned for its hermits and mystics, abbeys and convents, the complex covers 86,000 square metres—the size of 12 football pitches. It houses a watermill, a herbal pharmacy, an elaborately frescoed church and a topiary maze.

But many of its roofs are in urgent need of repair, and there is water infiltration in several places. The DHI committed itself in its bid to spend an additional €1.9m on restoration. Mr Bannon says that more than the row over the lease, the bigger concern "is making sure I can pull together all the resources needed to restore the monastery to what it should be."

The local authority has presented a further challenge by demanding €86,000 a year in property tax and for waste collection. Mr Bannon remains unfazed by all this. "I couldn't be more excited," he says. More excitement is probably to come. ■



No monkey business here

Charlemagne | The hugs don't work

Cosying up to populists rarely ends well for political moderates



ON A FREEZING morning in Vienna in December 2017, Charlemagne heard a tempting case for what might be called “the hug strategy”. He was drinking coffee with an ally of Sebastian Kurz, the young leader of the centre-right Austrian People’s Party who was hours from a coalition deal with the hard-right Austrian Freedom Party (FPÖ). “He has grown up,” said the Kurz-ite of Heinz-Christian Strache, the FPÖ’s leader, adding that, in any case, Mr Kurz would be able to manage his new ally. Having already edged towards some FPÖ positions and won back some of its supporters, the incoming chancellor would render his coalition partner irrelevant in government and thus contain the hard-right while governing pragmatically. It all sounded very clever.

It proved otherwise. Mr Kurz’s big hug failed to stifle Mr Strache. At recent rallies in the South Tyrol and Linz your columnist watched the vulpine vice-chancellor charge in to the boisterous oomph of Johann Strauss’s Radetzky March before unveiling his latest designs: Austrian passports for German-speakers in northern Italy, mosque closures, an end to the “population replacement” of white Europeans by immigrants. Support for the FPÖ remained high and stable at around 25%. Its ministers undermined the independence of Austria’s state broadcaster and attacked the rights of asylum-seekers. Karin Kneissl, the FPÖ-backed foreign minister, danced with Vladimir Putin at her wedding. Some containment this was turning out to be.

On May 17th it all came crashing down. Two German newspapers published a video secretly filmed in a villa on the Spanish island of Ibiza in the summer of 2017. In it, a woman posing as the niece of a Russian oligarch suggested to Mr Strache that her uncle take over the *Kronen Zeitung*, Austria’s largest newspaper, and use it to pump out pro-FPÖ messages in return for government contracts. The FPÖ leader responded enthusiastically and expressed admiration for how Viktor Orban, Hungary’s authoritarian prime minister, had crushed the independent press in his country. The scandal—dubbed “Ibizagate”—prompted a tearful Mr Strache to announce his resignation and a chastened Mr Kurz to dissolve the alliance. “Enough is enough,” the chancellor said. Yet he had hardly been ignorant of the risks of the coalition from the start. He merely thought he could manage them.

The sorry tale is part of a bigger saga. All over Europe populist nationalists like Mr Strache are challenging moderate politicians, many of whom are adopting a version of the hug strategy by emulating some of the populists’ language and policies, or bringing them into government, or both as in Austria. In Bavaria’s state election campaign last autumn the conservative Christian Social Union tilted right on migration and picked fights with Angela Merkel’s moderate Christian Democrat Union. Ahead of Sweden’s election in September the previously liberal-conservative Moderates lambasted multiculturalism and did deals with the hard-right Sweden Democrats in local government. Spain’s centre-right People’s Party formed a regional government with the nationalist Vox party in January and aped its hardline positions on Catalan autonomy. In subsequent elections the three mainstream parties fell to their lowest results since 1950, 2002 and 1979 respectively.

Elsewhere the cost has, as in Mr Kurz’s case, been less electoral than reputational and ideological. Britain’s Conservatives vanquished the anti-EU United Kingdom Independence Party by appropriating its main policy (Brexit) but are now tearing themselves apart. In Denmark the centre-right Venstre’s rightward shift (allowing police to confiscate jewellery and other valuables from arriving asylum-seekers, for example) and informal collaboration with the hard-right Danish People’s Party has pushed the country’s entire political contest in that direction. Manfred Weber, the centre-right candidate to be president of the European Commission, has long hugged Mr Orban in the hope of moderating him. This has emboldened the Hungarian leader, toxified Mr Weber and may impede him from marshalling the broad mainstream coalition that he needs in the European Parliament after this week’s elections—unless, that is, he relies on votes from the hard-right.

A Faustian embrace

Political scientists who have studied such things could have warned of the dangers. Pontus Odmalm and Eve Hepburn, for example, have used the examples of British, French, Finnish, Danish and Dutch politics from 2002 to 2015 to chart the effects of mainstream parties moving towards populist positions on immigration. Having expected that these shifts would dent support for the populist parties, they found no such effect. Mainstream parties moving right, they hypothesise, may legitimise extreme parties and push them into yet more extreme positions—creating a bidding war that mainstreamers cannot win. This difference applies even if the outsiders are brought into government. Studying the effects of hard-right parties on qualitative measures of transparency, individual liberties, rule of law and minority rights in 30 European countries from 1990 to 2012, Robert Huber and Christian Schimpf showed that the presence of anti-system populists in opposition can be good for democracy, because they act like “drunken guests” at a dinner party and blurt out awkward truths. But they also found that there is “a substantial negative effect on democratic quality” when they enter government. Ibizagate should have come as no surprise to Mr Kurz.

But if this is not enough, Europe’s moderates may be about to get another big dose of evidence. The European Parliament elections will probably see the centre-right bloc, many of whose member parties have pursued some version of the hug strategy, lose more seats than any other group. The right-wingers, some of them emboldened by roles in coalitions at national and regional levels, are expected to be among the main winners. If so, it will be yet more proof that the hugs don’t work. ■



Theresa May

The bitter end

Yet another British prime minister has been destroyed by the European question

THERESA MAY'S premiership has entered its surreal phase. On May 22nd the prime minister dutifully read out the ten points of her revised EU withdrawal bill to the House of Commons. The front bench next to her was half-empty, because several members of her cabinet were holed-up somewhere else discussing what to do next. The benches behind her emptied as she spoke. This was not just a prime minister without authority but a prime minister without an audience.

The rest of the day was consumed with frantic rumours about her imminent resignation. The good news for Mrs May was that the 1922 Committee of backbench Tory MPs put off a decision to change the party's rules in order to allow an immediate leadership challenge. The bad news, delivered an hour or so later, was that Andrea Leadsom, the leader of the House and the person responsible for bringing the withdrawal bill before the Commons, resigned, becoming the 36th minister to leave the government. Mrs May avoided further confrontations with disgruntled colleagues only by retreating to Downing Street and turning away ministers who asked to see her. "The sofa is up against the door, she's

not leaving," remarked Iain Duncan-Smith, a former Tory leader.

It is hard to see how Mrs May can hang on for long, even if she adds the kitchen sink to the sofa. The Conservatives are expecting a drubbing in this week's European election, whose results will be announced on May 27th. Polls put the party in the single figures. Tory MPs from all sides of the party—liberals such as Tom Tugendhat as well as Brexiteers like Steve Baker—are calling for her to go. President Donald Trump may arrive for his state visit on June 3rd to a country without a prime minister.

Mrs May has been under pressure to quit for months. What brought matters to a head this week was her revised withdrawal

bill. In her plodding style, she tried to win over various interest groups by offering something for everyone: strengthened workers' rights to please the Labour left, an option for MPs to vote for a second referendum to entice Remainers. She ended up alienating them all. The Tory party's Brexit wing erupted at the mention of a second referendum; Brexiteer ministers claim that Mrs May "exceeded what was agreed in cabinet". As we went to press, Downing Street was still promising to bring forward the withdrawal bill on June 7th. If it does, it will go down to an even bigger defeat than last time. Even former converts such as Boris Johnson and Dominic Raab have said that they will vote against.

How did the Conservative Party—an outfit that prides itself on its age, wisdom and ruthless appetite for power—get into such a mess? The British establishment has always been ambivalent about the European project, partly because it was on the winning side in the second world war and partly because it has historically seen Britain as a global power, not a continental one. That ambivalence curdled into hatred in some sections of the Tory party as the EU acquired more of the trappings of a state.

The Brexit referendum of 2016 created a poisonous clash between direct and representative democracy. The Tories' Brexit wing, convinced that it had the "will of the people" on its side, kept demanding an ever-purer version of Brexit. Those who lean towards Remain refused to vote for a hard Brexit that they thought would impoverish their constituents. As Mrs May's hold on power has weakened, so has her ►►

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▶ ability to enforce a compromise.

There is also a subtler reason. British politics still has not recovered from the financial crisis of 2008-09, and the blow that it dealt to the country's globalised, light-regulation model of capitalism. The crisis not only led to a prolonged period of wage stagnation. It also stoked popular demand to "take back control" from the forces that had dominated the economy over the previous decades. The rise of the Labour left, under Jeremy Corbyn, was driven by a demand to discipline global companies that trample on local communities (Mr Corbyn spent much of prime minister's question time this week lambasting Mrs May for the closure of British Steel). The rise of the nationalist right, most recently in the form of the Brexit Party, is propelled by a desire to insulate Britain from global uncertainty, particularly when it comes to immigration.

The Conservatives are profoundly divided over what to do about this crisis. Broadly speaking, the right of the party wants to complete the Thatcher revolution by deregulating markets still further and slashing taxes. For them, leaving the EU is a prerequisite to turning Britain into an offshore Singapore. The left of the party, meanwhile, wants to return to the One Nation tradition that believes in a more active role for the state and in reining back the excesses of capitalism.

Mrs May has proved to be just the wrong person to help the party out of this crisis. She has some of the right instincts—realising two years ago, for instance, that the government needed to increase its majority to avoid being held prisoner by clashing Tory factions, and that it had to deal with the unhappiness that led to Brexit. But she lacked the ability to make these things happen. She is an introvert who dislikes the rough-and-tumble of politics and who tries to run everything through a tiny group of advisers. When she was in her pomp she tried to exclude Parliament from having any say over the Brexit deal.

The race to succeed her is already approaching a full gallop. It is a measure of how big a mess the party is in that some 20 MPs have signalled that they are running, offering a bewildering range of policies. The favourite is Mr Johnson (see Bagehot).

It is still unclear what will happen when Mrs May does indeed resign—whether she will stay on while a successor is chosen, when the contest will conclude, and whether her successor will feel obliged to call a general election. But one thing is clear. For all Mrs May's many failings as a politician, she was also the victim of powerful forces that show no sign of abating. ■

Award: *The Economist's* Open Future initiative was named editorial campaign of the year at the British Media Awards this week. Read more about it at Economist.com/openfuture



The Brexit Party

Social climbers

The new Eurosceptic group cleans up in the battle for likes and shares

"THEY LIED to you," goads a video on Facebook, as news footage shows Remainers first vowing to respect the Brexit referendum's results, then calling for a second vote. The clip, set to a pulsing soundtrack, has been watched 250,000 times. "Teach the establishment a lesson this Thursday," it concludes: "Vote for the Brexit Party." Polls suggested that more than 30% of voters would do so in Britain's election to the European Parliament on May 23rd (results will be announced on May 27th). That would put Nigel Farage's new outfit in first place, winning perhaps 30 of Britain's 73 seats in Strasbourg.

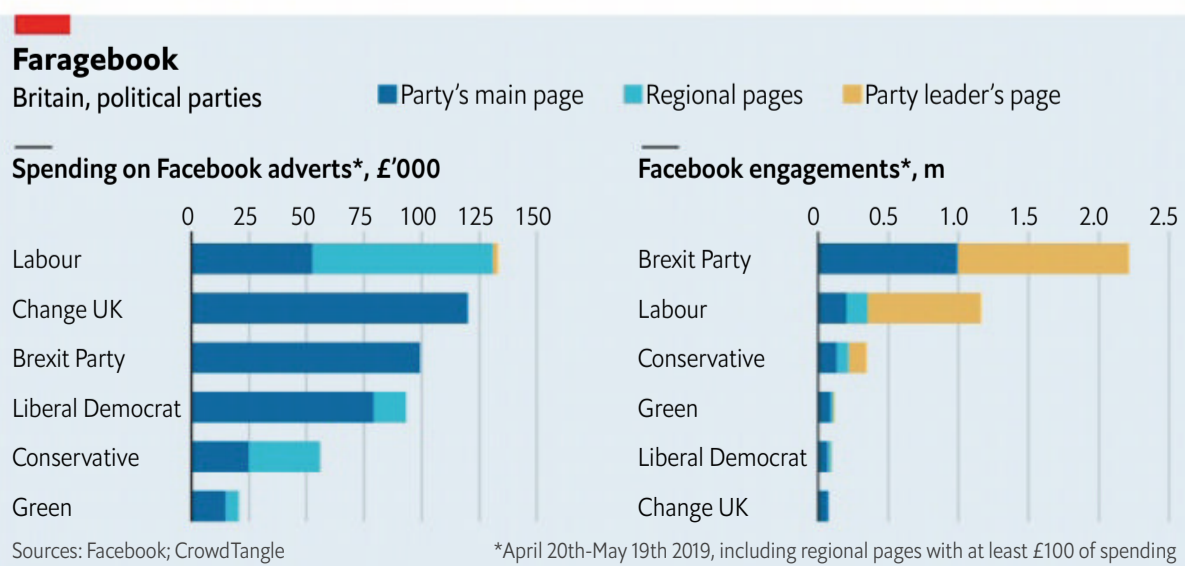
However the Brexit Party fares at the ballot box, it has won the battle for clicks. It has spent no more than most of its rivals on

Facebook ads in the past month. But it has got dramatically better results (see charts). The party's Facebook pages have attracted 2.2m likes, shares and comments, more than all the other parties combined, and some 30 times more than Change UK, a pro-Remain upstart which outspent it.

Its focus on digital strategy is a legacy of the Vote Leave campaign, which spent 98% of its marketing budget online. Some £2.7m (\$3.4m) of Vote Leave's £7m allowance was paid to AggregatIQ, a data-mining firm linked to the now-defunct Cambridge Analytica. The Brexit Party has canny youngsters, such as Steven Edington, its 19-year-old digital strategist, running its social-media feeds. Facebook's algorithm rewards videos, especially those streamed live from events. The Brexit Party has posted more than any other page, including broadcasts of rallies in Wolverhampton, Durham and Newport. Its punchier clips are also popular on Twitter.

It benefits from having a clear message, something both Labour and the Tories lack. Just as Vote Leave identified immigration and health as vote-winning subjects, the Brexit Party has alighted on the theme of democracy and its supposed betrayal. "This isn't about left or right. It's about right and wrong," reads one post. "Democracy comes before party politics," declares another.

Who is paying for all these ads? After the referendum, the Electoral Commission found that Vote Leave broke the £7m cap by giving £675,000 to BeLeave, a youth group. Questions now hang over the Brexit Party's finances. The commission is looking into whether any of its income has come via (prohibited) foreign donations of more than £500, which the party denies. Meanwhile the European Parliament is pursuing a complaint that Mr Farage, an MEP, failed to declare a personal gift of £450,000 from Arron Banks, a businessman whom the National Crime Agency is investigating for soliciting foreign money for Leave.EU, another pro-Brexit group (Mr Banks denies it). These are worrying allegations—which Leave-supporters who get their news from Facebook may never read about. ■



Bagehot | Double or nothing

Choosing Boris Johnson as Conservative leader—and prime minister—would be a dangerous gamble



THE CONSERVATIVE PARTY has a long history of making big bets on mavericks whenever it thinks its back is against the wall. Before they won the party leadership, three of the greatest Tory prime ministers were cordially loathed by their party. Margaret Thatcher was regarded as a polarising ideologue who lacked the ability to connect with voters or command Parliament. Winston Churchill was a boozy bloviator and serial bungler, launching the Dardanelles campaign and clinging to the gold standard. Benjamin Disraeli was a flashy outsider who had no achievements to his name other than undermining Robert Peel over the Corn Laws. The Tories punted on all three and won big.

It looks as if the party is about to gamble again, on Boris Johnson. The former foreign secretary is the overwhelming favourite among party members, who elect the leader. His only obstacle is persuading enough of his fellow Conservative MPs to put him on the shortlist of two. So far they have been sceptical. The charge sheet against Mr Johnson is a long one: a chaotic private life, a habit of bending facts, a lack of focus and discipline, and being what Sir Max Hastings, a former editor of the Conservative house journal, the *Daily Telegraph*, calls a “gold-plated egomaniac”.

But the party is in a full-blown panic. It is likely to come a poor fourth in this week’s European election, thanks to the rise of Nigel Farage’s Brexit Party and the implosion of Theresa May’s premiership. If the split on the right continues, it will put Labour’s far-left Jeremy Corbyn in Downing Street. What’s more, for all Mr Johnson’s faults, he is a genuine political star, one of a handful of politicians who are known internationally by their first name (if not always for the right reasons). Because of his leading role in Brexit he no longer has the ability to reach out to the cosmopolitan liberals who gave him two terms as mayor of London. But he nevertheless has a rare ability to light up a room. Mrs May was a grand miserator who made everybody around her feel rotten. Mr Johnson is a booming cheerleader who makes people feel good about themselves. Who better to reclaim wavering Tories from Mr Farage’s Brexit army? And who better to lead the charge against Mr Corbyn’s Leninist-Lennonist troops?

More thoughtful Conservatives wonder if Mr Johnson might be the ideal vehicle for absorbing and civilising the populist furies

that threaten to take the country to a dark place. The Tories have an admirable record of co-opting social movements that destroyed similar parties in other countries, such as the clamour for democracy in the late 19th century and the creation of a welfare state after the second world war. Mr Johnson may represent a chance to do the same with populism. He insists that Brexit is at its heart a liberal rather than a populist project, which will open Britain to the world rather than keeping it imprisoned in Fortress Europe. He enthusiastically supports a credo issued by the newly formed One Nation Group of 60 moderate Tory MPs. So it is easy to see why Tories are contemplating taking a punt. Surely a flash of genius is better than mediocrity, even if it is part of a combustible mixture? And surely the fact that three big bets in the past paid off handsomely suggests that it is worth making another one?

The problem with this is that winning streaks eventually fail, and charismatic mavericks can produce disasters as well as triumphs. Before making their bet, Conservatives need to think hard about three big questions.

First: can Mr Johnson really negotiate a better deal with the European Union than Mrs May? Mr Johnson blithely argues that the EU, in a sinister alliance with Remainers in the British establishment, has inflated problems such as the Irish border out of all proportion. He suggests that he will be able to renegotiate Britain’s exit deal with a combination of threat (keeping no-deal on the table) and charm. This is unlikely, not just because the EU heartily dislikes a man who made his journalistic career mocking their precious project, but also because it recognises that it can’t concede too much to Britain without threatening the integrity of the union. Making Mr Johnson prime minister significantly increases the chances of a no-deal Brexit that would severely disrupt the economy and alienate voters.

Second: can Mr Johnson run a government? The Conservatives will be electing not just a party leader but a sitting prime minister. The fate of a country of 66m people, in the middle of one of its most difficult passages since the second world war, will be determined by 124,000 party members. Mr Johnson’s record is not encouraging. He was a reasonably popular mayor but a dreadful foreign secretary. Although he is given to bumbling chaos, he does have a talent for delegation. A new girlfriend has helped to clean up his act: he has cut his hair, lost weight and taken up yoga. But Mr Johnson has never shown any sign that he is capable of dealing with the two things that define modern government: a relentless torrent of work and a demand to make complicated trade-offs.

Third: can he hold the United Kingdom together? The link with Scotland is already looser than it has been for decades. There are very few Scots in the upper ranks of Britain’s two main parties. England and Scotland backed opposing sides in the Brexit referendum. A Prime Minister Johnson might snap the link entirely, with his air of Eton-Balliol-*Telegraph* entitlement and his Bertie Woosterish mannerisms. Among Scottish voters he is even less popular than the hapless Mrs May.

A roll of the dice

Perhaps Mr Johnson is exactly the lightning-in-a-bottle that the Conservative Party needs to restore its fortunes as both a campaigning machine and a governing force. But the price of getting things wrong would be extraordinarily steep. A no-deal Brexit, the break-up of the UK, a Marxist in Downing Street—it is a long time indeed since the stakes have been so high and the chances of getting it right so low. ■



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Global warming

How climate change can fuel wars

BAGA SOLA, CHAD, BAMAKO, MALI AND THE HAGUE

Droughts are already making conflict more likely. As the world gets hotter, mayhem could spread

ON THE OUTSKIRTS of Baga Sola, a small town in Chad not far from the border with Nigeria, is a refugee camp called Dar es Salaam. The name means “haven of peace”, but the surrounding area is an inferno of war, spilling across the borders of four countries: Chad, Nigeria, Niger and Cameroon. Some 2.4m people have been forced to flee the fighting.

The most obvious cause of their suffering is ideological. The jihadists of Boko Haram want to establish a caliphate, snuffing out such sins as Western-style education and imposing a harsh form of sharia (Islamic law) as the sole system of government. To this end, they torch villages, behead aid-workers and enslave or strap bombs to young girls.

Religious extremism is not the war’s only fuel. Poverty is another. Boko Haram would find it harder to recruit footsoldiers if hungry young men did not see picking up a rifle as an attractive career move, leading as it does to opportunities for pillage. An-

other factor is oppressive, ineffectual government, which gives locals little to cheer about and plenty of grievances against which to fight. All four countries are cursed with predatory, incompetent officials and security forces. But in addition to all these long-standing ills is an aggravating factor created far away, in industrialised countries: climate change.

Fifty years ago the Dar es Salaam camp would have been under several metres of water. In the 1960s Lake Chad was the sixth-largest freshwater lake in the world, an oasis and commercial hub in the arid Sahel. Water and fertile lands were shared by farmers, herders and fisherfolk alike.

The vast lake has shrunk from 25,000 square km to half that area today (see satellite picture on next page). In the camp, which the UNHCR (the UN’s refugee agency) helps run, over 12,000 men, women and children huddle in any shade they can find from heat that often reaches 45°C. The camp has no guard towers or walls. Boko

Haram fighters are only a few miles away. A tangle of torn tarpaulins and human debris is scattered across the desert. For miles around, baked white sand is dotted with sparse, scraggy trees bristling with inch-long thorns. The sole signs of life are camels pecking at the dry vegetation.

Al-Haj Adam Ibrahim arrived with his family this year. Boko Haram many times attacked his home in Doron Baga, in Borno state, Nigeria, and the neighbouring market town, Baga. In 2013, 185 people were reported to have been killed in Baga; over 2,000 houses were torched. In 2015 Amnesty International released satellite photographs showing how both towns were nearly wiped off the map by an attack in which thousands were massacred. Jihadists went from house to house, shooting men of fighting age and rounding up old people, women and children.

As Mr Ibrahim sees it, the violence was a consequence of the drought. He remembers when the lake stretched over the horizon. “Before the lake began to shrink everything was going normally,” he says. “And now, nothing. We cannot get food to eat.” As the lake receded, people moved towards it, plagued by swarms of tsetse flies. Herdspeople, farmers and fisherfolk competed for access to the shrunken supply of water. Mr Ibrahim had to walk farther and farther to get to the fishing grounds.

Mr Ibrahim is not the only one to see a ►►

▶ link between climate and war. Globally, the proportion of people who die violently has been falling for decades, as poverty has tumbled and wars between states have become rarer. But many fret that climate change will be so disruptive that it will make future conflicts more likely. Some fear that as the Arctic sea-ice melts, Russia, China and America will scramble for the sea lanes that will open up and the minerals that may lie beneath. Others worry that, as temperatures rise, thirsty countries such as India and Pakistan or Egypt and Ethiopia will fight over rivers they share with their neighbours.

However, the most immediate threat is of civil wars, not inter-state ones, and one of the most vulnerable regions is the Sahel, an arid strip below the Sahara desert. Here, the roots of many conflicts lie in competition over dwindling fertile land.

In Mali, for example, struggles over resources between farmers and herders as the population rises have escalated into ethnic cleansing. Mahamadou Souleymane, a Fulani herder, fled his village last year when militiamen from the Dogon ethnic group attacked. “They were our friends from our great, great grandfathers,” says Mr Souleymane. But one day last year, they came with automatic rifles and machetes. “They cut off hands, arms and penises, and took them away.” They told the villagers that if they did not leave, “no one will survive. We will kill everyone.” So “we ran into the bush,” recalls Mr Souleymane.

Green campaigners and eager headline-writers sometimes oversimplify the link between global warming and war. It is never the sole cause. But several studies suggest that, by increasing the frequency and intensity of extreme weather events, including floods and droughts, it makes conflict likelier than it would otherwise be. In a meta-analysis carried out in the early 2010s, Solomon Hsiang, then at Princeton University, and Marshall Burke, then at the University of California, Berkeley, found “strong support” for a causal link between climate change and conflict (encompassing everything from interpersonal to large-scale violence). They even tried to quantify the relationship, claiming that each rise in temperature or extreme rainfall by one standard variation increased the frequency of interpersonal violence by 4% and intergroup conflict by 14%.

History offers several examples of climate change appearing to foment mayhem. An examination of Chinese records spanning a millennium found that the vast majority of violent eras were preceded by bouts of cooler weather. The team behind the study argues that lower temperatures reduced agricultural production, provoking fights over land and food.

Some see the recent civil war in Sudan’s Darfur region as the first modern climate-

change conflict. In 2007 the UN Environment Programme argued that desertification and dwindling rainfall had made supplies of food and water less secure, which may have helped spark the rebellion that Sudan’s government put down with a campaign of genocide and mass rape.

However, just as one can never be sure that any individual hurricane would not have happened without global warming, one can never prove that a given war would not have occurred without it. Environmental forces interact in unpredictable ways with human greed, opportunism and cruelty—and sometimes with mankind’s better angels, too. And the environmental forces themselves are complex.

Consider Syria. Between 2012 and 2015 three academic papers argued that climate change had been a catalyst or even a primary driver of the civil war. Headlines blamed it for the waves of refugees reaching Europe. The argument was that human emissions had caused or exacerbated a severe drought in Syria in the late 2000s that triggered mass migration from farmland into cities, contributing to tensions which ultimately led to war.

The headlines were too simplistic, as headlines often are. Climate modelling led by Colin Kelley, then at the University of California in Santa Barbara, estimated that greenhouse-gas emissions made the drought twice as likely. That is significant, but need not mean that in the absence of climate change, there would have been no drought and no war. Syrians had many reasons to revolt against their ruler, Bashar al-Assad, a despot from a religious minority who enforced his rule with mass torture.

The conflict around Lake Chad is also a tangled tale. Its roots can be traced back to a deadly drought in the 1970s and 1980s. Many have blamed that drought on industrial emissions of greenhouse gases. But climate models suggest they did not in fact play a big role in the drought. The recurrent failure of monsoon rains was caused by cooler temperatures in the north Atlantic, which pushed the rains too far south. The cooling was itself caused by a mixture of natural and human factors, notably air pollution above the ocean—a striking remind-

er that greenhouse-gas emissions are not the only way in which human activity may alter the climate.

A report published this month by Adelphi, a Berlin-based think-tank, shows that Lake Chad is no longer shrinking. Its authors examined 20 years of satellite data and found that the southern pool was stable for the duration. The northern pool is still shrinking slightly, but total water storage in the area is increasing, as 80% of the water is held in a subterranean aquifer, which is being replenished, as is moisture in the soil, as the rains have returned.

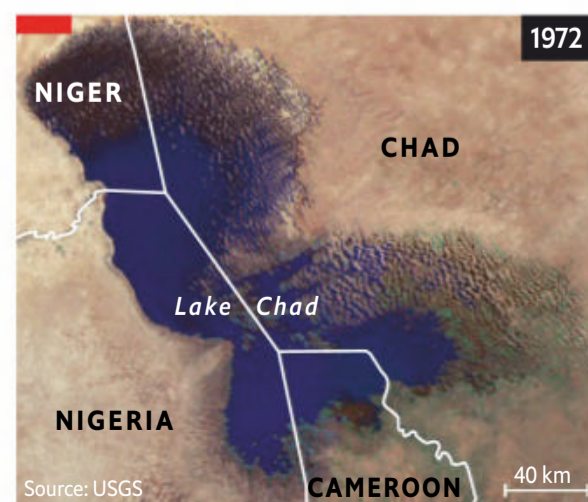
This has big implications for plans to alleviate tension in the region, says Janani Vivekananda, who led the research. Earlier this year government ministers dusted off a decades-old proposal to divert billions of cubic metres of water from tributaries of the Congo River, down a 2,400km canal and into the Lake Chad basin. The latest findings suggest this would do little good, at enormous cost.

Things fall apart

Despite all these caveats, climate change clearly can play a part in fostering conflict. The Sahel is warming 1.5 times faster than the global average, owing to greenhouse-gas emissions. In future, most models suggest, it will experience more extreme and less predictable rains over shorter seasons. In a region where most people still grow or rear their own food, that could make millions desperate and restless.

Traditional systems for sharing resources can break down if farmers suddenly have to adapt to different growing seasons or herders need to move their cattle at different times. Around Lake Chad, people are concentrated in a much smaller area than before, says Fode Baba Condé, who leads the UNHCR’s mission on the Chadian side of the lake, including the camp at Dar es Salaam. Many confrontations between farmers and herders result, he says. Cattle that used to wallow in the lake can now die for lack of water; those that survive may trample farmland.

Yusfa Issa, a 60-year-old, came to Dar es Salaam camp from Brasserie, a Chadian village of farmers and fisherfolk. He laments ▶



▶ the old days, when people would share food. “Now people won’t give you a potato, onion or cassava...There is nothing left.” His village is just 10-15km away, but too dangerous to go back to, he says.

Climate models predict that, as global average temperatures rise, dry regions will get drier and wet regions will get wetter, with more extremes and greater variability. Poverty makes it harder for farmers to adapt. Trying something new is always risky—and potentially catastrophic for those with no savings to fall back on. In conflict zones, farmers who once had the means to plant several different crops may only be able to plant one. They end up with all their seeds in one basket. On the shores of Lake Chad, violent clashes between government forces and armed opposition groups have created zones that are off-limits to civilians, says Chitra Nagarajan, a researcher for the Adelphi report, who spent two years conducting surveys in all four littoral countries.

Conflict and environmental change disproportionately bring suffering to women. “We are seeing high levels of divorce, high levels of domestic abuse,” says Ms Nagarajan. “Men are migrating, leaving the women to fend for themselves.”

The x factor

Conflict itself makes the poor even poorer, and more vulnerable to the vagaries of a changing climate. Fearing murder, pastoralists cannot take their herds to places with water and vegetation. The UNHCR’s Mr Condé says that fishermen can no longer go into the deep lake to fish. Government troops block them, and Boko Haram is still on the prowl. Fighters steal farmers’ crops. All the farmers can harvest is wood, which they sell as fuel. In a bitter twist, doing so accelerates desertification, further degrading the land.

Climate change makes conflict more likely but not inevitable. The Sahelian drought of the 1970s and 80s was felt across the region, but the violence began and has been most intense in a particularly ill-governed part of Nigeria. Likewise, the drought that preceded the Syrian civil war also affected Jordan, Lebanon and Cyprus, none of which imploded. Lebanon took in 1.5m refugees with barely a complaint.

The Adelphi report confirms that the Lake Chad conflict had many causes besides climate variability, including bad governance, corruption, rising inequality and religious extremism. Similarly, the origins of Syria’s war are complex. It was a revolt against a blood-drenched tyrant who had recently slashed fuel and fertiliser subsidies. But, as Charles Iceland of the World Resources Institute (WRI), a research organisation, points out, a horrible drought preceded the outbreak of hostilities, and “it isn’t logical to say that it contributed less

tension or the tension stayed the same.”

The question is in what circumstances environmental stresses can tip a precarious peace into violence, and how to respond. Governance can make the difference. Badly governed or poor countries find it harder to cope with climate change, especially when, as often, they have weak institutions. The Netherlands and Bangladesh both face similar environmental challenges: low-lying coastlines and frequent floods which will become more frequent and more extreme as sea-levels rise. The Netherlands has the political, technological and financial means to cope; much poorer, Bangladesh may not. No sensible person expects a Dutch civil war because of climate change; in Bangladesh, the risk of such a conflict is not trivial.

Aaron Wolf of Oregon State University and his collaborators have catalogued



More light than shade

2,606 instances of international conflict and co-operation over water between 1948 and 2008. In 70% of cases, countries co-operate. The biggest risk of conflict comes when an upstream country builds infrastructure, such as a dam, without an agreement on how to soften the downstream impact. Many of these dams are built because climate change is making water scarcer, or because of a move away from fossil fuels towards hydropower—ie, a secondary link to climate change.

Mr Wolf says that conflict is most likely when the change outpaces institutional capacity to adapt: “The problem is not the dam but the dam plus the absence of an agreement for how to deal with it.” At a meeting this year of the Planetary Security Initiative, a consortium of think-tanks, delegates from Mali gave their own illustration of this, drawing on the degradation of

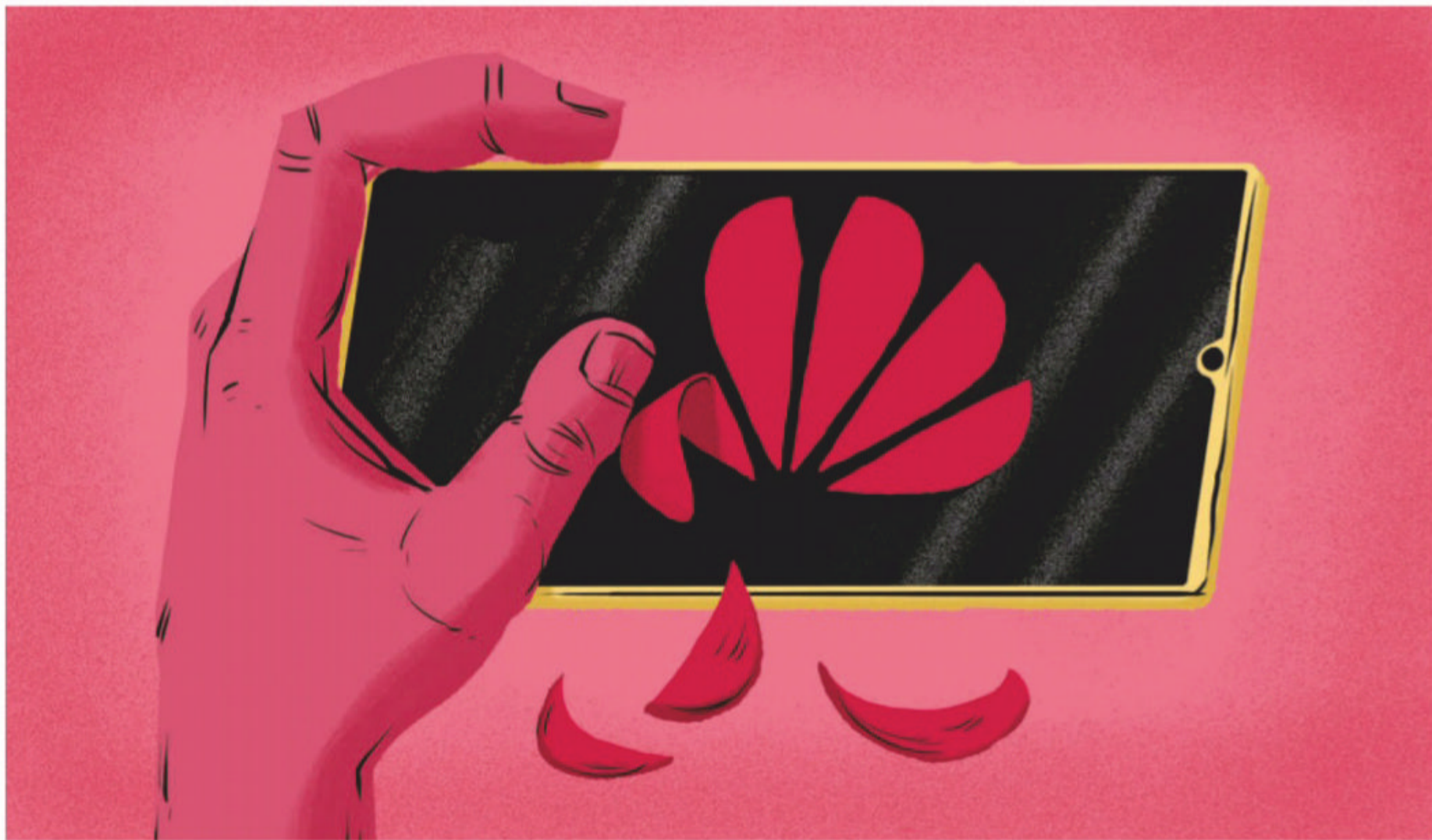
the Inner Niger Delta whose waters support farmers, pastoralists and fisherfolk. Ancestral agreements had created a system of shared commons. “Before, there were traditional mechanisms, a calendar that everyone respected. When the farmer was done, the pastoralist could bring his animals to graze the same land,” said Diallo Tata Touré, president of a commune in the delta. But as the supply of water to the delta has been depleted by irrigation upstream, these pacts have disintegrated, fuelling outbreaks of violence.

Another dam thing

“Pastoralists enter the delta earlier because their animals are hungry. They cross farms and fish-nurseries. The different groups are in conflict where before there was peace,” said Karounga Keita, a Malian economist, at the meeting. “All this is because the flooding area is reduced by dams and irrigation upstream.” There is concern that the proposed \$280m Fomi dam upstream of the delta in the Guinean highlands will make matters worse. Conflicts between agriculturalists have existed for centuries, says Seydou Doumbia, a Malian official, but have never resulted in a security crisis. “Not until now.”

Mr Iceland and his colleagues at the WRI, in collaboration with nine other organisations, are working on a predictive tool for future conflicts, with a focus on water stress. The team has fed large historical data sets of risk factors for conflict (social, economic, demographic and geographic), in addition to a number of water indicators (precipitation, groundwater availability, length and severity of droughts) to machine-learning software to generate a model that predicts the probability of conflicts. In October 2018, WRI’s Manish Bapna presented preliminary results to the UN Security Council. Using data from 2016, the model was able to predict instances of water conflict in 2017 with 83% accuracy.

Academics may squabble about the specific causes of past conflicts, and develop complex models to forecast future ones. But there is consensus that tensions, and so the potential for bloodshed, will be heightened by climate change. And conflict, in turn, makes it harder to prepare for or respond to climate change. How to save for a rainy (or dry) day if men with guns keep stealing your savings or burning down your grain stores? Saleh Isaka, a Chadian village elder, remembers when his people used to graze thousands of animals on land where the Dar es Salaam camp now stands. Three years ago, Boko Haram attacked. They were armed with automatic weapons and they stole away all the animals, as well as women and children. “Now we are suffering. It’s hotter than before... Everything is dead,” Mr Isaka says, gesturing into the bone-dry distance. ■



Technology wars

Inglorious isolation

HONG KONG

An American export ban will be excruciating for China's biggest tech firm

AMERICA IS NO fan of Huawei. Its officials have spent months warning that the Chinese giant's smartphones and networking gear could be Trojan horses for Chinese spies (something Huawei has repeatedly denied). They have threatened to withhold intelligence from any ally that allows the firm in. On May 15th they raised the stakes. President Donald Trump barred American firms from using telecoms equipment made by firms posing a "risk to national security". His order named no names. But its target was plain.

For all the drama, the import ban hardly matters. Huawei has long been barred from America, in practice if not on paper. More significant was the announcement by the Commerce Department, on the same day, that it was adding Huawei to a list of firms with which American companies cannot do business without official permission. That amounts to a prohibition on exports of American technology to Huawei.

It is a seismic decision, for no technology firm is an island. Supply chains are highly specialised and globally connected.

Cutting them off—"weaponising interdependence", in the jargon—can cause serious disruption. When ZTE, another Chinese technology company, received the same treatment in 2018 for violating American sanctions on Iran, it was brought to the brink of ruin. It survived only because Mr Trump intervened, claiming it was a favour to Xi Jinping, China's president.

Huawei matters more than ZTE. It is China's biggest high-tech company, and is

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seen as a national champion. Its name translates roughly as "Chinese achievement". Revenues of \$105bn put it in the same league as Microsoft. Only Samsung, a South Korean firm, sells more smartphones. Huawei holds many crucial patents on superfast 5G mobile networks, and is the largest manufacturer of telecoms equipment. Were it to go under, the shock waves would rattle all of tech world.

By May 20th the impact of the ban was becoming clear. Google said it had stopped supplying the proprietary components of its Android mobile operating system to Huawei. A string of American chipmakers, including Intel, Qualcomm and Micron, have also ceased sales. Later that day the Commerce Department softened its line slightly, saying that firms could continue to supply Huawei for 90 days, but for existing products—for instance, with software updates for Huawei phones already in use. New sales, on which Huawei's future revenue depends, remain banned.

Interdependence, of course, cuts both ways (see chart on next page). Shares in American technology firms fell after the announcement, because Huawei is a big customer. Qorvo, which employs 8,600 people and makes wireless communication chips, derives 15% of its revenue from Huawei. Micron is in the memory business, of which Huawei is a big consumer. A report from the Information Technology & Innovation Foundation, a think-tank, also released on May 20th, guessed export con- ▶▶

► trols could cost American firms up to \$56bn in lost sales over five years.

Unlike Intel, Qualcomm or ZTE, Huawei is privately owned, so lacks listed shares whose price swing would hint at the extent of its distress—though the price of its listed bonds has dropped to 94 cents on the dollar. In public, the firm is staying calm. Ren Zhengfei, Huawei's founder, said it would be "fine" without access to American technology. Huawei has spoken of activating a "Plan B" designed to keep it in business despite American sanctions. It has been stockpiling crucial components for months, and has made a conscious push to become less reliant on American technology over the past few years. Its phones in particular make extensive use of chips designed by HiSilicon, its in-house chip-design unit.

Yet few analysts are as sanguine as Mr Ren. Three business areas in particular look vulnerable. Without Google's co-operation, new Huawei phones will lack the latest versions of Android, and popular apps such as Gmail or Maps. That may not matter in China, where Google's apps are forbidden. But it could be crippling in Europe, Huawei's second-biggest market. Its telecoms business needs beefy server chips from Intel. The supply of software to manage those networks could dry up too. Huawei is developing replacements for all three, but they are far from ready.

Two questions will determine whether or not Huawei can weather the storm, says Dieter Ernst, a chip expert and China-watcher at the East-West Centre, a think-tank in Honolulu. The first concerns America's motives. The timing of the ban, a few days after broader trade talks between China and America had broken down, was suggestive. On one reading, it is a tactical move designed to wring concessions from China. If so, it might prove short-lived, and Huawei's stockpiles may tide it over.

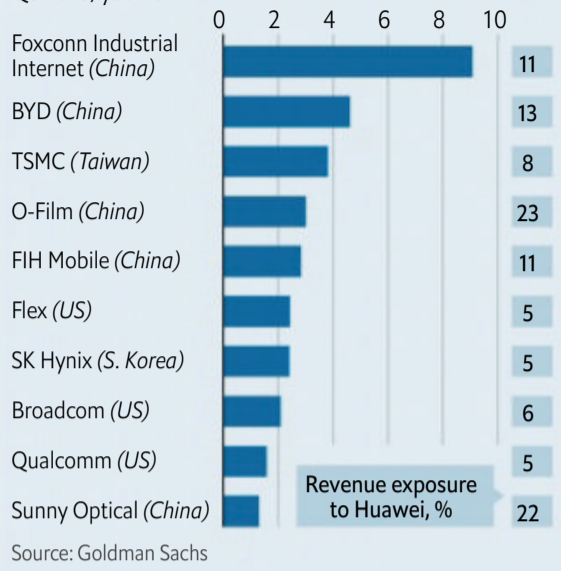
Paul Triolo of Eurasia Group, a political-risk consultancy, is doubtful. Rather than a negotiating tactic, he sees the ban as "the logical end-game of the US campaign to take down Huawei". A long-lasting ban would force the firm to look for alternative chips and software that Chinese suppliers would struggle to provide.

The second question concerns the reach of American power. The tangled nature of chip-industry supply chains, says Mr Ernst, means that many non-American companies make use of American parts or intellectual property. They may therefore consider themselves covered, wholly or partially, by the ban. Take Arm, a Britain-based firm whose technology powers chips in virtually every phone in the world, including those made by HiSilicon. Arm says that it will comply with the Commerce Department's rules. That suggests that Arm will not grant Huawei new licences. It is

Blocked chain

Huawei, top suppliers by revenue

Q3 2018, yuan bn



unclear if Arm will offer support for existing licences, however. As Arm's technology advances, Huawei risks being left behind.

Other non-American companies are as important. One industry insider with contacts in Taiwan says that American officials are pressing Taiwan Semiconductor Manu-

facturing Company (TSMC), a big and cutting-edge chipmaker, to drop Huawei, which is its third-biggest customer. That would be a crushing blow, for Chinese chip factories are not up to the task of manufacturing HiSilicon's sophisticated designs. TSMC's only peer is Samsung—and South Korea is another of America's allies. TSMC said on May 23rd that it would continue supplying Huawei for now.

Even if the optimists are right, and the ban is lifted in exchange for trade concessions, a return to business as usual seems unlikely. America has twice demonstrated a willingness to throttle big Chinese companies. Trust in American technology firms has been eroded, says Mr Triolo. China has already committed billions of dollars to efforts to boost its domestic capabilities in chipmaking and technology. For its rulers, America's bans highlight the urgency of that policy. Catching up will not be easy, believes Mr Ernst, for chips and software are the most complicated products that humans make. But, he says, if you talk to people in China's tech industry they all say the same thing: "We no longer have any other option." ■

Technology deals

Acquired taste

BEIJING

Western firms increasingly admire—and covet—Chinese technology

IT IS A charge that American hawks love to level at China: that its companies, through fair means and foul, are after the crown jewels of American technology. Despite years of efforts to manufacture its own computer chips, the Asian giant still spends more on importing them than it does on crude oil. Politicians and companies in the West constantly grumble about Chinese rivals pilfering their intellectual property. So the idea that Chinese firms have some technology gems of their own to offer may seem fanciful.

In fact, Western technology firms increasingly fancy Chinese tech. In some cases, they are buying Chinese rivals outright—with the acquiescence of authorities in Beijing. Those working on such acquisitions date the phenomenon back to 2016. Most deals are small and involve niche industries: makers of the power-trains and sensors for electric vehicles, or agencies managing social-media influencers. But the trend has taken root, even as animosity between the United States and China has escalated (see previous article). American officials have been treating technology bosses to classified briefings on the

dangers of doing business in China.

Those who operate there see things differently. For the first time last year, in an annual poll by the EU Chamber of Commerce in China, a majority of foreign companies (61%) said that domestic firms were as innovative as European ones, or more so. This year four-fifths of them saw opportunities in Chinese sparkiness.

Three main motivations have historically driven Westerners to purchase Chinese companies. They wanted to gain market share in China, bolster their local distribution networks and get their hands on makers of lower-tech goods. Today, acquiring a Chinese startup can help some foreign firms gain an edge. Takeover targets have their own research teams, patents, clients and, sometimes, lavish state subsidies. For Chinese founders, the interest has been a boon as domestic sources of fundraising have dried up.

In some cases the technology is hard to find elsewhere. In 2017 Faurecia, a French firm that is the world's leading supplier of vehicle interiors, acquired Jiangxi Coagent Electronics, which develops human-machine interfaces. A person with knowl- ►►

edge of the deal says that Faurecia had been looking worldwide for a year before coming to China and spotting Jiangxi Coagent. “Faurecia said, ‘Wow,’” he says, and made the Chinese technology the core of its offer.

The enthusiasm extends to artificial intelligence (AI), medical technology, cloud computing and, yes, even chips. Jim McGregor of Tirias Research, an American technology consultancy, discerns “tremendous interest on both sides of the ocean” in semiconductor and software acquisitions. Among the most prominent recently was one last July of DeePhi Tech, a machine-learning startup in Beijing, by Xilinx, an American chipmaker, for an undisclosed amount. DeePhi, which had developed software for Xilinx’s chips, was a young business at the time, but had raised close to \$300m within 19 months of its founding. When Xilinx announced the deal, it described DeePhi’s capabilities as “industry-leading”.

All told, American technology companies have invested \$1bn in Chinese ones since the start of last year, according to Dealogic, a data provider. Chinese tech firms poured nearly four times as much, \$3.8bn, into those in America. But high-profile investments signal the mood. In 2016 Apple put \$1bn into Didi Chuxing, a ride-hailing giant, and Microsoft took a stake in Laiye, an “AI butler” that handles voice commands through an app. Intel has taken stakes in several startups, including, in 2018, a cloud-services provider and, this year, a firm that builds software for cashierless stores.

In 2018 Alphabet, Google’s parent company, paid \$550m for a stake of less than 1% in JD.com, an e-commerce giant. Nvidia, an American maker of AI chips, has invested in WeRide.ai, a Chinese leader in self-driving tech, and TuSimple, an autonomous-lorry startup. Last year Intuitive Surgical, the world’s largest surgical robotics company, took a stake in Broncus, a Chinese startup—chiefly, says Nisa Leung of Qiming Venture Partners, an investor in Broncus, for technology to help perform advanced lung surgery. Last week Reuters reported that Facebook was considering minority stakes in Chinese firms.

China has blocked only one foreign acquisition in the past decade—Coca-Cola’s \$2.4bn bid for Huiyuan Juice, a drinks giant, in 2009. Last year the “negative list” of areas where investments are restricted shrank from 63 to 48 industries. Chinese regulators surprised many by not reviewing the purchase of DeePhi, despite how strategic its technology could prove—or how easy it is to classify as defence-related and thus untouchable. Without trade tensions and the technological cold war, deals would multiply. That they now might not will delight America’s spooks. Its companies, less so. ■



Quinoa

Seed bump

Big Agribusiness wants to make the Andean grain more mainstream

AMID GROWING appetite in the West for a healthy food, the UN declared 2013 the International Year of Quinoa. Exports boomed out of Bolivia and Peru, the two largest producers. Prices tripled to \$4,800 per tonne; organically grown stuff fetched \$6,800. Poor Andean farmers who are the grain’s traditional custodians benefited. Protein-rich profits also lured Big Agribusiness. Intensive farms sprang up in South America’s fertile coastal plains. By 2015 supply topped 228,000 tonnes—and outstripped demand. Prices collapsed. Sales to

America, the largest importer, have been flat. Traders’ margins have fallen by almost half, to 6% or so. Four out of Peru’s five leading exporters have gone bust.

This has led some to talk of “peak quinoa”. Not everyone, though. Distributors in America and Europe think the slowdown is temporary. To help this come true, they are promoting production at home.

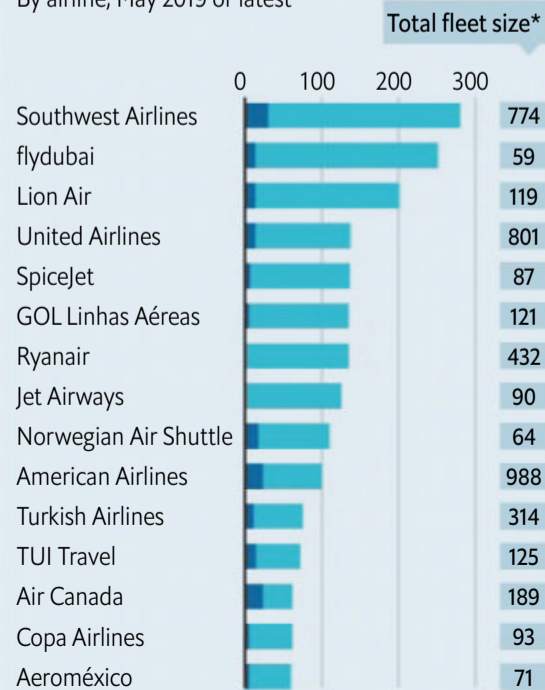
To be more adventurous in their use of quinoa foodmakers need a more dependable supply, says Shrene White, general manager of Ardent Mills, America’s biggest ▶▶

MAXed out

A year ago at Farnborough Air Show, Dennis Muilenburg, boss of Boeing, beamed as orders for its new 737 MAX jetliner rolled in. At next month’s Paris Air Show he will be less upbeat. In March regulators around the world grounded the plane, after two of them crashed within five months, killing 346 people. On May 23rd aviation regulators were due to convene in Dallas to review Boeing’s application to unground the MAX, now that it says it has fixed the software thought to have contributed to the accidents. Mr Muilenburg says he is “confident” that the updated plane will be “one of the safest aeroplanes ever to fly”. On May 22nd America’s Federal Aviation Administration suggested it could be a while before it is back in the air. All told, airlines have ordered around 5,000 MAXes. This week Ryanair, which awaits 135 of them, said it will have to cut 1m seats from this year’s schedules.

Flight risk

Boeing 737 MAX deliveries and unfulfilled orders
By airline, May 2019 or latest



Source: CAPA - Centre for Aviation

*Excludes unfulfilled orders

flour-maker. Its adoption as an ingredient in higher-margin processed food has been hampered by volatile prices and inconsistent produce. A truckload imported by Andean Naturals, which is based in California and buys from thousands of Bolivian farms, can contain half a dozen different quinoa varieties. These behave differently when processed, and so are hard to convert reliably into flour or snacks.

To remedy this, last year Ardent Mills launched a unit that works with breeders and food scientists to sponsor American growers, starting in its native Colorado and the Pacific north-west. It is eyeing California. Andean Naturals is testing a 32-hectare site in the state. It wants, optimistically, to convert 5% of California's 223,000 hectares of rice fields to quinoa by 2025. France and Spain already have 3,000 hectares each. Early results look encouraging. Food producers are launching more quinoa snacks, says Ms White. Kellogg's, the inventor of cornflakes, adds quinoa from Andean Naturals to frozen meals and cereal bars. A Nevada subsidiary of Kameda Seika, Japan's largest maker of rice biscuits, sprinkles it on its crackers. The Honest Kitchen, a startup in San Diego, uses it to enrich dog food.

Sergio Núñez de Arco, Andean Naturals' boss, expects the market for processed quinoa (outside its Andean home) to grow from \$900m today to \$2.2bn by 2025. South American exporters want a bite. Since its first shipment to China in December, Sindan Organic, a Bolivian firm, has dispatched 700 tonnes to the country—5% of its sales. Its boss gushes about the potential of China's 1.4bn mouths. Health-conscious Chinese urbanites may take to the trendy grain, he believes—especially if it comes in readily munchable form. ■

Corporate taxes

Havenly as ever

Despite an overhaul, Switzerland will remain a low-tax centre for big firms

SWITZERLAND IS KNOWN for its delicious chocolate, its luxury watches—and its lightly taxed multinationals. Some 24,000 international companies are domiciled there to benefit from low-tax deals offered by its 26 cantons, which set their own rates on top of the federal corporate income-tax rate of around 8%. Zug, a canton near Zurich, alone is home to some 1,800 of them, including global commodity traders, pharmaceutical giants and a cluster of blockchain and cryptocurrency firms.

When federal and cantonal taxes are combined, Switzerland has an average ef-



fective corporate-tax rate of just under 20%, not far below Italy's and higher than Britain's (see chart). But sweetheart deals with cantons reduce it to as little as 9% for some big firms. That is set to change—a bit—after Swiss voters approved reforms on May 19th.

These were crafted under pressure from the European Union, which had accused the Swiss of “harmful” tax practices and threatened retaliation. From next January cantons will still be able to set their own rates, but not offer better deals to foreign companies than to domestic ones.

The Swiss have taken further steps to prevent an exodus of multinationals to low-tax rivals such as Ireland and Singapore. The reforms include new sweeteners for research and development and for patent-derived income.

Not all multinationals own enough intellectual property to benefit greatly from such schemes; commodity traders have a lot less of it than pharmaceutical firms. So, besides installing “patent boxes” (frowned upon by tax-fairness campaigners but compliant with international tax rules), cantons are cutting their ordinary corporate-tax rates. In Basel, which is particularly popular with drugmakers and logistics-and-trading firms, it is set to fall from 22% to 13% (including the federal portion).

In short, says Peter Uebelhart of KPMG, an accounting firm, Switzerland is “using all the room for manoeuvre it has” to remain competitive while complying with international standards. The average combined income-tax rate for multinationals that have made Switzerland their home will tick up only slightly once the changes kick in, he reckons, from 9-11% to 12-14%. “Our sense is that most of them consider that acceptable,” he says, especially combined with Switzerland's other attractions, such as political stability, its central location in Europe—and all that chocolate. ■

Indian business

Privatisation by stealth

MUMBAI

The government's role in business is in decline—because state firms are dying

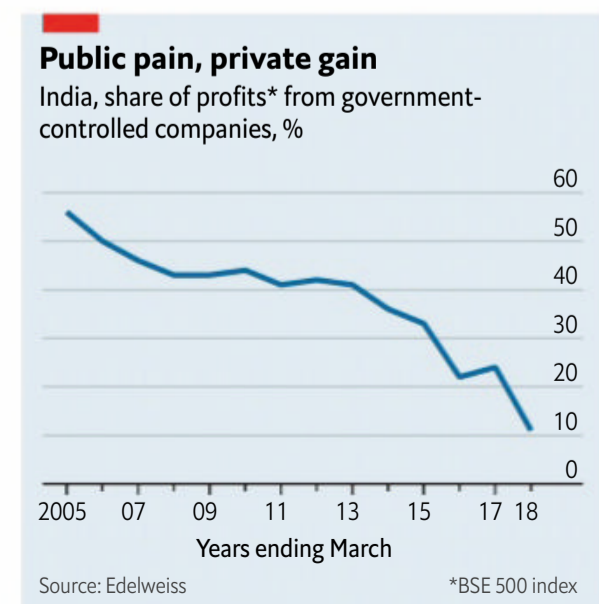
IN 2007 INDIA combined two troubled state-run champions, Indian Airlines for domestic flights and Air India for international ones, in the hope that consolidation would produce higher profits and happier flyers. Instead, the merger created unhappy unions, shabbier service and mounting losses. Last year a plan to privatise the airline collapsed for lack of bidders with pockets deep enough to afford it.

Such shambles invariably garner attention. What has passed largely unnoticed is the steady decline in the market share of state-run firms. Despite the nationalist mood that has coloured India's marathon general election, which concluded on May 23rd, it is likely to continue.

Among more than 50,000 companies analysed by consultants at McKinsey, the share of income generated by state-run firms declined from 45% to 37% between 2005 and 2017. The shift has been more pronounced among the biggest companies. Public-sector companies account for 11% of the profits in the benchmark BSE 500 stock-market index, down from 56% 14 years ago (see chart).

Sometimes the shift from public to private dominance occurs through divestments. The government got out of carmaking in 2008, when it ceded control in Maruti-Suzuki to its Japanese joint-venture partner. More often it lets state-controlled firms wither, as the private sector blooms.

This reflects how the government has gone about reducing its role in the market, observes Rashesh Shah, chief executive of Edelweiss, a financial firm that itself emerged from the state's retreat from bank- ▶▶



ing. Call it privatisation by stealth.

This has been most emphatic in consumer-facing businesses. The state duopoly which once controlled Indian telephony has been reduced to a 10% share of the market as people abandon fixed lines for mobile phones offered by frenetically competitive private providers. Door-dashan, the once-monopolistic public broadcaster, is losing the battle for attention. In 2016 Hindustan Machine Tools, which sold one in seven wrist watches in India at the turn of the century, down from nine in ten in 1990, folded. That left the

market wide open for private brands like Titan, which is controlled by Tata Group, India's biggest conglomerate.

In politically sensitive industries such as chemicals, energy and steel, public-sector companies cling on thanks to subsidies, price caps and a profusion of other government mandates. The state has been producing around half of India's fertiliser for years. But even there the state's grip is loosening. As recently as 2010 state-owned utilities generated nearly 80% of India's electricity. Their share has fallen to 56%. These days just 15% of steel is smelted by

the government, compared with one-third at the turn of the century.

Then there is finance. Public-sector borrowers (and well-connected private ones) could historically count on cheap loans and cut-price policies from state-run banks and insurers. Between 2010 and 2018 the government's share of banking assets declined from three-quarters to two-thirds. As it continues to shrink, so too does a critical lever used by politicians to control the activity of all business.

Indian critics of privatisation, who far outnumber its fans, point out that private ▶▶

Bartleby Picking up the Bill

A man who showed that the best managers need to be coaches

AS YOGI BERRA, a legendary Yankees baseball player, coach and master of malapropisms, once said, "baseball is 90% mental and the other half is physical." Managers might need a better grasp of maths than Berra. But they require a similar focus on instilling the right mentality, not just in themselves but in their team.

That view is held particularly strongly by three Google executives—Eric Schmidt (a former director of *The Economist*), Jonathan Rosenberg and Alan Eagle—who have written a book in praise of their mentor, Bill Campbell. His influence on Silicon Valley was so profound that they have called the book "Trillion Dollar Coach".

Most outsiders will not have heard of Campbell, who began his career as a college coach of American football. Later, he worked at Apple, heading the marketing campaign for the original Macintosh, and then became chief executive at Intuit, a financial-software company. But his most effective role, until his death in 2016, was in the background, as a board member at Apple (and close friend of Steve Jobs) and as a coach to companies backed by Kleiner Perkins, a venture-capital firm.

Google was one of Kleiner's investments and when Mr Schmidt was appointed chief executive of the company in 2001, Kleiner's John Doerr suggested that he recruit Campbell as his coach. Although Mr Schmidt was initially reluctant to accept the need for coaching, he learned to value Campbell's advice. In 2004 Campbell helped to persuade the Google boss not to quit when his roles as chairman and chief executive were split.

Campbell acted as an unpaid mentor at Google until his death in 2016. He also coached executives at eBay, Facebook

and Twitter, among others. In 2000 he advised the Amazon board not to replace Jeff Bezos as chief executive of the e-commerce company.

As a coach, Campbell's role was not to be in charge of particular projects, or to make strategic decisions, but to make other people work better. Although he advised individuals, his focus was on ensuring that teams were able to co-operate properly. His motto was that "your title makes you a manager, your people make you a leader."

While he was happy to dish out praise in group meetings, and was a generous man in his spare time, he was not a soft touch. He simply believed in giving harsh feedback in private, and was usually adept enough to make the recipient grateful for the telling-off.

When he talked to people, he gave them his undivided attention; the discussions were never interrupted and he never checked his smartphone. But coaching had to be a two-way process. Some people were temperamentally incapable of responding properly. To be coachable, Campbell be-

lieved, managers need to be honest, humble and willing to learn.

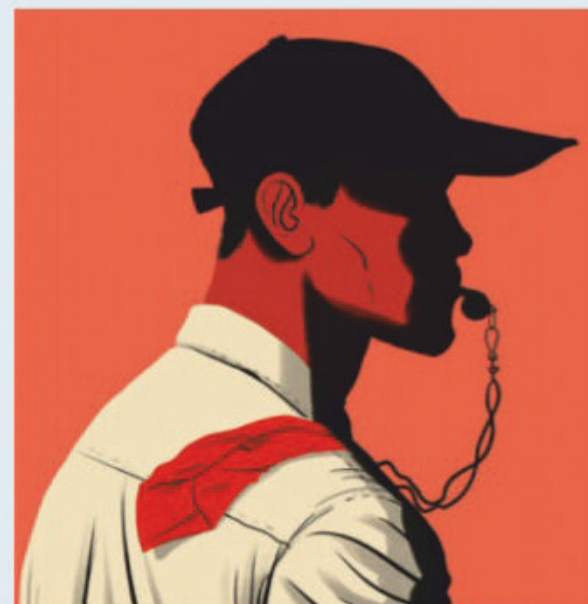
A sign of his unique personality is that he has not been replaced since he died. Instead Google is attempting to incorporate his principles into the way the company is run. All managers should, in part, be coaches. The idea seems to be gaining popularity. In their book, "It's the Manager", Jim Clifton and Jim Harter of Gallup, a polling organisation, include a whole section called "Boss to Coach".

This is linked to the importance of employee engagement. Gallup cites research showing that when managers involve employees in setting their own work goals, the latter are four times more likely to report feeling engaged. Managers are responsible for 70% of the variance in how engaged employees were.

The primary job of any manager is to help people be more effective in their job. One benefit should be that workers will stay with the company; the main reason they change jobs, according to what they tell Gallup, is for "career growth opportunities". Workers should get regular feedback from their managers—daily if possible, surveys show. An annual performance review is of little use.

But this approach will only work if it comes from the top down. Middle managers tend to emulate their superiors and to respond to incentives; they will coach underlings if this behaviour is reinforced and rewarded.

Of course, even the best coaches and managers have to give their employees scope to find their own way, and make their own mistakes. As Yogi Berra put it, "I'm not going to buy my kids an encyclopedia. Let them walk to school like I did."



► companies often seem little better than state-run ones. New telecoms providers may be cheap but service is poor, with frequent outages and dropped calls. Messy collapses of private firms—for example Jet Airways, India's biggest private-sector carrier, in April—leave millions of customers in the lurch.

India's Thatcherite contingent argue that such problems could be solved with less state intervention, not more. Competition among private-sector firms, they say, often hinges on rights which the government allocates in an opaque manner. Mo-

bile operators and airlines need spectrum or airport slots. Both are in the government's gift.

India's central government still directly controls 339 enterprises. Over two dozen of them approved for sale by the administration of Narendra Modi, the incumbent prime minister who appeared on course for re-election as *The Economist* went to press, remain stuck in bureaucratic limbo because he did not want to anger powerful trade unions and politically connected suppliers ahead of the poll. It should let them go. Or let them quietly die. ■

Child-safe internet

The kids aren't alright

NEW YORK

Politicians and regulators want to protect children on social media. About time

IN MARCH AND April Jim Steyer, founder of Common Sense Media, a children's advocacy group, badgered members of America's Congress to regulate the apps children are using online. Their response on Capitol Hill shocked him. "We already regulated Nickelodeon, Disney channel and PBS Kids," they replied, referring to rules for television enacted in the 1990s and 2000s (with his help). They had apparently missed a series of recent scandals: children exposed to violence and pornography, their data being collected, paedophiles lurking in comments sections of videos depicting youngsters. "We're changing at warp speed," Mr Steyer says, "and we're still talking about 'Sesame Street'."

Not for much longer. Members of Congress are drafting multiple bills to regulate how internet platforms treat children. Britain has proposed child-safety rules, including prohibitions on features designed to keep users hooked. From July it is expected to require porn sites to bar users under 18; MindGeek, which owns many salacious sites, wants to use an age-verification registry in order to comply (and, in doing so, make it easier to charge adult visitors for content). In Delhi politicians are considering rules that could stop the data of anyone under 18 from being collected. The EU bars tech giants from garnering data and targeting ads at children. Last year California adopted similar privacy protections that also forbid tech companies from ignoring users' actual age. Most of these provisions will be enforced with heavy penalties.

In the 1980s and 1990s public officials in America worried about what shows and advertisements children were being exposed to on tv. The Children's Television Act of



Safe cyberspaces

1990 and subsequent regulations limited the number of commercials interrupting children's shows and required that television stations provide educational programming for children.

Compared with that concern, politicians and regulators have treated online video services like YouTube (owned by Google) with insouciance verging on neglect. Today children and teenagers are exposed to much dodgier fare in cyberspace than they were in the 1990s on broadcast tv—at the touch of a fingertip on their (or their parents') iPad or smartphone. Teens run into white nationalists. Ten-year-olds encounter flat-earthers. Toddlers stumble on violent, scary or pornographic content. In comments attached to YouTube videos featuring children, molesters identify the parts they liked most, with time stamps to alert others with similar inclinations.

In 2018 the Pew Research Centre found

that 61% of American parents who let their offspring watch YouTube reported that the children come across unsuitable content. Youngsters are also easily manipulated, critics say, by "like" and "share" buttons, which may induce social anxiety and infringe on privacy.

It would help matters if social-media companies worked out ways to divert children to stripped-down versions of their services without targeted ads and certain features—Instagram without a "like" button, YouTube without autoplay or comments. YouTube has a separate app, YouTube Kids—but most parents have not heard of it. On May 22nd SuperAwesome, a British company that provides software for children's apps, announced that it had developed a tool, KidSwitch, which can recognise with a high degree of confidence when a child is using an app.

The social-media giants, with their algorithms and rich stores of data, should be able to sniff out at least the very young. So far, most have merely repeated that children under 13 are not supposed to be using them without parental permission. That official posture is meant to shield them from liability for harvesting children's data without parental consent, which is prohibited under existing law.

The Federal Trade Commission, an American regulator, has received complaints against Facebook (which owns Instagram), YouTube and TikTok, a popular Chinese-owned video-sharing app, alleging that they collected data from children under 13. In February TikTok agreed to pay a fine of \$5.7m, said it would take down any videos uploaded by children under 13, and pledged to limit the app's functions for these young users.

Data-privacy rules aside, it has mostly been up to social-media companies to regulate other aspects of their operations themselves. They can restrict content as they please, but have only done so in the glare of scrutiny, after journalists or activists shed light on problems. (In February YouTube largely banned comments on videos featuring children.) Without the threat of severe penalties, the platforms have had little financial incentive to change. MIDIA, a consultancy, estimates that in 2017 children's channels accounted for 17% of YouTube views, and 15% of revenues, or \$2.1bn.

The threat is now materialising. In June Ed Markey, a senator from Massachusetts, is expected to introduce a sweeping child-protection bill, the "KIDS Act". It would ban continuous "autoplay" on video sites and certain social features, set standards for content and restrict advertising. It would, in other words, be the internet era's equivalent of the Children's Television Act, which Mr Markey helped pass as a young congressman. As Mr Steyer says: "To a child a screen is a screen is a screen." ■

Schumpeter | The Seven Ages of Climate Man

A Shakespearean guide to how companies tackle climate change



“ALL THE world’s a stage,” wrote William Shakespeare in his monologue, “The Seven Ages of Man”. Centuries later, that stage is on fire, to paraphrase Greta Thunberg, the 16-year-old Swedish climate-change activist who delivered a raw message to titans of industry in Davos this year that their companies were helping stoke the blaze.

It is not just Ms Thunberg who is wagging the finger of blame. Central bankers, shareholders, customers and employees are urging firms to take bolder action to tackle climate change. In some boardrooms, the message is sinking in; to date 210 firms collectively worth more than \$6trn, ranging from carmakers (like Renault) to confectioners (such as Mars), have committed to “science-based targets” to cut their carbon footprint in line with the internationally agreed goal of limiting global warming to 2°C or less relative to pre-industrial levels. Using data from CDP, which tracks firms’ climate disclosures, Schumpeter has developed (with stacks of poetic licence) a Shakespearean guide to climate action, from denial to reluctant engagement to bold ambition.

Start with the infant “mewling and puking in the nurse’s arms”. That, broadly speaking, is the fossil-fuel industry. For the past three decades it has kicked and screamed against efforts to halt global warming even as its products have added roughly as much carbon dioxide to the atmosphere as in the previous 250 years. Coal-burners are the biggest culprits. But oil firms are little better. The biggest listed one, ExxonMobil, is a notable laggard: it aims to increase oil and gas production by 25% from 2017 to 2025. Some European rivals, such as Norway’s Equinor and Royal Dutch Shell win praise for prioritising lower-carbon gas over oil, and for pledging to disclose more fully their carbon footprints. But the 24 biggest listed oil firms invested just 1.3% of capital expenditure last year in renewable technologies—a baby step.

The “whining schoolboy...creeping like snail unwillingly to school”, Shakespeare’s second age, sums up industries like iron and steel, cement and power-generation, which produce about half of all energy-related CO₂ emissions yet grumble over carbon-pricing schemes and renewable-energy mandates intended to change their behaviour. A favourite excuse for foot-dragging is that onerous regulation risks “carbon leakage” to countries with

laxer emissions rules. Yet a few star pupils show how much can be done. Dalmia Cement, an Indian company that already produces a third less CO₂ per tonne of cement than the industry as a whole, aims to use less high-carbon clinker in its cement and use only renewable energy by 2030. Mahendra Singhi, its boss, says that it can reduce emissions to zero by 2040, which would be remarkable given that the industry is one of the hardest to decarbonise. In Europe, HeidelbergCement has also made bold climate pledges.

The third age is that of the fickle lover, “sighing like furnace”. It corresponds to (unromantic) industries like mining, chemicals, capital goods and heavy transport. Yet they are in fact torn, lover-like, between the possibility of climate-induced pain and pleasure. Carbon taxes, or constraints on fossil-derived plastics, or fuel restrictions on shipping and flying would be painful—especially for the likes of General Electric, an industrial conglomerate whose decision to double down on fossil-fuel technologies has cost it dearly. Others, like Schneider Electric, are more animated by the pleasurable prospect of profit—from new kinds of industrial materials to equipment for the mass-electrification of energy.

Next are the soldiers, “jealous in honour, sudden and quick in quarrel”. These are firms whose businesses are already in the throes of climate-related disruption that are finally jumping into the fray. They include carmakers, increasingly eager to disprove their dirty reputations by ramping up production of electric vehicles to meet fleet-wide emission curbs and demonstrate their prowess to low-carbon competitors such as Tesla. (Daimler, owner of Mercedes-Benz, is the latest to swerve, although its ambition to make carbon-neutral cars by 2039 is hardly foot to the floor.) Consumer-goods firms, facing upstarts that appeal to environmentally conscious consumers, have been jolted into action. Some, such as Nestlé and Unilever, are stockpiling climate-friendly brands.

Those taking the boldest path towards a low-carbon future are the justices “full of wise saws”. They include some tech giants and even mature firms like Walmart. The world’s largest grocery chain, working with NGOs such as WWF, pledged in 2017 that its 100,000 suppliers will cut a cumulative 1bn tonnes of CO₂ from their emissions by 2030, the equivalent of removing all the cars in America off the road for a year. Over 1,000 suppliers have been quick to join in, but others are being encouraged to take part with accolades and discounted trade finance. Walmart says that some schemes, such as energy efficiency, cut costs. It thinks others are a price worth paying. There are some precocious climate justices, too, like startups taking bold bets on zero-carbon technologies such as carbon capture and storage or hydrogen.

It would help if more financial firms joined this category. But of the many financiers with “big manly voice” on the climate, plenty turn again, as does the Bard’s sixth age, to “childish treble, pipes and whistles in his sound” when it comes to allocating capital. As Mr Singhi from Dalmia Cement says, banks are loth to support projects like carbon storage because they take a short-term view and fear low returns. And even though many savers have long horizons, their fund managers only look three to five years ahead.

Sans teeth, sans eyes, sans taste, sans everything

Governments can make the biggest difference by more widely taxing carbon emissions. But while firms benefit from nature’s bounty—its water, minerals and energy—preserving it is also an act of self-interest. If they do not, the last scene of all may be what Shakespeare sums up as “mere oblivion”. Averting catastrophe could depend on whether business plays the role of hero or villain. ■



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Global markets

Late in the day

The joys and pains of investing in a mature business cycle

IN 14TH-CENTURY Germany a heretical cult grew up around the figure of Frederick II, a dead emperor. Its adherents believed that the apocalypse was close at hand. “In all countries a hard time sets in,” is how a prophecy from the period begins. “Rapine and arson go hand in hand,” it continues. “Everyone is at everyone else’s throat. Everyone harms everyone else in his person and his belongings. There is nobody but has cause to lament.”

This is not the sort of language used in investment-bank research notes and hedge-fund letters, or by pundits on CNBC and Bloomberg News, however troubled the outlook might seem for financial markets. Yet there is a parallel between today’s market chatter and the prophecies of medieval cults. The millenarians believed they were living in the end times or “last days”; and so, in a way, do today’s investors. Much of the talk is of “late-cycle” market conditions—the kind that prevail after a long expansion, when economic slack is largely used up and assets are richly priced.

The late-cycle mindset is a battleground for two impulses. On the one hand, it recognises that these are the good times. The economy is strong, jobs are plentiful, and factories and offices are humming with activity. Animal spirits are higher than they were in the earlier stages of the business cycle. So there is money to be made. And who knows? Perhaps the good times might last a little longer than usual. On the other hand, if it is late in the cycle a recession cannot be far off. Jitters about anything that might bring that day forward—rising interest rates; a prolonged trade war—are understandable.

These warring impulses set the pattern for late-cycle markets. The general tendency is for prices of risky assets (stocks, corporate bonds and so on) to go up—perhaps by a lot. But recurring fears of recession mean this rising trend will be punctuated by sometimes-violent sell-offs.

To understand this push-and-pull dynamic, go back to last year. By September a wave of optimism about the strength of

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America’s economy, buoyed by tax cuts, had taken the S&P 500 index of leading stocks to a fresh peak. Then a host of growth risks suddenly loomed. China’s economy was losing momentum. The Federal Reserve was bent on tighter monetary policy. By Christmas Eve the S&P index had fallen by 19.7% from its peak. Credit spreads—the extra yield investors demand as a buffer against default—blew out. Then, just as suddenly, the markets recovered. A succession of policy changes, including tax cuts, convinced investors that China would not let its economy go down. The Federal Reserve changed tack, taking interest-rate increases off the table, at least for this year. The good times were back again.

Yet a feature of late-cycle markets is that recession scares recur. Another is brewing. This one has its origins in the growing breach between America and China over trade. Earlier this month America stepped up its tariffs on Chinese imports. It has now opened a new front in the dispute by requiring American firms wishing to supply Huawei, China’s technology champion, to seek licences. Markets are choppy, though more in Asia than America. Investors seem fairly calm. But few yet want to bet against a quick resolution.

This latest leg of the trade dispute started with a tweet from President Donald Trump. It might also be ended by one. So why sell now? But the longer it goes on, the more harm it will do to business confi- ▶▶

Boom and gloom

Stockmarket indices

September 20th 2018=100



Sources: Datastream from Refinitiv; Federal Reserve Bank of St. Louis; Bloomberg

US, corporate-bond yields, spread over US Treasuries

Percentage points



Chinese yuan per \$

Inverted scale



dence in America, China and elsewhere. If a deal is not struck at or before the G20 Summit in Japan on June 28th and 29th, another sell-off seems likely.

The foreign-exchange market may be the place to watch for trouble. The yuan is still a long way from being widely used outside China. But it increasingly reflects, and to some degree sets, the tone for global currency markets. Other major currencies, including the euro, have tended to track its movements up and down against the dollar. A stronger yuan has thus often implied that the dollar is weaker against a range of currencies. At the start of the year the yuan rose against the dollar in line with better news on China's economy. But it has fallen again (see chart) and is now close to the seven-yuan mark, widely seen as a meaningful threshold, not least within China.

That has fuelled speculation that China might use its currency as a weapon in the trade war. Were the yuan to go through seven to the dollar, from this perspective, the gloves would be off. A weaker yuan would mean a stronger dollar—certainly in Asia and probably across the board. Not only would that squeeze American exports, it would also spark a broad sell-off in stocks and in credit. For the dollar is also a thermostat for global risk appetite: it rises with a weak dollar and falls with a strong one. Yet China has so far been “very responsible” in its handling of the yuan, says Steven Englander of Standard Chartered, a bank. Were the yuan to break the seven mark, he reckons, it would be in response to a wave of risk aversion hitting Asia; China would not be the initiator.

If trade peace breaks out, a fresh growth scare will emerge sooner or later. As Willem Buiter of Citigroup notes, each of the world's three biggest economies has a financial frailty: corporate leverage in America, a debt mountain in China and rickety banks in Europe. Even so, he argues in a recent note, it might still take a severe shock to kick off a global recession. If the economy keeps surviving—and it may take a fresh dose of stimulus from China or the

Fed to lift spirits—the conviction that the cycle can keep going may take hold. Market “capitulation” usually means a sudden loss of unwarranted optimism. But in the present circumstances capitulation is “melt-up, not meltdown”, says Eric Lonergan of M&G, a fund-management group.

For now it is hard to see past the trade skirmish and the G20 summit. Today's late-cyclists might envy the faith of the medieval millenarians. They were hedged. The apocalypse would mark the start of their longed-for salvation. But if it were to be delayed a little, it would be no great loss. ■

Public debt in Germany

Black books

Politicians and economists clash over whether to borrow in order to invest

OUTSIDE THE headquarters of the German Taxpayers' Federation in Berlin, a display tracks the public debt in real time. Now displaying a total of just under €2trn (\$2.2trn), it has been ticking down since early 2018. Germany's public-debt ratio, expected to be 58% of GDP in 2019, is as much the envy of other rich countries as its engineering prowess. Thanks to rising labour-market participation, says Michael Hüther of the German Economic Institute, a think-tank, tax revenues per head reached their highest level ever, in real terms, in 2018.

Even so, Germany's fiscal policy is becoming a subject of debate. Olaf Scholz, the finance minister, has warned that the “fat years” are over. Economic growth is projected to slow this year, reducing the tax take. If he is to meet Germany's stringent fiscal rule, he must rein in public spending.

The *Schuldenbremse* (debt brake) was enshrined in the constitution in 2009, when the financial crisis was expected to swell public debt beyond 80% of GDP. It re-

stricts the federal-government deficit to no more than 0.35% of GDP a year unless a downturn hits; any overshoot beyond that must be made up in better times. (The debt brake also affects states' finances: from 2020, they will be forbidden to run structural deficits.) Some economists, though, are asking whether the rule is a good one. Pointing to Germany's rock-bottom interest rates and crumbling infrastructure, they argue that the country needs more debt-financed investment.

Germany's government debt is in such high demand that, at some maturities, investors are willing to pay to lend it money. Yields on ten-year bonds turned negative in May, as investors spooked by the trade war between America and China, and by Italian politicians' hints that they would break the euro zone's fiscal rules, sought safety. On May 9th the yield on Germany's ten-year government bonds slipped below that of Japan's (see chart).

At such attractive rates the case for borrowing for projects that could boost growth seems obvious. Public investment, at 2.3% of GDP, lags behind the euro-zone average and barely covers depreciation. Mr Hüther was once a proponent of the debt brake. But in a recent column in the *Süddeutsche Zeitung*, written with Jens Südekum of the Heinrich-Heine University Dusseldorf, he argues for a return to a “golden rule”, which allows for investment to be financed by debt. The debt brake was supposed to spare future generations from being saddled with today's borrowing. But by limiting investment, they argue, it penalises future generations instead.

Moreover, the government may have been overzealous in its application of the rule. Catarina Midoes and Guntram Wolff of Bruegel, a think-tank, find that since 2010 officials, when drawing up budget plans, have consistently come up with predictions for tax revenues that turn out to undershoot reality. That has had the effect of restraining public spending.

In part, the forecasting errors reflect the fact that the economy has beaten expecta- ▶▶

Under-achiever

Ten-year government-bond yields, %



Source: Datastream by Refinitiv

tions over the past decade, resulting in unexpectedly high tax revenues. But the researchers speculate that the debt brake may also have led to a “surplus bias”, with forecasters being deliberately cautious for fear of breaking the rule. (The finance ministry, however, says that the analysis does not consider the possible influence of tax-policy changes or one-off effects.)

Not everyone agrees that the debt brake has led to a squeeze on capital spending. Officials in the finance ministry point out that government investment has grown at 7% annually in recent years, outpacing nominal GDP growth. Bottlenecks prevent plans from turning into reality, meaning that investment cannot rise much more. Clemens Fuest of the Ifo Institute for Economic Research points out that €8bn allocated to public projects by the federal government in recent years has not yet been spent. Public planners are in short supply and the building industry is close to capacity. NIMBYism has held up the redevelopment of a railway network in Stuttgart and a third runway for Munich’s airport.

Political appetite to release the debt brake seems limited. Though the finance ministry’s new chief economist, Jakob von Weizsäcker, is receptive to fresh ideas, Mr Scholz is still keen to balance the books. Even so, there is nothing stopping the government from dismantling other barriers to investment. More of it would, after all, boost the future tax take—thus making it less likely that the government would need to slam its foot on the debt brake further down the line. ■

Wealth management

Chubby cats

NEW YORK

Managing money for the proletariat

IF THE BEST way to get rich is by managing other people’s money, it helps if your clients control a lot of it. For private-equity firms and hedge funds, that means courting pension-fund managers, investment bankers and the like. For the top wealth managers, the money in question belongs to the super-rich, whom they advise on asset allocation, tax planning and even which artists should adorn their walls.

Now some are starting to tout for the custom of the merely well-heeled. On May 16th Goldman Sachs paid \$750m in cash for United Capital Financial Advisors, a wealth-management firm based in California that manages \$25bn-worth of assets for 22,000 clients. It was Goldman’s biggest acquisition in two decades.

It accelerates the firm’s shift of emphasis under David Solomon, who became its boss last year, away from volatile businesses such as trading towards more stable fee-based ones. It also broadens Goldman’s target market for wealth-management services. Until now, the bank’s individual customers were drawn almost entirely from the ranks of those with at least \$25m in investable assets. United Capital serves those who have \$1m-5m.

The non-filthy rich used to find it surprisingly hard to get customised help with managing their money. The fees they generated were not fat enough to satisfy full-service wealth advisers at the biggest investment banks. But the mass-market offerings of brokers and retail banks were not sufficient. Into this gap came firms like United Capital, founded in 2005 by Joe Duran, its chief executive (who will join Goldman as a partner). The firm’s platform enables its advisers to manage relationships more efficiently. The client’s age, career status and so on are used to build up a financial profile, and advisers can send video updates about major market moves to those whose portfolios are affected.

The acquisition fits well with Goldman’s evolving thinking about wealth management. In 2003 it acquired Ayco, which specialised in managing the assets of top-ranking company executives. Ayco has since expanded into offering financial-planning services to everyone at the companies it serves, says Larry Restieri, the Goldman partner who runs Ayco. Moreover, uninvested deposits with United Capital can conveniently be funnelled to Goldman’s consumer bank, Marcus.

Competition to serve the mass affluent is heating up. In February Morgan Stanley, which is around the same size as Goldman but makes twice as large a share (40%) of its revenues from wealth management, announced that it would buy Solium for \$850m. The software company, since rebranded Shareworks by Morgan Stanley, provides a platform for companies to administer shares and stock options paid as part of compensation. The acquisition is appealing in two ways, says Jonathan Pruzan, Morgan Stanley’s chief financial officer. It brings an opportunity to acquire younger customers who may one day be very rich, and it allows the bank to use Shareworks to offer those employees access to Morgan Stanley’s own products.

The mass-affluent market is becoming better served in other ways, too. Online financial advisers such as Betterment, which manages \$16.4bn in assets, are developing clever new ways to counsel customers on what to do with their savings. Investment banks, it seems, are not alone in deciding that the best way to get rich is not to manage rich people’s money, but to manage everyone’s. ■



Tariffs

Shining brighter

OTTAWA AND WASHINGTON, DC

Relief for American importers of metals from Canada and Mexico

TIMES HAVE been tough for Riverdale Mills Corporation, a company based in Northbridge, Massachusetts. In June last year the Trump administration imposed tariffs of 25% on steel imported from Canada, which accounted for half the firm’s supply. As its business involves transforming steel rods to supply 85% of North America’s lobster traps, and 31 miles (50km) of security fencing along America’s border, its costs soared. “We were very, very disappointed,” said James Knott, its chief executive.

Disappointment has given way to delight. On May 19th President Donald Trump declared that steel and aluminium from Mexico and Canada no longer posed a threat to America’s national security, and the next day the tariffs were no more. “This is just pure good news for Canadians,” said Justin Trudeau, Canada’s prime minister.

It was also excellent news for American consumers of steel. Faced with a lack of steel of similar quality from American suppliers nearby, and the expense of shipping from those farther away, Mr Knott had stuck with his Canadian suppliers, which hit profits and forced him to trim his workforce. Although he kept prices steady for his core products, some customers decamped anyway, worried that price rises were coming.

The tariff cuts will relieve strain for metal importers immediately. But the effect on the overall market may be muted, says Michael Widmer of Bank of America Merrill Lynch, an investment bank. Before the tariffs Canada and Mexico supplied only around 15% of America’s combined steel and aluminium imports. Most of the rest still faces trade restrictions. For steel ►

▶ the relief will be “very narrow”, he says.

Even that narrow relief will leave trade between the United States and its North American neighbours less free than before. The deal between the United States, Canada and Mexico allows for tariffs to be reimposed without notice if imports of a particular product surge. And it includes new, as yet unspecified, enforcement provisions, intended to ensure that metal from other countries does not sneak into the United States. That is meant to address concerns about Chinese exports depressing American prices through the back door.

But it is better for Canada and Mexico than the quotas the Trump administration had been demanding. Those could have blocked trade altogether, even if American supply had fallen short. And the deal’s political significance goes well beyond the limited quantities of metal imports it covers. Mr Trudeau called it a “big step forward” towards ratifying the USMCA, the deal between the United States, Canada and Mexico negotiated to replace NAFTA. Though Democrats in Congress are likely to demand further changes first, its chances should be helped by the silencing of Cana-

dian and Mexican complaints.

The news does not mean that Mr Trump is no longer, as he put it, a “tariff man”. On May 17th a presidential proclamation gave Japan and the European Union up to six months to negotiate away the (imaginary) threat posed by their cars and car parts to America’s national security. On May 10th American tariffs on \$200bn of Chinese imports increased from 10% to 25%. All this means Mr Knott’s luck has turned. As he points out, all tariffs are “an exploitation of the consumer”. But now it is not his firm that is feeling the worst of the squeeze. ■

Buttonwood Index unlinked

Why economies and stockmarkets do not always match up

EVERYBODY KNOWS Monty Python’s “cheese shop” sketch—everybody who is over 50 and a comedy nerd, that is. The shopkeeper, played by Michael Palin, asks a customer, played by John Cleese, what cheese he would like. Do you have Red Leicester? Sold out. Caerphilly? On order. Cheddar? Not much call for it. Each increasingly testy request for a different cheese (43 of them) is cheerfully met with a “no”, “sorry” or feeble excuse. Pressed to back up his claim to the best cheese shop around, the shopkeeper replies: “Well, it’s so clean, sir!”

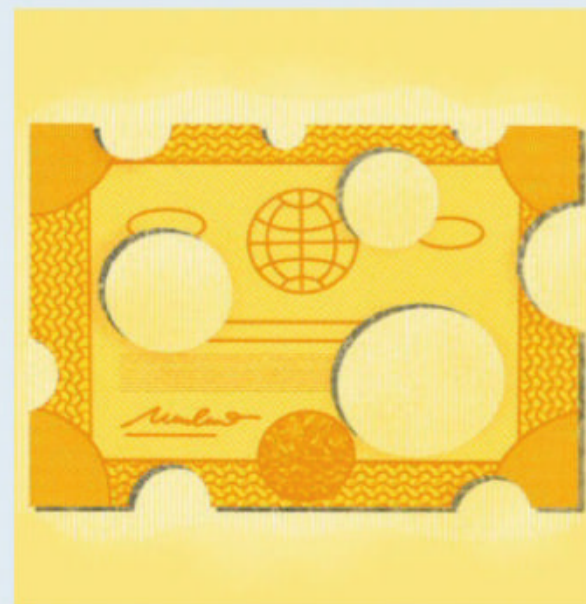
This leads us, as smoothly as a Python segue, to a frequent complaint about the main stock index for investors in emerging markets. The opportunity is as clear as a sign saying “Cheese Shop”. Most of the growth in the world’s GDP over the next five years will be in developing countries, says the IMF. You might like to buy a basket of stocks from a broad range of countries that taps into this growth. But the benchmark MSCI emerging-market index does not really offer that.

It is light on exposure to the fastest-growing bits of the world economy, notably in Africa. Instead it has a heavy tilt towards economies in the Asian supply chain to rich-world consumers. In short, it looks to some investors like a cheese shop that is so clean because it is uncontaminated by cheese. Yet the trouble lies not with the index compilers, but with the nature of public markets.

The matter turns on the different ways in which economies and markets are classified. With countries, it mostly comes down to income level: if GDP per person is above a certain threshold, an economy counts as developed. The criteria for financial-market development are different. Here, what matters is how easy it is for foreign investors to

move large sums into and out of local stocks. That in turn depends on two things. The first is the stockmarket’s liquidity: the bigger the market, the better equipped it is to handle big purchases or sales of stock on any given day. The second is openness. A market with lots of biggish listed stocks, which trade frequently, might still fail to qualify for developed-market status because it has limits on foreign ownership or other barriers to cross-border trading.

Take South Korea, for instance. Decades of sustained growth turned it into a rich country, with GDP per person of \$31,000 at current exchange rates. Yet its currency can be bought and sold only in Korea, and only during local market hours. It cannot be traded offshore. That may seem like a minor matter. But index funds that move vast sums to and fro quickly like to do their currency trades in one go. Developed stockmarkets are defined by the absence of such frictions, says Sebastien Lieblch, of MSCI. Though Taiwan is richer than Portugal, and Korea’s GDP is bigger, they are both classified by MSCI as emerging markets.



Together they account for a quarter of the index. Add in the 33% weight for Chinese stocks and its constituents lean heavily towards “Factory Asia”.

A stock index measures what is investable. If you are seeking exposure to broad-based economic development, you need to be creative. That means looking at smaller, less liquid stocks outside the index, or perhaps the shares of rich-world firms that earn the bulk of their revenue in developing countries. The alternative is to drop down a level in terms of liquidity and openness to “frontier markets”, which include fast-growing economies in Asia, such as Bangladesh and Vietnam, but also in Africa. This is a much smaller universe of stocks. The market capitalisation of MSCI’s frontier-market index is around \$120bn, compared with around \$5trn for its emerging-market index. And it is also dominated by a few countries. Stocks listed in Kuwait, Vietnam and Argentina account for more than half of it.

Economies and stockmarkets do not match up well, even in rich countries. America accounts for 55% of MSCI’s world index but a much smaller share of the world economy. The size of its equity market relative to GDP is at one extreme (along with Britain and Switzerland), notes Victor Haghani of Elm Partners, with Germany and Italy at the other. The best reason for investing across borders is not to plug into faster GDP growth (for which you may overpay), but for diversification. By owning a broad range of stocks, investors leave themselves less exposed to specific company, industry or country risks. The best thing about indices of big, liquid stocks is that buying and selling them is cheaper. For the only thing that grates more than Parmesan is high-cost investing.

Cross-border payments

Into the big league

TransferWise becomes Europe's most valuable private fintech

THE TEA BUILDING, in London's hip Shoreditch district, used to hold factories making biscuits and bacon. Now it is home to tech startups and media firms. Yet their ideas require space, too. In the out-sized lifts, still operated by push buttons as big as traffic lights, a pair of movers have just finished a job. TransferWise, which rents Floor 6, is taking over another level, barely three years after moving in.

On May 22nd the cross-border payments firm, which was founded in 2011, said it had collected \$292m in fresh capital. The fundraising round, led by Lead Edge Capital, Lone Pine Capital and Vitruvian Partners, venture-capital firms known for backing tech stars such as Uber, Snap and Spotify, valued it at \$3.5bn—a doubling in 18 months. Now Europe's most valuable private fintech firm, it plans to add 750 staff in the next 12 months to its existing 1,600.

TransferWise allows users to send money along 1,600 currency routes at 15% or less of the fee banks typically charge. Unburdened by old IT systems and focused on moving money, it has automated many of the steps required. It also aggregates transfers and nets them out against payments going the other way, which means it need borrow less currency offshore to meet customers' requests. And it seeks to build direct relationships with multiple banks, even as those lenders are trimming the old "correspondent" banking networks they use to send money across borders.

Matt Briers, TransferWise's chief financial officer, says it did not need to raise more capital. Unlike many "unicorns", as startups worth over \$1bn are known, it is profitable. But it needed patient capital to provide an exit to its "angel" investors—wealthy individuals with an appetite for risk. It now counts funds managed by BlackRock, the world's biggest investment firm, among its backers. In due course it will consider going public, though Mr Briers acknowledges that its latest funding round may have delayed that moment.

Analysts who watch the sector reckon the valuation is fair. The firm's revenue grew by over three-quarters in the 12 months to March 2018, to £117m (\$155m). Though it is already the largest fintech focused on cross-border consumer transfers, there is no sign that growth is close to tapering off, says Daniel Webber of FXC Intelligence, a data provider. It processes \$60bn a year—a fraction of the \$2trn market.

Sin taxes

Soda stream

How to tax sugary drinks

SUGAR TAXES are on a high. Around 40 countries and seven American cities have started to tax sugary drinks, mostly in the past few years. Supporters say such levies compensate for the costs imposed on health services by higher rates of obesity, diabetes and heart disease. They might also help short-termist buyers avoid the long-term consequences of sugary indulgences. Opponents counter that such levies are a fun-killer, souring people's pleasure, and regressive, because poorer people spend a bigger share of their incomes on soft drinks.

Two working papers published on May 20th seek to help policymakers find the sweet spot. Hunt Allcott of New York University, Benjamin Lockwood of the University of Pennsylvania and Dmitry Taubinsky of the University of California, Berkeley, compute the "optimal" tax rate that maximises social well-being, taking into account differences in consumers' income and behavioural biases.

Consumer data show that a soda tax does indeed have regressive effects.

American households earning less than \$10,000 a year buy twice as much sugary drink as those earning \$100,000. Weighed against that, the gap between desired and actual consumption is wider for poorer people than it is for richer ones. The authors surveyed households to gauge their knowledge of sweet drinks' nutritional content and how much their consumption outstrips what they regard as ideal. The average household, they conclude, would consume a third less if it had expert nutritional knowledge and perfect self-control. That rises to a half for poorer households.

One of the main determinants of the optimal tax rate turns out to be the price elasticity of demand for sugary drinks. If demand is sensitive to changes in price, then a tax will change behaviour, benefiting poorer people's health and aligning their behaviour more closely with what they say they desire. Those gains would offset the regressive effects. But if consumers really have a sweet tooth—that is, demand is price-inelastic—then the regressivity effects dominate and a sugar subsidy would actually help redistribute income from the rich to the poor.

By analysing shoppers' behaviour, the authors find that demand is elastic enough that a tax, and not a subsidy, is socially beneficial. They compute an optimal tax rate of 1-2 cents per ounce of soft drink in America. That is higher than the average rate of 1 cent in those cities with a tax.

But there is a wrinkle. In the real world, if taxes in one place get too high shoppers will arbitrage the rules by travelling to buy soft drinks elsewhere. Taking this into account they reckon that the optimal rate for cities is 0.5 cents, although a more efficient system would be a state or national tax to control America's sugar rush.



There are three ways it can meet investors' lofty expectations. The first is to seek dominance beyond Britain, where it accounts for 15% of outbound consumer transfers, more than any bank. Though America is a tough market for fintechs, because regulations vary from state to state, the firm says its American unit is growing fast (it may help that Chinese rivals are less welcome than they used to be). It is also improving its service for small businesses, of which it is signing up 10,000 a month.

Its main hope, however, is to convert

foes into clients by selling its services to banks, to offer in turn to their own customers. That might mean sacrificing margin, but in return for greater volume and economies of scale. It already has tie-ups with BPCE, France's second-largest bank, and with three digital banks: Monzo, based in Britain, N26, in Germany, and bunq, in the Netherlands. More are likely. "Technology is enabling it; consumer demand is requiring it," says the head of fintech at one of Britain's biggest high-street banks. "You either join the game or you lose out." ■

Zimbabwe's currency

A mouthful of zollars

After a sharp devaluation, Zimbabwe's fledgling currency is struggling for life

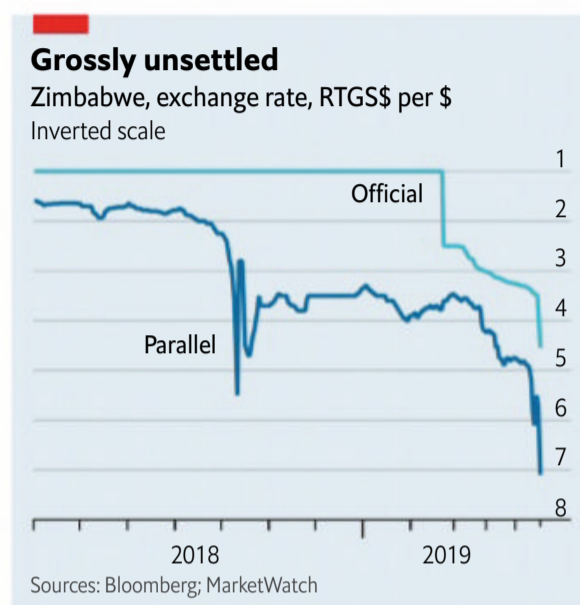
MOST CURRENCIES have snappy names, like yen, won, kip or lek. Some have unfortunate ones: dong or colón. Few have names as cumbersome as Zimbabwe's Real-Time Gross-Settlement Dollars, also known as RTGS-dollars or "zollars". Hard to say, the new currency is also hard to price. Last week it lost about 20% of its value against the American dollar, according to Market Watch, which tracks the currency's movements on the black market. This week it zagged, then zigged again (see chart). "You have to follow Zimbabwe hour by hour," says an economist in Harare.

Zimbabwe's previous homegrown currency was destroyed by the hyperinflation of 2007-08, forcing the country to adopt the American dollar (and other foreign currencies) instead. That worked well until 2015. But in the final years under Robert Mugabe, the longstanding dictator ousted in November 2017, the government could not muster enough genuine dollars to meet its spending ambitions. Instead it paid people with money of its own creation, transferred electronically into their dollar bank accounts. These "zollars", it claimed, were identical to a dollar. But if depositors withdrew them from the bank they received not greenbacks, but "bond notes": paper currency issued by the Reserve Bank of Zimbabwe, the country's central bank.

Last October the new government, led by Emmerson Mnangagwa, admitted that zollars and dollars were not the same, allowing depositors to keep them in separate accounts. By mid-December the banking system had almost 9.7bn in zollar deposits and only \$660m in dollars. But the government insisted that a zollar could fetch \$1.

If only. In reality, the central bank sold only small amounts of the American currency at the official one-to-one exchange rate, reserving a portion for grain and fuel imports, another for essential inputs to production and the remainder for favoured insiders. Dollars could be bought for higher prices on the black market. But that was not an option for many listed companies and foreign multinationals, which were wary of breaking the rules. They struggled to find hard currency. Delta Corporation, a beverage firm that bottles Coca-Cola, had to stop making fizzy drinks for months.

With the economy going flat, the government finally dropped the pretence of parity, devaluing the official exchange rate by 60% in February. But this forced move



was not accompanied by a plan to build the new currency's credibility. It was a "kick-and-rush strategy", says one observer. Like an English football team in the 1980s, the government hoofed the currency upfield, with no guarantee of regaining control.

Three months later the gap between the official and unofficial exchange rates has only widened. The finance ministry can boast a narrower budget deficit, thanks partly to higher fuel duties and a 2% tax on financial transactions. The central bank is also apparently planning to limit the growth of the money supply, narrowly defined, to 8-10% this year. And the government has asked the IMF to monitor its progress, even though it will remain ineligible for any IMF money until it has settled more than \$5.6bn of arrears to other official cred-

itors, including the World Bank.

None of this, however, has brought the new currency under the government's spell. In March the economy suffered from Cyclone Idai, which displaced 16,000 households and damaged crops that were already suffering from severe drought. The water shortage has also parched the country's hydroelectric dams, contributing to widespread power cuts. Last week the state electricity utility said it cannot import more electricity from South Africa and Mozambique until it has settled its \$80m debts to their producers. Its search for dollars may have contributed to the latest sharp turn in the exchange rate.

Over the weekend the Reserve Bank said it would step in, selling some of the \$500m it has reportedly borrowed from the African Export-Import Bank, a multilateral lender based in Cairo. And on May 21st it did so. But this support for the local currency was overwhelmed by another revelation. The central bank said Zimbabwe's petrol companies would no longer receive dollars at highly favourable rates, leaving them unsure if they could cover their costs. The confusion has prompted long queues at petrol stations, a further loss of confidence and another dash for dollars.

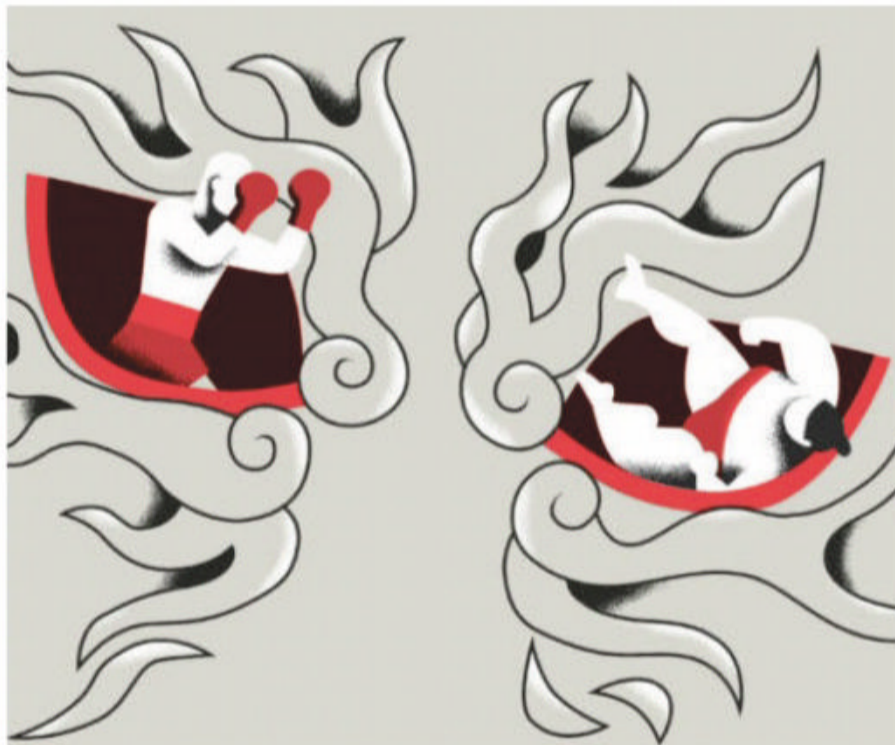
The new currency is becoming less widely used as well as cheaper. Shops and even schools are increasingly demanding dollars in payment, or setting zollar prices forbiddingly high. Inflation surpassed 75% in the year to April. If the government cannot restore faith in its own currency, the country may once again adopt America's instead. That should restore price stability: Zimbabwe's inflation averaged less than Japan's from 2012 to 2016. But it would also obliterate many households' zollar savings, create a shortage of small bills and coins, and limit the room for macro-economic manoeuvre. The dollar has a simple name. But redollarisation could be as ugly as it sounds. ■



Z day for the zollar?

Free exchange | The plaza discord

As the trade war heats up, China looks to Japan's past for lessons



HISTORY IS NEVER far from China's mind in its trade dispute with America. A few months ago, when negotiations looked on track, staunch nationalists warned of echoes with the "unequal treaties" that foreign powers had forced upon China in the 19th century. In recent weeks the breakdown in talks has led state propagandists to draw comparisons with the Korean war of the 1950s, a bloody struggle between China and America (see Chaguan). But the analogy that haunts Chinese economists does not involve China itself. They fear a replay of the Plaza accord of 1985, when Japan, under American pressure, tried to resolve trade tensions by pushing the yen higher. That calmed the tensions but, most Chinese economists think, at an intolerable price: stagnant Japanese growth for two-plus decades.

The parallels are imperfect. Dependent on America for security, Japan was constrained in its pushback. The Plaza accord also involved Britain, France and West Germany. Jeffrey Frankel of Harvard University has called it "a high-water mark of international policy co-ordination", which is not President Donald Trump's trademark. The substance was different, too. The five countries announced that they wanted the dollar to depreciate and intervened in currency markets to make it happen. Within a year the yen soared by nearly 50% against the dollar. By contrast, currencies are just one part of today's tussle between China and America. Over the past decade China worked to address complaints that the yuan was too low. So there are no calls for appreciation, only demands that China does not weaken it to help its exporters.

Looked at more generally, though, there are similarities. The Plaza accord is best understood not as a one-off event but as a critical stage in a multi-year dispute, which ranged from agriculture to electronics. America accused Japan of stealing intellectual property and plotting to control future industries. Robert Lighthizer, America's lead negotiator against China today, earned his spurs in these earlier battles. In 1990 the two countries agreed to a "Structural Impediments Initiative", which bears a striking resemblance to the crux of the debate today. America wanted Japan then—and wants China now—to improve its competition laws, open more widely to foreign investors and weaken its giant conglomerates (keiretsu groups in Japan, state-owned firms in China).

The case against the Plaza accord is that it set Japan on a path to doom. To counter the effect of a strong yen, an obvious drag on exports, Japan slashed interest rates and unleashed fiscal stimulus. These moves brought about an economic rebound. But they also generated asset bubbles: stock and land prices tripled within five years. In 1990 these bubbles burst and the economy slumped, never to recover its former *mojo*. In nominal terms Japanese stocks are still 40% below their peak on the final trading day of 1989. The Plaza accord, in this view, did succeed in defusing tensions between Japan and America, but only because it neutered Japan as a challenger. This has percolated into official thinking in China. As Cui Tiankai, China's ambassador to America, said last year: "Give up the illusion that another Plaza accord could be imposed on China."

The sequence of Japan's woes does seem to make for a damning indictment. But a closer look at each step shows that nothing was preordained. One point, clear in retrospect, is that Japan overcompensated for the slowdown in exports. Within 18 months of the Plaza accord, it had cut benchmark interest rates from 5% to 2.5%. It also announced a big stimulus package—increasing spending and cutting taxes—in May 1987, though by then its recovery was already under way. It did not shift gears and raise rates again until 1989, when its asset bubbles were already a few years old.

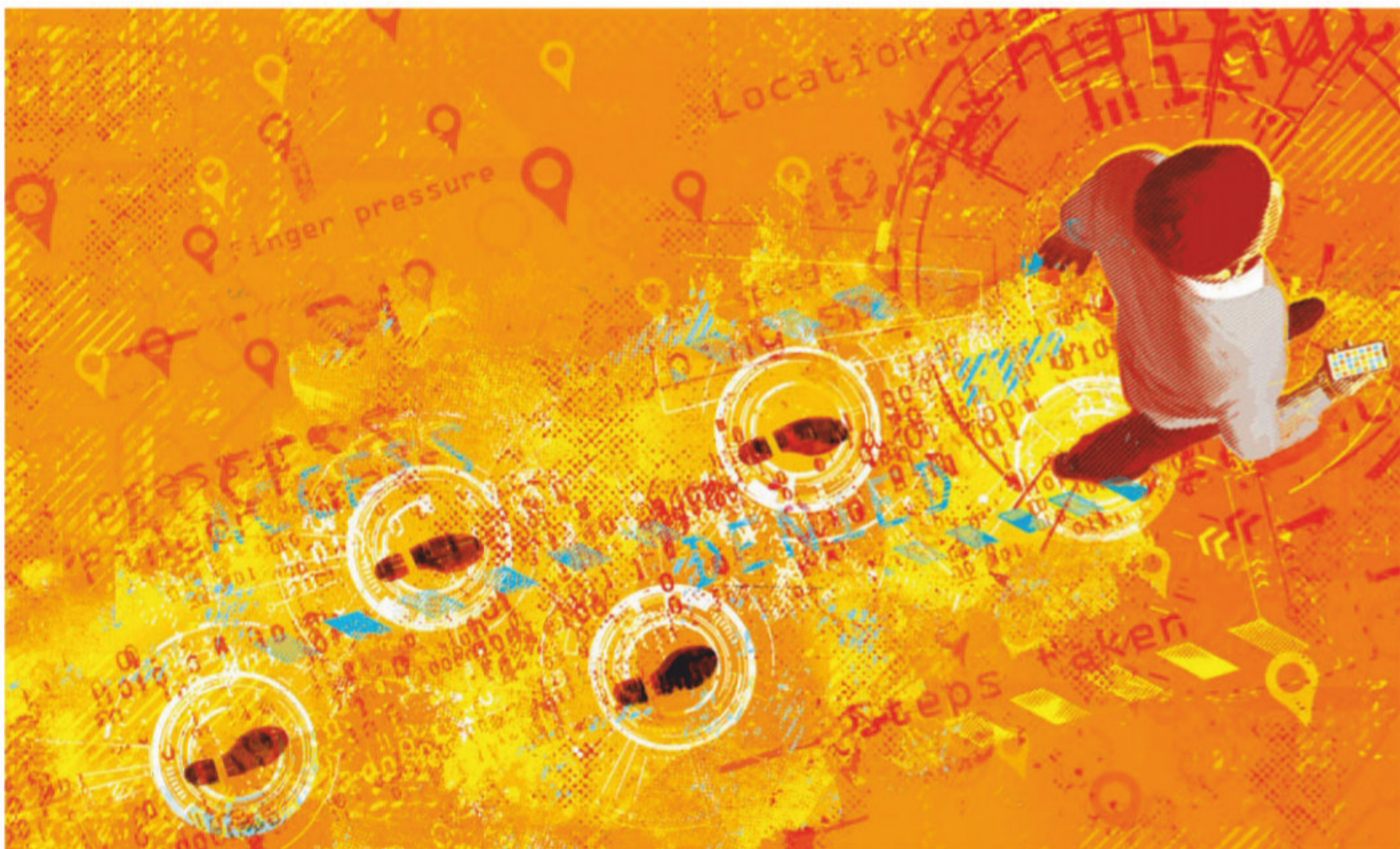
As the International Monetary Fund has argued, there were at least two other factors that could have led to a different outcome. Excessive stimulus, by itself, did not guarantee that Japan would suffer an asset bubble. It was that much more dangerous when combined with financial deregulation, which led banks to lend more to property developers and homebuyers. And the bursting of the bubble did not guarantee that Japan would suffer a lost decade, let alone three. A sluggish response by regulators compounded the trouble. Rather than pushing banks to raise capital, they encouraged them to go on lending to zombie firms.

So the simplistic story—that the Plaza accord felled Japan—misses the mark. Rather, China should draw two lessons from Japan's experience of trade tensions with America. First, it must get its domestic-policy response right. Japan feared that the deal with America would cause its growth to suffer; China fears the same about the absence of a deal. But the bigger dangers for Japan were over-stimulus and flawed regulation. China seems to grasp that. So far it has been cautious about pumping up growth. The real test will come if the trade war continues to escalate.

Ask the bellboy

A second lesson is the danger of resisting America's demands, just because it is America that is making them. Had Japan acted on some of America's long-standing gripes, it might have fared better in the 1990s. Domestic competition would have been stronger. A bigger role for foreign investors might have prompted Japanese banks to tackle their festering problems. Similarly, it is China, not America, that would be the biggest beneficiary if it moves more quickly to open its economy to foreign firms.

China might also note a historical curiosity. The talks in 1985 were in New York's Plaza Hotel, which was bought three years later by a property tycoon named Donald Trump. He paid nearly \$1bn in today's money. At the time he said he had "knowingly made a deal which was not economic", because the hotel was a masterpiece, not just a building. Sure enough, in 1992 the Plaza Hotel entered bankruptcy. That Mr Trump ended up harming himself might be comforting for China. That he went ahead despite knowing the risks should be less so. ■



Behavioural biometrics

The way you walk

Your phone uses your gait and sleep patterns, all in the name of security

MOST ONLINE fraud involves identity theft, which is why businesses that operate on the web have a keen interest in distinguishing impersonators from genuine customers. Passwords help. But many can be guessed or are jotted down imprudently. Newer phones, tablets, laptops and desktop computers often have beefed-up security with fingerprint and facial recognition. But these can be spoofed. To overcome these shortcomings, the next level of security is likely to identify people using things which are harder to copy, such as the way they walk.

Many online security services already use a system called device fingerprinting. This employs software to note things like the model type of a gadget employed by a particular user; its hardware configuration; its operating system; the apps which have been downloaded onto it; and other features, including sometimes the Wi-Fi networks it regularly connects through and devices like headsets it plugs into.

The results are sufficient to build a pro-

file of both the device and its user's habits. If something unusual is then spotted—say, a bank detects access to an account from a phone with a different profile from that which a customer usually uses—it can take appropriate measures. For example, additional security questions can be posed.

LexisNexis Risk Solutions, an American analytics firm, has catalogued more than 4bn phones, tablets and other computers in this way for banks and other clients. Roughly 7% of them have been used for shenanigans of some sort. But device fingerprinting is becoming less useful. Apple, Google and other makers of equipment and operating systems have been steadily restricting the range of attributes that can be

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observed remotely. The reason for doing this is to limit the amount of personal information that could fall into unauthorised hands. But such restrictions also make it harder to distinguish illegitimate from legitimate users.

That is why a new approach, behavioural biometrics, is gaining ground. It relies on the wealth of measurements made by today's devices. These include data from accelerometers and gyroscopic sensors that reveal how people hold their phones when using them, how they carry them and even the way they walk. Touchscreens, keyboards and mice can be monitored to show the distinctive ways in which someone's fingers and hands move. Sensors can detect whether a phone has been set down on a hard surface such as a table or dropped lightly on a soft one such as a bed. If the hour is appropriate, this action could be used to assume when a user has retired for the night. These traits can then be used to determine whether someone attempting to make a transaction is likely to be the device's habitual user.

Behavioural biometrics make it possible to identify an individual's "unique motion fingerprint", says John Whaley, head of UnifyID, a firm in Silicon Valley that is involved in the field. With the right software, data from a phone's sensors can reveal details as personal as which part of someone's foot strikes the pavement first, and how hard; the length of a walker's stride; ▶▶

▶ the number of strides per minute; and the swing and spring in the walker's hips and step. It can also work out whether the phone in question is in a handbag, a pocket or held in a hand.

Using these variables, UnifyID sorts gaits into about 50,000 distinct types. When coupled with information about a user's finger pressure and speed on the touchscreen, as well as a device's regular places of use—as revealed by its GPS unit—that user's identity can be pretty well determined, Mr Whaley claims. UnifyID began offering behavioural biometrics to its clients (which include retail banks, online retailers, delivery companies and ride-sharing firms) in 2017. In time, advertisers will pay for the scoop on individuals' lifestyle-revealing movements, reckons Mr Whaley, though his firm has no plans yet to expand in that direction.

The lidless eye

Behavioural biometrics can, moreover, go beyond verifying a user's identity. It can also detect circumstances in which it is likely that a fraud is being committed. On a device with a keyboard, for instance, a warning sign is when the typing takes on a staccato style, with a longer-than-usual finger "flight time" between keystrokes. This, according to Aleksander Kijek, head of product at Nethone, a firm in Warsaw that works out behavioural biometrics for companies that sell things online, is an indication that the device has been hijacked and is under the remote control of a computer program rather than a human typist.

On a device with a touchscreen rather than a keyboard, however, the reverse is true. Most people type with their thumbs on touchscreens, so flight times between keystrokes are longer. In this case, therefore, it is short flight times which are a signal of something suspicious going on—for example, that a touchscreen device is actually being operated remotely, using the keyboard of a laptop.

Used wisely, behavioural biometrics could be a boon. As Neil Costigan, the boss of BehavioSec, a behavioural-biometrics firm in San Francisco, observes, the software can toil quietly in the background, continuously authenticating account-holders without badgering them for additional passwords, their mother's maiden name "and all that nonsense". UnifyID and an unnamed car company are even developing a system that unlocks the doors of a vehicle once the gait of the driver, as measured by his phone, is recognised.

Used unwisely, however, the system could become yet another electronic spy on people's privacy, permitting complete strangers to monitor your every action, from the moment you reach for your phone in the morning, to when you fling it on the floor at night. ■

Measles vaccination

Never too old

Stopping measles outbreaks requires vaccinating adults too

BEFORE A vaccine became widely available in the 1960s, measles was an inevitable childhood disease. The highly contagious virus came round like clockwork. Infection conferred lifelong immunity—but at the cost, each year, of about 500 deaths and 50,000 hospitalisations in America alone. In the decades that followed, routine childhood vaccination in Western countries made measles increasingly rare. In recent years, however, outbreaks have become more frequent, with no signs of abating.

The resurgence has been blamed on parents refusing to vaccinate their children or delaying jabs. But what has also become clear is that vaccinating only children is no longer sufficient. In 2013-17 between 33% and 63% of the annual measles cases in Europe were among people older than 14 years. In 2017 the median age for measles cases in Italy, which has frequent outbreaks, was 27 years.

A paper published in *Science* this month shows how this pattern evolved. Using historical data and statistical modelling, the paper's authors find that as a country gets closer to fully eliminating measles, the age range of those who are not immune to the disease widens (see chart). Catch-up jabs, in other words, need to cover older and older groups of people.

The main reason for this is the accumulation over time of people who missed one or both of the two measles jabs that are routine for children. At the same time, falling birth rates have led to fewer and fewer babies, who are susceptible to measles until

they are old enough to be vaccinated. As a result, the average age of susceptible people has crept up.

For a variety of reasons, some cohorts in a given country may be particularly prone to a measles outbreak when they reach a certain age. One example in Britain is people born in the few years after 1998, when a fraudulent study linking a measles vaccine with autism scared many parents away from vaccinating their children. Now in their teenage years, these children are travelling abroad, including to countries with ongoing measles outbreaks. High-risk groups like these may become evident only when an outbreak sweeps through the population and the ages of those infected are tallied by health officials.

A growing number of studies in recent years have tried to get ahead of the curve by predicting which age groups have the highest risk of an outbreak. They typically draw on data from health records and various surveys asking people about their vaccinations and socialising habits (to gauge how easily they can catch and spread the virus).

Serological surveys, which measure antibodies in blood, are a particularly useful tool, but are not always available. Where they are, they have identified groups of people whose susceptibility to the virus is greater than those targeted by public health services for catch-up jabs—usually school-children and university students, who are easier to cover with a mass vaccination campaign. In this way, a study in Belgium found that in 2013 those aged 20 to 30 were particularly susceptible. At the time, the government was prioritising jabs for 10-to-13-year-olds.

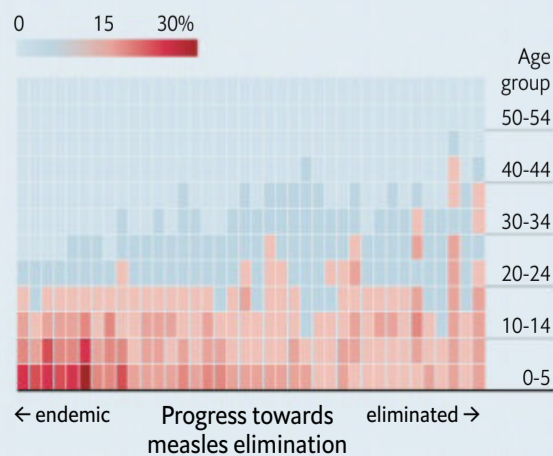
Why such studies matter is illustrated by outbreaks like one that hit a childcare centre near Antwerp, in Belgium, in 2014. An adult employee at the centre caught measles during a trip to the Dutch "bible belt", an area with a high concentration of religious groups opposed to vaccines. Upon returning to work, the employee started an outbreak that infected 28 infants; 12 were hospitalised.

There is another developing wrinkle in measles vaccination policy. For several months after birth, babies are protected by maternal antibodies passed on while they are still in the womb. But inherited antibodies wane two to three months earlier if the mother was vaccinated than they do if she became immune after being infected by the virus.

One seemingly obvious solution would be to vaccinate babies earlier. The catch, however, is that the vaccine is not very effective in children younger than a year, so they would still need to have two boosters later on in life. At a time when many parents fret over giving their children too many vaccines, adding a jab that is only partially effective may be a tough sell. ■

Spot the problem

Share of age group susceptible to measles, %
By countries' progress towards elimination



Source: "Measles and the canonical path to elimination", by Matthew Graham et al., *Science*, 2019

Biogeochemistry

Gold leaf

If you're looking for gold, don't look down. Look up.

IN THE GOOD old days, gold miners could seek out visible specks of bling at the surface in order to find deeper, richer veins. These days, prospectors must examine samples of dirt for more minute traces suggestive of a hidden seam below. Analysing water from boreholes can also yield clues, but boreholes are scarce and new ones are costly and time-consuming to drill.

Trees offer an alternative that is finally bearing fruit in Australia. The idea has been around since the 1940s but, until now, never practical. Some trees have roots that reach deep underground, drawing up water and, along with it, tiny quantities of minerals that end up distributed throughout the tree. In this way, even lofty leaves bear traces of what lies far beneath. The quantities are minuscule. In areas where there is no gold, leaves may have a background level of 0.15 parts per billion (ppb) of gold; on gold-rich sites that can rise to 4ppb.

In theory, "biogeochemical" prospecting is a simple matter of collecting leaves from across a site and mapping mineral concentrations to reveal subterranean treasures. It is best applied to dry regions where plants seek out water with deep roots. Some even break down soil to extract mineral nutrients, thus increasing the amount of telltale minerals in their leaves. Gold is the obvious element to look for, but checking for elements that are associated with gold deposits, such as antimony and bismuth, can also be sensible.

Sampling is harder than it sounds, though. Different trees accumulate gold in different ways, so exactly the same species must be sampled across each site for valid comparisons. Acacia is one of the trees of choice, but Australia has about 1,000 Acacia species, many of which look similar. To confuse matters further, the degree to which elements accumulate in leaves varies with the seasons.

In proof-of-principle studies over the last few years, Nathan Reid and his team at CSIRO, Australia's national science agency, have shown that biogeochemical prospecting closely tallies with the surface and groundwater analyses. Inspired by these results, Marmota, an exploration firm, put the method to the test at its Aurora Tank site, 50km from the highly-productive Challenger mine in South Australia.

Leaves collected immediately around a known deposit that lies beneath ten metres of rock contained traces of gold, validating

Human evolution

Stone-age hot pots

Geothermal springs could help explain how human brains got so big

HOW AND WHY, roughly 2m years ago, early human ancestors evolved large brains and began fashioning relatively advanced stone tools, is one of the great mysteries of evolution. Some researchers argue these changes were brought about by the invention of cooking. They point out that our bite weakened around the same time as our larger brains evolved, and that it takes less energy to extract nutrients from cooked food. As a result, once they had mastered the art, early chefs could pare back their digestive systems and invest the resulting energy savings in building larger brains capable of complex thought. There is, however, a problem with the cooking hypothesis. Most archaeologists believe the evidence of controlled fire stretches back no more than 790,000 years.

Roger Summons of the Massachusetts Institute of Technology has a solution. Together with his team of geomicrobiologists, he analysed 1.7m-year-old sandstones that formed in an ancient river at Olduvai Gorge in Tanzania. The region is famous for the large number of human

fossils that have been discovered there, alongside an impressive assembly of stone tools. The sandstones themselves have previously yielded some of the world's earliest sophisticated Acheulean hand axes: large tear-drop-shaped stone tools that are associated with *Homo erectus*. Creating an Acheulean axe by repeatedly knocking flakes off of a raw stone in order to create two sharp cutting edges requires a significant amount of planning. Their appearance is therefore thought to mark an important moment in cognitive evolution.

Trapped inside the Olduvai sandstones, the researchers found distinctive but unusual biological molecules that are often interpreted as biomarkers for heat-tolerant bacteria. Some of these thrive in water between 85 and 95°C. The molecules' presence suggests that an ancient river within the gorge was once fed by one or more hot springs, fitting nicely with its location within the geologically active East African Rift. The findings are published in a paper posted to the online bioRxiv preprint server.

Dr Summons and his colleagues say the hot springs would have provided a convenient "pre-fire" means of cooking food. In Rotorua in New Zealand, the Maori have traditionally cooked food in geothermal springs (see picture), either by lowering it into the boiling water or by digging a hole in the hot earth. Similar methods exist in Japan and Iceland, so it is plausible, if difficult to prove, that early humans might have used hot springs to simmer meat and roots.

Richard Wrangham, a primatologist at Harvard University who devised the cooking hypothesis, is intrigued by the idea. Nonetheless, fire would have offered a distinct advantage to humans, once they had mastered the art of controlling it since, unlike a hot spring, it is a portable resource.



Not a fire in sight

the approach. Further samples were taken 40 metres apart around known deposits, and at wider spaces farther out. This turned up several anomalies, where gold seemed to be present but other tests had shown nothing. "The usual calcrete [surface sample] testing was saying 'Don't drill here,'" says Colin Rose, Marmota's executive chairman, "but the tree sampling was saying 'Drill here'."

Then came the pay-off. Drilling revealed a five-metre-thick vein with 27g of

gold per tonne, more than 30 metres below the surface. A metre-thick inner layer held an impressive 105g per tonne. Five grams per tonne is considered high-grade.

Marmota is keen to explore further. In the outer sampling zone, the company found four anomalies in an area where only one potential seam had been identified. They have yet to be drilled but plans are afoot. Prospecting with trees is starting to look less like a scientific curiosity and more like a golden opportunity. ■



Commemorating slavery

Giving up the ghosts

RIO DE JANEIRO

For some in Brazil, remembering slavery is vital; others are wary of a painful past

IN 2005 Giovanni Harvey began to buy property in the port district of Rio de Janeiro. The area was dilapidated and controlled by drug-traffickers; he would wear a tucked-in shirt (to show he was unarmed) and sandals (suggesting he had no reason to run). But Rio aspired to host the World Cup and the Olympics, and the area was due to be gentrified. To Mr Harvey, a successful black businessman who founded Brazil's first incubator for Afro-Brazilian entrepreneurs and served as national secretary for racial equality, the purchase was "purely an investment". He knew nothing about the port's role in slavery.

Two events in February 2011 changed that. On a business trip to Senegal he visited the Maison des Esclaves, where enslaved Africans were loaded onto ships for the Americas. "Until then, I'd had a romantic image of slavery," he says. In the 1970s his school had glossed over such dehumanising aspects as family separation. In Africa, he wept. Just days after returning to Brazil, he turned on the television and saw an archaeologist discussing the "discovery" of the Cais do Valongo, a wharf in Rio where around 1m slaves had disembarked (pictured). It was two blocks from his house.

Since then, Mr Harvey and a small group

of Rio-based academics, entrepreneurs and activists have fought to disseminate this history. It is an uphill battle. The wharf was recognised as a UNESCO World Heritage site in 2017, but risks losing that status because of political bickering, economic woe and the government's perennial negligence over historical preservation, especially when the history in question is painful. A plan to construct a museum next to the wharf has won international support, but attracted neither funding nor powerful domestic politicians to tout it.

These days the wharf is ridden with graffiti and trash. Other relevant sites are in even sorer states—but then, so is much of Rio. For some, commemorating slavery is a vital part of addressing contemporary injustices. For others, it is a distraction.

Beyond samba

Between 1525 and 1866 more than 12m slaves were shipped across the Atlantic to European colonies in the Americas. Around half a million died on the way to Brazil; of the 4.9m who disembarked there, around half did so in Rio, according to Emory University's Transatlantic Slave Trade Database (see chart on next page). At the height of the slave trade in the early

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1800s, when gold, coffee and sugar cane were booming, 400-500 enslaved Africans landed at the Valongo wharf every week, says Monica Lima of the Federal University of Rio de Janeiro. Its unearthing in 2011 was not really a discovery, she notes. Documentary evidence had always existed, but over the years the wharf was covered up—by a new pier to receive the Portuguese empress in 1843; by a commercial plaza in the early 1900s; by a powerful myth, confected in the 1930s, that Brazil is a "racial democracy".

"There's this notion that Brazil isn't as racist because it has lots of interracial marriages and everyone loves samba," says Ms Lima. Though Brazil was late to outlaw slavery, in 1888, it did not adopt the segregation and miscegenation laws that ensued in America. More fluid relations helped perpetuate a feeling that slavery need not be dwelled upon. Mr Harvey sees himself as a victim of this "social amnesia".

In the 1970s Brazil's civil-rights movement started to question the idea of racial equality. It gradually brought about change. During the presidency of Luiz Inácio "Lula" da Silva (2003-10), a law instructed schools to teach Afro-Brazilian history. Steps were taken to boost black education and alleviate poverty; descendants of escaped slaves living on informal settlements called *quilombos* gained land rights. São Paulo opened the Museu Afro Brasil, a complement to an existing institution in the north-eastern city of Salvador (though neither focuses on slavery).

In Rio, Eduardo Paes, a white mayor known for his love of samba, promised that a multi-billion-dollar project to renovate the port would benefit the black neigh- ▶

► bourhoods around it. Rebranded with an old nickname, Little Africa, the area has witnessed a cultural flowering in recent years, including the Museu de Arte do Rio, which hosted Brazil's first major exhibit about samba, and the rebirth of a weekly gathering at Pedra do Sal, a rock where early sambistas jammed. Julio Barroso, a cultural impresario, says it is these sorts of initiatives that the government should support. "We can't get stuck in the past," he says, "we have to look toward the future."

Others insist that the awful history of slavery must be remembered alongside uplifting narratives. "It's more than just a reference point, it's the defining factor in the construction of Brazilian identity," thinks Ms Lima. Ignorance, they say, only makes this task more urgent. When vestiges of the Valongo wharf began to emerge in 2011, Mayor Paes gleefully announced that Rio had found its "Roman ruins". Newly enlightened, Mr Harvey protested. "This is our Maison des Esclaves," he said. More fumbling followed, including a short-lived suggestion that the mayor's office inaugurate the wharf with a musical re-enactment of a slave voyage, featuring black actors.

The unquiet dead

Because of such insensitivity, many black people in Rio are apprehensive about the museum proposal. The original plan was to use a warehouse near the wharf owned by the federal government and constructed in 1871 (without slave labour) by André Rebouças, a black engineer. The Smithsonian Institution and other overseas bodies were supportive, but the scheme came to nothing, as did a proposal in 2017 from Rio's new mayor, Marcelo Crivella, for a "Museum of Slavery and Liberty". Its unfortunate Portuguese acronym—MEL, meaning honey—sparked an outcry.

The project was renamed and given the broader purpose of chronicling the African diaspora. Then, in February, Nilcemar Nogueira, the municipal official responsible, was demoted. She insists the plans are progressing; the 80m reais (\$19.5m) required will come from private donations, she says. Meanwhile, rubbish collection at the wharf depends on a grant from America's State Department. "If the mayor's office can't even take out the trash, how is it going to run a museum?" asks Luiz Eduardo Negro-gun of the State Council for Black Rights.

One danger is that debate over how to handle such a sensitive subject, which could be therapeutic, will instead be a pretext for uninterested governments to abandon the project altogether. Brazil's far-right president, Jair Bolsonaro, once characterised *quilombo* residents as fat and lazy. Mr Crivella (an evangelical Christian) is the first Rio mayor in decades to refuse to attend carnival celebrations. Choosing whether and how to highlight slavery is "a

political decision", says Milton Guran, an anthropologist who co-ordinated the Valongo wharf's recognition by UNESCO.

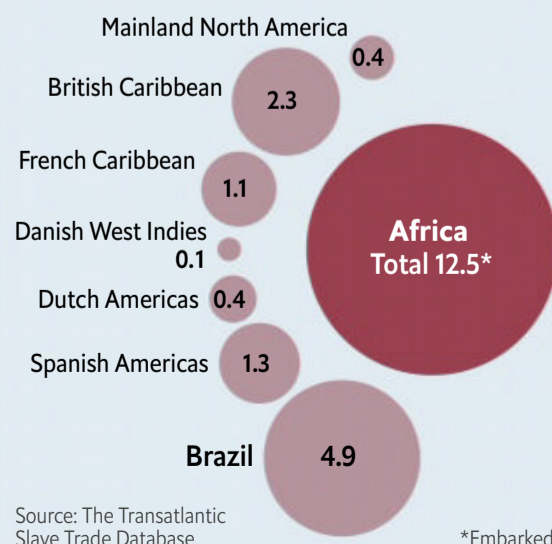
Ali Moussa Iye, director of UNESCO's Slave Route Project, which has just issued guidelines on managing slavery-related sites, notes that the task is often complicated by the paucity of physical exhibits: "apart from shackles here and there, it is an intangible heritage." In Rio, though, even such artefacts as have survived have been neglected. Consider the "New Blacks Cemeteries", pitiful church-side plots where newly arrived slaves who died from disease or exhaustion were dumped like rubbish. In 1996 a white woman came across some such remains while building a house. Mercedes Guimarães now runs a tiny museum called the "Institute of New Blacks", where visitors can peer through a glass panel in the floor and see the skeletons of slaves.

But there has been no effort to fund large-scale excavations or memorials. "Archaeology in Brazil doesn't produce knowledge, it just accumulates material," says João Carlos Nara, an architect and historian who studies the Santa Rita church in Rio, where thousands of slaves were buried in the mid-18th century. He thought the construction of a tram line on the site could be an opportunity to learn what lay beneath. But the city was keen to finish the job.

After some debate, the firm in charge proposed raising the tracks to avoid the bones, and to give several stations apposite names such as "Little Africa" and "New Blacks". Black leaders reluctantly agreed—to forestall a repetition of what happened to the material recovered from the Valongo wharf in 2011. Mr Negro-gun summarises that bleak precedent: "The remains of our ancestors are sitting in plastic bags in air-conditioned shipping containers waiting for whenever there's enough money to study them." Last year, construction on the tram line moved forward. Whatever bones had emerged were quickly covered up. ■

Of human bondage

Transatlantic slave trade from Africa, 1525-1866
By disembarkation region, estimates, m



Big Brother's afterlife

The clock strikes 13

The Ministry of Truth: The Biography of George Orwell's "1984". By Dorian Lynskey. Doubleday; 368 pages; \$28.95. Picador; £16.99

HOW GEORGE ORWELL would have relished these times. Alternative facts, troll farms, meme warfare—he would be spoiled for material. "The Ministry of Truth", Dorian Lynskey's biography of "1984", joins the dots between the age of fake news and Orwell's work.

Mr Lynskey begins with the genesis of "1984" and its reception in 1949, and then explains how it reverberated through the cold war. The Spanish civil war and Orwell's career in the BBC may seem familiar, but the novel's literary background is arresting. Utopian and dystopian stories had become increasingly popular since H.G. Wells published his series of late-Victorian hits such as "The War of the Worlds". Orwell was heavily influenced by Wells; Mr Lynskey gives a poignant account of the ageing man of letters dining with the rising star in Orwell's tiny flat in London in 1941. The result was a bust-up, the aggrieved Wells skulking off into the darkness.

As Mr Lynskey says, Orwell wrote "1984" not as a prophecy but as a warning, to galvanise action so that the future he described never came to pass. He succeeded; the book became a weapon in the Western fightback against totalitarianism in the 1940s and beyond. Yet, as Mr Lynskey relates, by the 1970s it had become so proverbial as to be colonised by gormless television shows and indifferent pop-music albums. Its wholesale appropriation by pop culture blunted its political force.

When the Soviet Union fell, Orwell's oeuvre might have become a historical curiosity. After all, mid-century writing that was meant to expose the despotism of both the communist left and fascist right should have become irrelevant; history was deemed to have ended. That is not how it turned out, for history or Orwell.

Disappointingly, the section on his modern resonance is the weakest part of Mr Lynskey's book. He devotes only a brief passage to the Orwellian echoes in Donald Trump's presidency: the lies that warp reality, the obsolescence of facts, the divergent information universes of Fox News and CNN. The obvious implication—that the totalitarian methods chronicled by Orwell 70 years ago are now being recycled by supposed democrats—should concern everyone. But it awaits a more rigorous analysis than the one offered here. ■



British history

Prince charmless

The Regency Years: During Which Jane Austen Writes, Napoleon Fights, Byron Makes Love, and Britain Becomes Modern. By Robert Morrison. *W.W. Norton*; 416 pages; \$29.95

IF A SINGLE man in possession of a large fortune must be in want of a wife, that is nothing to how a regent in possession of a large debt tends to feel. By 1795 Britain's dissolute Prince Regent (pictured) had, through his passions for horses, mistresses and diamond-buttoned breeches, acquired debts of £630,000 (roughly £74m or \$94m today); the unwelcome attentions of Parliament; and an even less welcome engagement to a wealthy cousin.

The dialogue at the meeting of the betrothed would not be easily confused with Jane Austen's. Upon seeing his bride, Caroline of Brunswick, the regent declared: "I am not well. Pray, get me a glass of brandy." Caroline, meanwhile, announced: "I think he's very fat and he's nothing like as handsome as his portrait." Of Mr Darcy-style smouldering there was little—not counting the fact that, on their wedding night, the regent got so drunk that he collapsed into the fireplace in the bridal chamber.

It is a scene that deserves to be well-known but, like so much in the Regency period, it is not. "I awoke one morning and found myself famous," Lord Byron, a Regency poet, once said. The period itself has suffered from the opposite problem. Sandwiched between the more solemn and substantial Georgian and Victorian eras, it has always felt like a transition, so flighty it is unable even to muster a proper monarch as

its namesake. Today it is widely ignored, except perhaps through the lens of Austen's writing or Napoleon's fighting.

What a shame, says Robert Morrison in his superb new book "The Regency Years"—the first on the period in 30 years. It is a hoary old criticism of Austen that she left the Napoleonic wars out of her work. That is the least of it, Mr Morrison writes. Her England also has "no Luddite riots, no steam locomotives, no displaced families of factory workers, and no contaminated rivers." Austen skips discreetly over England's thriving porn industry, its appalling opioid crisis and its burgeoning gay-rights movement. But they were there.

As Mr Morrison's subtitle contends, it was in this period—not its celebrated Victorian successor—that Britain started to become modern. Certainly there is much that feels contemporary. Take that opioid epidemic. At this time laudanum (a mixture of brandy and opium) was "an unremarkable part of daily life", not only prescribed by doctors but flogged by bakers, grocers and publicans. Charles Lamb endured his cold with it; Austen's mother alleviated her travel sickness with it; Samuel Taylor Coleridge composed "Kubla Khan" on it. Babies were dosed on Mother Bailey's (doubtless effective) "Quieting Syrup".

It was also a period of sexual experimentation, liberation—and infection. The population of London's prostitutes rose to an estimated 50,000; rates of disease soared accordingly. Regency rakes such as Byron were not only "mad, bad and dangerous to know", they were even more dangerous to sleep with. Syphilis attacked without regard for rank or privilege. If you think the Elgin Marbles, snatched from Athens at this time, look dilapidated, that is nothing to the state of Lord Elgin himself. Shortly after selling the marbles to the British Museum, and with his nose viciously consumed by the disease, he retired from public life.

This era also saw the birth of that most modern spectacle, the political sex scandal. In November 1815 the "most infamous Regency flagellant" (this being an age that offered competition for such a title), an MP named Sir Eyre Coote, entered Christ's Hospital mathematical school, sent away the younger boys and paid the older ones for a bout of mutual flogging. The school nurse arrived to find him buttoning his breeches; England's satirical press had come of age in time to make the very most of such a moment. Coote endured a cartoon by George Cruikshank, a vaunted caricaturist, and national humiliation.

The Regency period lasted for less than a decade but, as Mr Morrison argues, "its many legacies are still all around us." It was also, as this book amply proves, marvelously entertaining. It deserves to find itself a little more famous than it has been. ■

Tony Thomas

The boy from Africa

Remembering a great Economist journalist, who has died at 78

"FRESH AIR and fresh light" was how Tony Thomas appeared to his bureau chief when he breezed into the Brussels office of *The Economist* in 1974. Improbable, even. He had come out of Africa, via the *Yorkshire Post* and the Washington office of the *Times*, to cover Britain's efforts to join the Common Market. Unlike the desk-bound pundits in St James's Street, here was a journalist of the old school. He was not afraid to get his hands dirty; to ask in his brisk, emphatic way, "What's the story?" and to challenge conventional wisdom whenever he met it. Throughout his quarter-century at *The Economist*, as well as over fine wine and venison stew in the Welsh hills he retired to, he kept the habit.

His Southern Rhodesian background made that difference. He was always, in accent, dress, head and heart, the boy from Africa. Bulawayo, his home town, was a place for hard grafters, unlike soft-handed Harare. So straight out of government school at 16 he had joined the *Bulawayo Chronicle*, then made his way to England to work there. But the move didn't change him. When his doctor remarked latterly that he should be good for a couple of years, he told friends he would be able to plant at least one more crop of "mealies", or maize.

Once at *The Economist* he thrived, writing for almost every section of the paper. After Brussels he became US business correspondent, covering the whole country out of New York. America became his lasting joy and fascination. He did two stints ▶▶



Tony and Sarah

▶ there, and never tired of reviewing books on its history. With Edmund Fawcett, a colleague whose sister, Sarah (pictured right on previous page), he married, he wrote “The American Condition”, assessing land and people with his usual unflinching eye—but also the humanity of Rembrandt or Norman Rockwell, favourite artists.

In London, as Business Affairs editor for six years, he kept a spike in his office to receive poor copy. (Ever the country boy, he also killed a stray mouse with it.) He wrote an enthusiastic survey on golf, ran Books & arts, and with the then-editor, Rupert Pen-

nant-Rea, a soft Harare man, introduced a sports page. Its failure disappointed him. But then, at Books & arts, he was already doing “the best job on the paper”.

Meanwhile he used his clear eye, first, to turn writers’ dross into good vigorous prose, and second to spot young talent when it turned up. Several of today’s senior editors were hired by him. He took pride in that, and them.

His move to a whitewashed cottage in Crickadarn in 1998 seemed sudden, prompted by a cancer prognosis that he delightedly outlived by many years. But

Wales was the land his great-grandparents had left for southern Africa; and there he turned his voracious appetite for life to becoming an honorary Welshman. He was a vice-president of the Erwood agricultural show, grew vegetables of prize-winning size, was teaching himself Welsh and found in Mattie (short for Matabele), a spirited Welsh springer, the perfect dog. But, like any journalist worth their salt, he loaded the sofa at weekends with every decent London paper he could get. For though he might have left the world of news, it, like *The Economist*, never left him. ■

Johnson Mother tongues



Forcing immigrants to learn English can be counter-productive

LEV GOLINKIN left Soviet Ukraine as a nine-year-old in 1990. With assistance from HIAS, a Jewish organisation that helps refugees, his family made its way to Indiana. In America, not having English felt “like having a massive stroke, only instead of being sent to the hospital and getting help you have to go out and get a job.” His experience suggests immigrants don’t have to be told how important it is to speak the language of a new country: they are more painfully aware of it than natives can ever know.

Yet they are often assumed to need coercion. On May 16th, for example, Donald Trump vowed to ensure that immigrants to America learn English and pass a civics exam before arriving.

Such strictures might seem to serve national cohesion. In fact, the wrong policies and tone do the reverse, as Vicky Fouka of Stanford University found in a study of German-Americans living a century ago. With its large German-immigrant population, Ohio was the first of several states to permit teaching in German alongside English. By 1900 some 4% of elementary-school pupils in America were taught at least partly in German. After the first world war anti-German sentiment led to the end of those programmes and, in Ohio and Indiana, even to a ban on teaching German as a foreign language to young children.

Ms Fouka compared German-American populations in border counties of Ohio and Indiana with their neighbours in adjacent states (who experienced no language ban). She found that those affected by the ban were more likely to marry another German and give their children German names, and less likely to enlist during the second world war. Forced assimilation backfired at every level, from the personal to the political.

Unless the intention was not assimilation at all. Sometimes language laws are mostly symbolic. For instance, numerous American states have declared English to be their official tongue (at a federal level, the country doesn’t have one). This seems intended to send a message—“We speak English here”—without doing much to change reality on the ground. Sometimes, though, laws seem designed to make life as hard as possible for immigrants.

Take Proposition 227 of 1998, whereby Californian voters eliminated almost all of the state’s bilingual education programmes. Bilingual teaching was always intended as a bridge to English, but in a polarising campaign it was portrayed as allowing kids to avoid English altogether. (A few years earlier, another vote had stripped illegal immigrants of state benefits.) A later analysis provided scant evidence that Proposition 227 made much difference to English-learning. But the Republican-led anti-immigration backlash of the 1990s led to a counter-backlash: California Latinos, though often religious and socially conservative, have been solid-

ly Democratic since.

California’s conservatives were right to spot a rising cohort of foreign-born residents. They had two options: to try to make them patriotic Americans (and Republican voters) with a positive appeal, or to threaten them with punishments. Choosing the latter, they lost twice, in both language and politics. Californians overwhelmingly repealed Proposition 227 in 2016. The state is riotously multilingual, even as English remains the essential language, as it is in the rest of the country.

Just how permissive should receiving countries be? Corine Dehabey, a Syrian-American who helps immigrants learn English in today’s Ohio, thinks that, if policies are too accommodating, there is a risk that people don’t feel any pressure to acquire the language. But if she could make one change, it would be to give them more time to do so. Current policies push newcomers to find work as soon as possible. That leads to doctors and engineers driving taxis, because they have yet to requalify in America.

Adults often struggle to learn a new language, as Mr Golinkin’s mother did, going from being a psychiatrist in Ukraine to a security guard in America. Some pull it off, as Mr Golinkin’s father did by studying English for years before the move. But nearly all children master their adopted country’s language, as Mr Golinkin (now a writer) did quickly. Children are sponges for languages—and for attitudes, too. Their views of their new homes will forever be shaped by the way they are treated when they arrive.



Correction: Johnson’s previous column mistakenly said that “Tuesday” includes the Indo-European root *dyeu* twice. *Dyeu* produced the word for day in other languages, but English “day” is thought to be from *dhegwh*, “to burn”. Sorry.



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InvestHK invites companies with experience in investment promotion, economic development, or international business development to submit an expression of interest for provision of the following services in the markets of **Brazil, France, Italy, Middle East and North Africa (MENA - as one market), Russia, CIS and Baltic States (as one market), South America (except Brazil), South Korea, and Turkey.**

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Economic data

	Gross domestic product			Consumer prices		Unemployment rate		Current-account balance		Budget balance		Interest rates		Currency units		
	% change on year ago			% change on year ago		%		% of GDP, 2019†		% of GDP, 2019†		10-yr gov't bonds	change on	per \$	% change	
	latest	quarter*	2019†	latest	2019†							latest,%	year ago, bp	May 22nd	on year ago	
United States	3.2	Q1	3.2	2.2	2.0	Apr	2.2	3.6	Apr	-2.6	-4.7	2.4	-67.0	-	-	
China	6.4	Q1	5.7	6.4	2.5	Apr	2.5	3.7	Q1§	0.3	-4.5	3.1	§§	-13.0	6.90	-7.7
Japan	0.8	Q1	2.1	1.0	0.5	Mar	1.1	2.5	Mar	3.9	-3.4	-0.1	-10.0	110	0.6	
Britain	1.8	Q1	2.0	1.0	2.1	Apr	1.8	3.8	Feb††	-4.1	-1.6	1.1	-43.0	0.79	-5.1	
Canada	1.6	Q4	0.4	1.6	2.0	Apr	1.7	5.7	Apr	-2.6	-1.1	1.7	-80.0	1.34	-4.5	
Euro area	1.2	Q1	1.6	1.3	1.7	Apr	1.3	7.7	Mar	3.2	-1.2	-0.1	-65.0	0.90	-5.6	
Austria	2.4	Q4	5.1	1.3	1.7	Apr	1.8	4.8	Mar	2.0	0.1	0.2	-57.0	0.90	-5.6	
Belgium	1.1	Q1	0.7	1.2	2.1	Apr	2.2	5.7	Mar	0.1	-0.9	0.4	-46.0	0.90	-5.6	
France	1.1	Q1	1.2	1.2	1.3	Apr	1.3	8.8	Mar	-0.6	-3.3	0.3	-52.0	0.90	-5.6	
Germany	0.7	Q1	1.7	0.9	2.0	Apr	1.4	3.2	Mar‡	6.6	0.7	-0.1	-65.0	0.90	-5.6	
Greece	1.6	Q4	-0.4	1.8	1.0	Apr	1.3	18.5	Feb	-2.5	nil	3.4	-93.0	0.90	-5.6	
Italy	0.1	Q1	0.9	0.1	1.1	Apr	0.9	10.2	Mar	2.0	-2.9	2.6	32.0	0.90	-5.6	
Netherlands	1.7	Q1	1.9	1.4	2.9	Apr	2.6	4.1	Apr	10.2	0.7	0.1	-55.0	0.90	-5.6	
Spain	2.4	Q1	2.9	2.2	1.5	Apr	1.2	14.0	Mar	0.5	-2.2	0.8	-58.0	0.90	-5.6	
Czech Republic	3.0	Q4	2.0	2.8	2.8	Apr	2.2	2.0	Mar‡	0.2	0.7	1.8	-16.0	23.1	-5.5	
Denmark	2.5	Q4	1.2	1.9	1.0	Apr	1.1	3.7	Mar	6.3	1.0	nil	-58.0	6.70	-5.5	
Norway	2.5	Q1	-0.3	1.9	2.9	Apr	2.5	3.8	Feb††	7.7	6.6	1.7	-31.0	8.75	-7.9	
Poland	4.5	Q4	5.7	3.8	2.2	Apr	1.7	5.6	Apr§	-0.6	-2.4	2.9	-38.0	3.86	-5.4	
Russia	0.5	Q1	na	1.5	5.2	Apr	4.9	4.7	Mar§	6.9	2.1	8.0	53.0	64.3	-4.9	
Sweden	2.4	Q4	4.7	1.6	2.1	Apr	1.7	7.1	Mar§	2.6	0.3	0.1	-63.0	9.64	-9.8	
Switzerland	1.4	Q4	0.7	1.6	0.7	Apr	0.5	2.4	Apr	9.7	0.5	-0.3	-46.0	1.01	-2.0	
Turkey	-3.0	Q4	na	-1.7	19.5	Apr	16.1	14.7	Feb§	-0.7	-2.3	19.8	480	6.11	-23.9	
Australia	2.3	Q4	0.7	2.5	1.3	Q1	1.7	5.2	Apr	-2.4	-0.2	1.6	-125	1.45	-9.0	
Hong Kong	0.6	Q1	5.4	2.0	2.1	Mar	2.3	2.8	Apr††	4.6	0.5	1.6	-78.0	7.85	nil	
India	6.6	Q4	5.1	6.9	2.9	Apr	3.7	7.4	Apr	-1.8	-3.4	7.3	-55.0	69.7	-2.3	
Indonesia	5.1	Q1	na	5.2	2.8	Apr	2.8	5.0	Q1§	-2.7	-2.1	8.0	59.0	14,525	-2.7	
Malaysia	4.5	Q1	na	4.5	0.2	Mar	0.8	3.4	Mar§	2.5	-3.5	3.8	-39.0	4.19	-5.3	
Pakistan	5.8	2018**	na	3.4	8.8	Apr	8.2	5.8	2018	-4.0	-7.0	13.7	†††	152	-23.8	
Philippines	5.6	Q1	4.1	5.7	3.0	Apr	3.6	5.2	Q1§	-2.2	-2.5	5.8	-49.0	52.5	-0.5	
Singapore	1.2	Q1	3.8	1.8	0.6	Mar	0.5	2.2	Q1	18.7	-0.6	2.2	-48.0	1.38	-2.9	
South Korea	1.8	Q1	-1.4	2.4	0.6	Apr	1.0	4.4	Apr§	4.5	1.0	1.8	-94.0	1,193	-9.0	
Taiwan	1.7	Q1	2.0	1.9	0.7	Apr	0.1	3.7	Apr	13.2	-1.2	0.7	-30.0	31.6	-5.1	
Thailand	2.8	Q1	4.1	3.5	1.2	Apr	0.9	0.9	Mar§	8.8	-2.8	2.0	-60.0	31.9	0.4	
Argentina	-6.2	Q4	-4.7	-0.9	55.1	Apr	46.1	9.1	Q4§	-2.1	-3.2	11.3	562	44.6	-45.5	
Brazil	1.1	Q4	0.5	1.5	4.9	Apr	4.0	12.7	Mar§	-1.3	-5.8	6.8	-172	4.02	-9.2	
Chile	1.6	Q1	-0.1	3.2	2.0	Apr	2.2	6.9	Mar§††	-2.5	-1.4	3.8	-75.0	698	-10.0	
Colombia	2.3	Q1	nil	3.1	3.2	Apr	3.1	10.8	Mar§	-3.5	-2.0	6.5	-14.0	3,339	-14.6	
Mexico	1.3	Q1	-0.8	1.4	4.4	Apr	4.2	3.6	Mar	-1.7	-2.3	8.1	35.0	19.0	4.2	
Peru	4.8	Q4	11.4	3.7	2.6	Apr	2.2	7.5	Mar§	-1.7	-2.0	5.6	64.0	3.35	-2.4	
Egypt	5.5	Q4	na	5.5	13.0	Apr	12.2	8.1	Q1§	-1.0	-7.9	na	nil	16.9	5.8	
Israel	3.3	Q1	5.2	3.1	1.3	Apr	1.2	3.9	Mar	2.7	-3.9	1.8	-20.0	3.61	-1.4	
Saudi Arabia	2.2	2018	na	1.9	-1.9	Apr	-1.1	6.0	Q4	3.6	-6.7	na	nil	3.75	nil	
South Africa	1.1	Q4	1.4	1.5	4.4	Apr	5.0	27.6	Q1§	-3.2	-4.2	8.4	-15.0	14.4	-12.3	

Source: Haver Analytics. *% change on previous quarter, annual rate. †The Economist Intelligence Unit estimate/forecast. §Not seasonally adjusted. ‡New series. **Year ending June. ††Latest 3 months. †††3-month moving average. §§5-year yield. ††††Dollar-denominated bonds.

Markets

In local currency	Index	% change on:	
		May 22nd	Dec 31st 2018
United States S&P 500	2,856.3	0.2	13.9
United States NAScomp	7,750.8	-0.9	16.8
China Shanghai Comp	2,891.7	-1.6	16.0
China Shenzhen Comp	1,540.9	-2.3	21.5
Japan Nikkei 225	21,283.4	0.4	6.3
Japan Topix	1,546.2	0.1	3.5
Britain FTSE 100	7,334.2	0.5	9.0
Canada S&P TSX	16,327.4	0.1	14.0
Euro area EURO STOXX 50	3,386.7	nil	12.8
France CAC 40	5,379.0	0.1	13.7
Germany DAX*	12,168.7	0.6	15.2
Italy FTSE/MIB	20,573.3	-1.4	12.3
Netherlands AEX	553.0	nil	13.3
Spain IBEX 35	9,232.2	0.6	8.1
Poland WIG	57,264.9	1.6	-0.7
Russia RTS, \$ terms	1,292.8	3.7	21.3
Switzerland SMI	9,645.0	1.7	14.4
Turkey BIST	83,675.3	-4.2	-8.3
Australia All Ord.	6,598.1	3.6	15.6
Hong Kong Hang Seng	27,705.9	-2.0	7.2
India BSE	39,110.2	5.4	8.4
Indonesia IDX	5,939.6	-0.7	-4.1
Malaysia KLSE	1,603.7	-0.5	-5.1

	index	% change on:	
		May 22nd	Dec 31st 2018
Pakistan KSE	34,637.1	1.0	-6.6
Singapore STI	3,183.1	-1.1	3.7
South Korea KOSPI	2,064.9	-1.3	1.2
Taiwan TWI	10,457.2	-1.0	7.5
Thailand SET	1,626.9	0.3	4.0
Argentina MERV	34,578.8	4.1	14.1
Brazil BVSP	94,360.6	3.0	7.4
Mexico IPC	42,942.1	-0.9	3.1
Egypt EGX 30	13,664.2	-1.1	4.8
Israel TA-125	1,463.9	2.3	9.8
Saudi Arabia Tadawul	8,656.2	2.1	10.6
South Africa JSE AS	55,231.1	-1.4	4.7
World, dev'd MSCI	2,111.8	0.1	12.1
Emerging markets MSCI	998.0	-1.8	3.3

US corporate bonds, spread over Treasuries

	Basis points	
	latest	Dec 31st 2018
Investment grade	163	190
High-yield	459	571

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

Commodities

The Economist commodity-price index

2005=100	May 21st*		% change on	
	May 14th	May 21st*	month	year
Dollar Index				
All Items	132.6	134.3	-2.5	-14.6
Food	138.0	141.6	0.4	-12.2
Industrials				
All	127.0	126.8	-5.6	-17.2
Non-food agriculturals	117.1	117.5	-5.6	-20.5
Metals	131.2	130.8	-5.6	-15.9
Sterling Index				
All items	186.7	191.1	-1.3	-10.3
Euro Index				
All items	147.0	149.4	-2.2	-10.1
Gold				
\$ per oz	1,297.0	1,274.2	0.4	-1.4
West Texas Intermediate				
\$ per barrel	61.8	63.1	-4.8	-12.6

Sources: CME Group; Cotlook; Darmann & Curl; Datastream from Refinitiv; FT; ICCO; ICO; ISO; Live Rice Index; LME; NZ Wool Services; Thompson Lloyd & Ewart; Urner Barry; WSJ. *Provisional.

For more countries and additional data, visit [Economist.com/indicators](https://www.economist.com/indicators)

Not-so-cold comfort

China is surprisingly carbon-efficient—but still the world’s biggest emitter

WITH ITS four-tiered smog warnings and lethal dumps of toxic waste, China has become Exhibit A for the environmental costs of economic development. Its growing meat consumption and reliance on fossil fuels have also made it a focus for people worried about climate change.

In one sense, China’s reputation as the bellows of “hothouse Earth” is overblown. Since 1850 countries with a GDP per head of \$12,000-16,000 in 2019 dollars have produced a population-weighted average of 10.6 tonnes of carbon dioxide-equivalent gases per person per year. In 2016 China’s GDP per head was \$14,000, and it emitted just 9.3 tonnes per person.

Moreover, China pollutes far less per person than Western countries did at the same stage of development. When America, France, Britain and Germany had incomes similar to modern China’s, they relied on inefficient power stations and cars, and spewed out 16.6 tonnes per person.

The combination of China’s huge population and rapid GDP growth has nonetheless made it the world’s biggest emitter of carbon. China is predicted to produce 16bn tonnes of greenhouse gases in 2030—four times the entire world’s output in 1900.

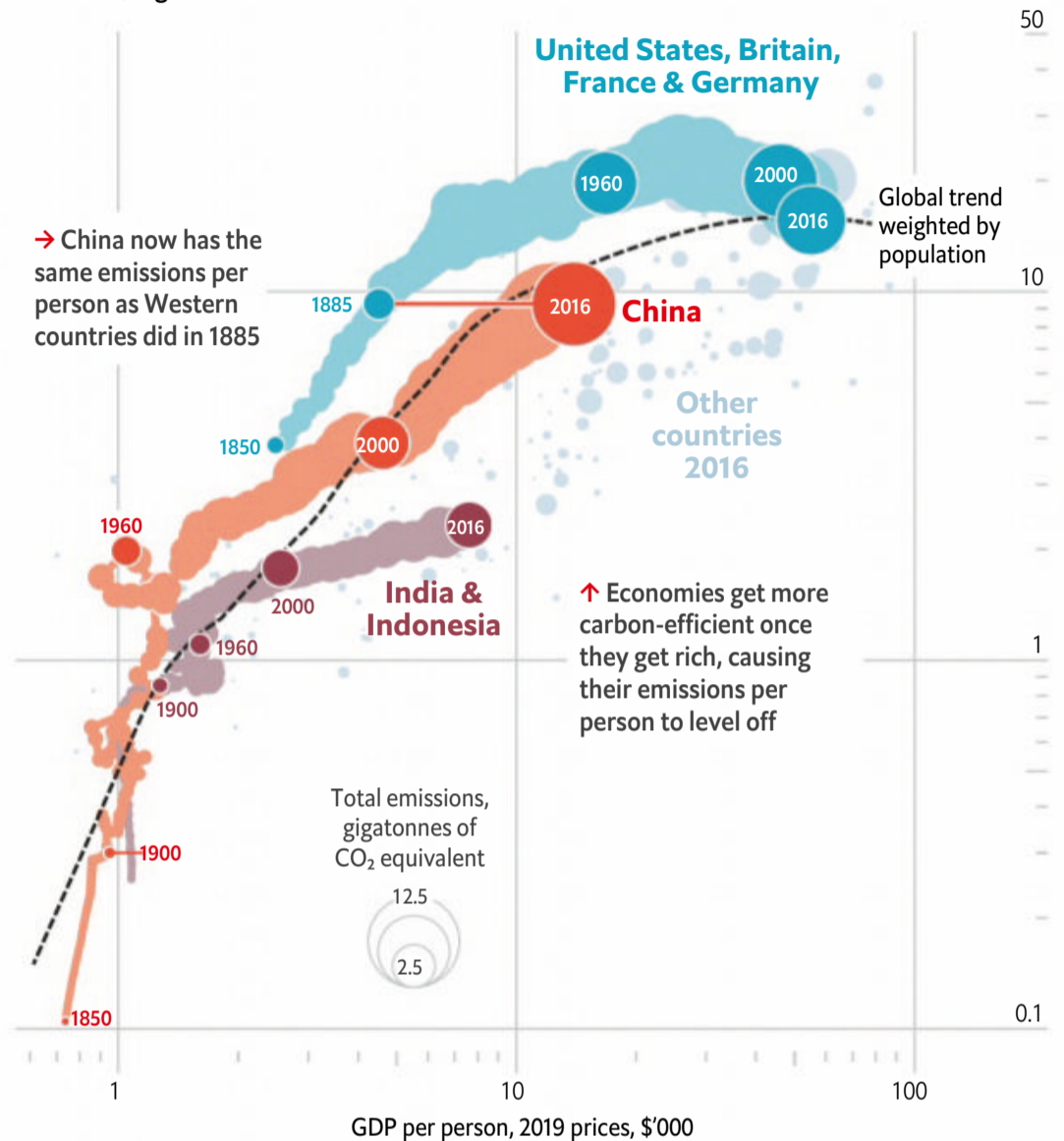
To prevent the stock of greenhouse gases in the atmosphere from reaching levels likely to cause disastrous warming, China must do better than merely beating the past records of richer countries. Instead, it will need an unprecedented decline in emissions per head—at least to the more carbon-efficient level of similarly rich Latin American economies, and ideally onto the trajectory of poorer Asian giants like India and Indonesia, which rely less on heavy industry and manufacturing. Those countries, perched at the sweltering latitudes where farmers will be most hurt by climate change, must in turn work out how to reach upper-middle-income status without replicating China’s emissions path.

To their credit, Chinese authorities, spurred by public concern about air pollution, have prioritised green policies, such as switching from coal-fired power stations to renewable sources and setting up an emissions-trading system. China’s annual rate of emissions growth has fallen from 9.3% in 2002-11 to 0.6% in 2012-16. The waning of its cement-intensive construction boom should slow emissions further. But it will take more than incremental gains to stave off severe warming. ■

China emits far less greenhouse gas per person than Western countries did at the same stage of economic development

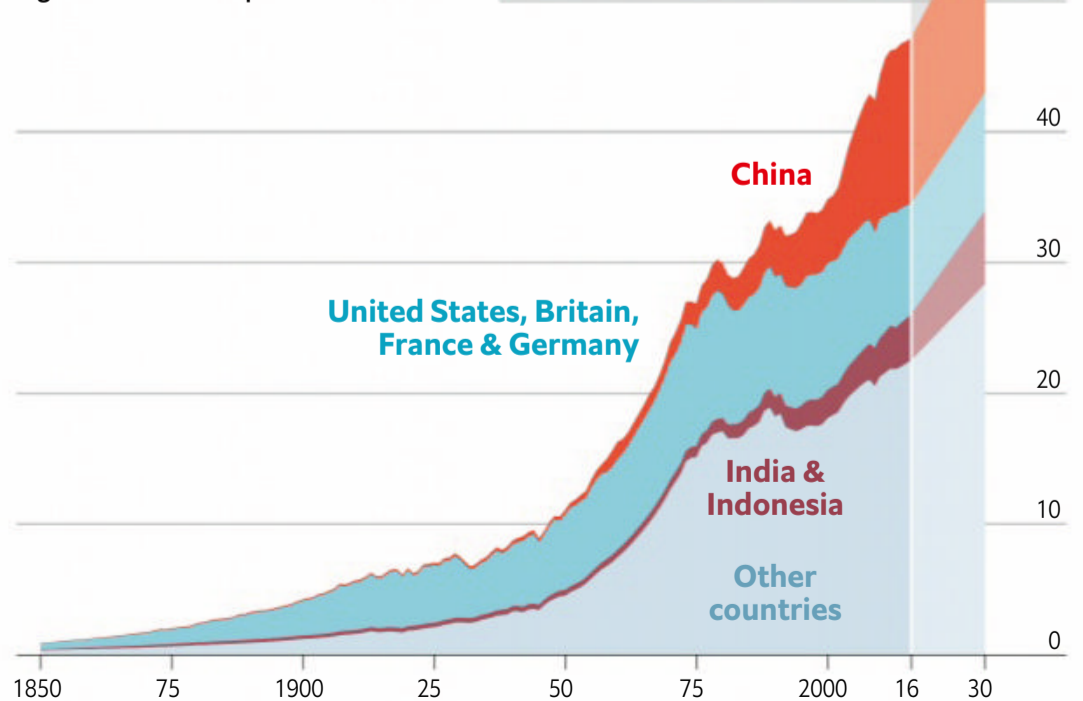
GDP per person v annual emissions per person 1850-2016, log scales

Annual emissions per person Tonnes of CO₂ equivalent



Nonetheless, China is so large that it has become the world’s biggest emitter—and will only get bigger

Total annual greenhouse-gas emissions Gigatonnes of CO₂ equivalent



Sources: Climate Action Tracker; Climate Watch; University of Groningen Growth and Development Centre; UN Intergovernmental Panel on Climate Change



Advance Australia fair

Bob Hawke, Australia's longest-serving Labor prime minister, died on May 16th, aged 89

WHATEVER YOU thought about Bob Hawke, and he gave people plenty to think about, you couldn't deny that he brimmed with self-confidence. At the age of 15 he was telling friends he was going to be prime minister. Even at three, visiting a sick old lady with his minister father, he climbed on a chair and preached a sermon to her, which mightily raised her spirits.

He did the same for the whole of Australia in the nearly nine years he was prime minister: raised its spirits. He opened up the economy, tore down tariff walls, floated the currency, demolished inflation, privatised state-owned companies, revived universal health care and set the path for decades of uninterrupted growth. Thanks to him, Australia was hardly hurt by either the Asian financial crisis of 1997 or the Great Recession. Other people helped along the way, especially his treasurer Paul Keating, with whom he blew hot and cold (and the feeling was mutual). But the engine room driving change was his own personal office. He also opened up Australia to the world, pivoting towards the countries of Asia as neighbours and trading partners and founding APEC, which grew to 21 members. Cocky insouciance was his middle name as he strode across the global stage, forcing the end of apartheid in South Africa, leading the campaign to ban mining in Antarctica, encouraging China to engage. Golda Meir consulted him on how to sort out the Middle East, and Mikhail Gorbachev asked him how he should restructure the Soviet economy. He was glad to tell them. He also, incidentally, taught Shane Warne how to bowl.

Britain's Gordon Brown once asked him the secret of his success. That he didn't reveal, but it was simplicity itself. He loved Australians and they loved him. It fascinated him that waves of immigrants had melded into a warm, generous race whose chief principles were mateship and "a fair go", and where the worst sin was to be up yourself. He was never happier than when he was out among them in factories or pubs, on ranches or on the beach. Wherever he

went he walked in a tropical breeze of adulation, but the reason women wept and young folk wanted to embrace him was because he was one of them. For all his education and his Rhodes scholarship to Oxford, he wasn't some milk-pale type from the groves of academe. He was Hawkie, a true dinky-di Australian.

Added to that he was a larrikin, a rowdy fun-loving rogue. Many voters loved that. He held the world record, 11 seconds, for drinking a yard of ale, and his party trick was to down a pint in one, although he did give up the grog from time to time. Sport obsessed him, especially cricket, for which there were never enough hours in the day. He shed tears, lost his temper and spoke his mind: one of his rivals was "three sausages short of a barbecue", another had "kangaroos in the top paddock". When Australia won the America's Cup in 1983, when he was fresh as prime minister, he endeared himself indelibly to the country by appearing at the Royal Perth Yacht Club, in a jacket stamped all over with "Australia", crying: "Any boss who sacks anyone for not turning up today is a bum!" and throwing back his silver-cockatoo head to roar with laughter.

He also understood that Australians had no time for people squatting under the banyan tree wrapped in the warm euphoria of their principles, such as the Keynesian ideas so much loved by the Labor Party when he took it over. Such people were a million miles from power and from making a better world. When he came in, at a time of industrial strife and with the economy a shambles, his slogan was simply "Bringing Australia Together", and his first act was to unite trade-union bosses and business leaders in a national summit to forge an accord on wages and social welfare. Mateship in action. This was the fruit of years he had spent first studying the history of Australian wage-fixing, then fighting for and leading the Australian Council of Trade Unions, infuriating whole benches of wage-arbitration judges to get more money into workers' pockets. That was when the people really started to love him, and in high office, which he calmly knew he was bound for even when he started, he didn't disappoint them. Once the economy took off, there was more cash in everyone's wallets.

There were hiccups, of course, to do with women, who threw themselves at him although Hazel was waiting not-so-patiently at home, and with his children, for whom he couldn't spare enough time in his 16-to-20-hour working days. Because he felt low he nearly threw away the second election in 1984, and in 1987 a sharp downturn forced him to cut spending in almost every department. Cabinet could be a bloody circus, steaming with egos, especially when he and Keating fell out over Keating's pet consumption tax. The Labor Party was a difficult horse to ride. He couldn't just jab his spurs into its flanks, but had to coax it along, firmly pointing in a centre-left free-market direction. With Medicare and social security there was no problem; liberalising the economy was harder graft, but business and the banks lined up eagerly behind him. Once tariffs and exchange controls were swept away, Australia became a proper citizen of the world and he, as first citizen, had that world at his feet. Not that he exalted himself. At The Lodge, his official residence, he opened his own car door and sat beside the driver, just two government workers together, Bede and Bob.

Leaving was difficult. He made a fair fist of life afterwards, going into business consultancy, becoming a multimillionaire and marrying the beautiful mistress who was also his biographer. But he wasn't leading the country any more. He had told Keating, who badly wanted his job, and whom he never knew whether to tell off or pat on the head, that he would leave a year after he won the 1990 election. When the time came he changed his mind, so Keating brought him down as party leader. He was never voted out by the Australian people.

Many assumed he changed his mind because he loved being in power. Not so, he insisted. It was because Keating had described Australia to him as the arse-end of the world. He couldn't put the country into the hands of someone who felt that way for a second. It rightly belonged to a bloke who couldn't love it enough. ■

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