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Hong Kong in revolt

China's unruly periphery





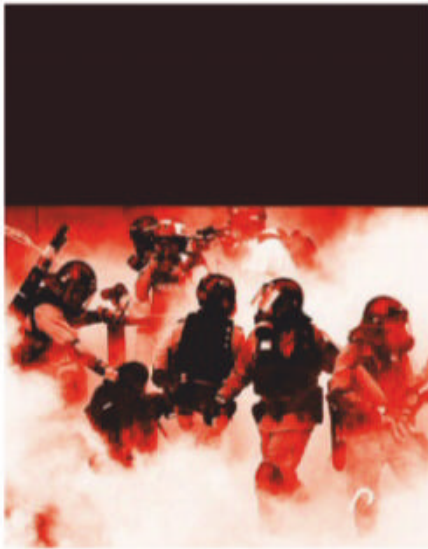
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Sri Lanka's presidential election was won by Gotabaya Rajapaksa, the younger brother of Mahinda Rajapaksa, a former president who oversaw the bloody end to an insurrection by Tamil separatists. Gotabaya Rajapaksa was defence secretary during the fighting. His Sinhala-Buddhist nationalist campaign pledged to wipe out terrorism, following attacks at Easter by jihadists, in which 268 people died. The elder Mr Rajapaksa will be prime minister.

Police shot rubber bullets at the protesters occupying Hong

Kong Polytechnic University. Most of the students eventually left the campus. Meanwhile, a court in **Hong Kong** overturned a ban on wearing masks in the protests, finding it contravened the territory's Basic Law. The decision was denounced by China's National People's Congress, which suggested that only it had the power to rule on constitutional issues in Hong Kong.

The American **Congress** passed the Hong Kong Freedom and Democracy bill, a largely symbolic act that will anger China and encourage the protesters. Donald Trump is expected to sign it.

America walked out of talks in Seoul with **South Korea** in a dispute about paying for American troops stationed in the country. South Korean politicians say America wants \$5bn a year, five times what it is getting now from the South Korean government.

The Taliban released two academics, one American and one Australian, whom it had held captive since 2016, in exchange for three militants. **Afghanistan's** president, Ashraf Ghani, said the swap of hostages for prisoners was necessary to kick-start peace talks with the jihadists.

Singing like a canary

Gordon Sondland, America's ambassador to the EU and the star witness in the **impeachment inquiry** into Donald Trump, gave his public testimony to the House. Mr Sondland said he and others had followed orders from the president to put pressure on Ukraine to dig up dirt on Joe Biden and that the Ukrainians knew there would be a clear "quid pro quo" if they co-operated. He also said "everyone was in the loop", including Mike Pompeo, the secretary of state, and Mike Pence, the vice-president.

A jury found **Roger Stone** guilty on all charges related to obstruction of the Mueller investigation into Russian interference in American politics. Mr Stone is a Republican operative who earned his stripes on Richard Nixon's campaign. He once claimed to have "launched the idea" of Mr Trump for president.

A show of defiance

Large protests erupted in **Iran** after the government increased the price of heavily subsidised fuel. Demonstrators blocked traffic, torched banks and burnt petrol stations. Ayatollah Ali Khamenei, the supreme leader, called the protesters "thugs" and blamed foreign powers for the unrest. Dozens of people have been killed by the authorities, say human-rights groups.

Mike Pompeo, America's secretary of state, announced that **Israeli settlements** in the



occupied West Bank are consistent with international law. Most of Israel's other allies disagree. Past American administrations largely dodged the question. The decision will have no immediate effect on the ground, but it may embolden Israeli politicians who want to annex the settlements. Meanwhile, Benny Gantz missed the deadline to form a government in Israel, raising the possibility of another election, as Binyamin Netanyahu faced mounting legal woes.

Israel carried out air strikes in **Syria**, hitting targets belonging to the government and its Iranian allies. The attacks were in response to rockets fired at Israel by Iranian forces.

Escalating conflicts in **Burkina Faso**, **Mali** and **Niger** have created a humanitarian crisis in which 2.4m people need urgent food aid, said the UN's World Food Programme. The worst affected is Burkina Faso,

where more than half a million people have fled their homes.

Rumble about the jungle

The pace of deforestation of the **Brazilian Amazon** in the year to July reached its highest level in a decade, said the country's space agency. It was nearly 30% faster than in the previous year. Environmentalists blame Brazil's populist president, Jair Bolsonaro, who wants to open the region to miners and ranchers.

Following a wave of political protests, **Chile's** government agreed to hold a referendum in April on whether the country should write a new constitution. Chileans will be able to decide what sort of body should draft it and will also be able to vote on the final text of a constitution.

The death toll in the unrest leading up to and after Evo Morales's resignation as **Boliv-**

ia's president rose to at least 32 people. Security forces fired on pro-Morales demonstrators who had blocked a fuel plant near the capital, La Paz. The protesters want the interim president, Jeanine Áñez, to resign. They also want new elections. A decree by the interim government appeared to encourage the police to be overzealous in their efforts to quell protests.

Conservative v Labour



Britain's two main party leaders clashed in the first televised election debate. The

courts rejected demands from the Liberal Democrats and the Scottish National Party that they should be included. Boris Johnson, the Conservative prime minister, did slightly better than Jeremy Corbyn, the far-left leader of the Labour Party. The Conservatives' press office altered its Twitter account to look like a fact-checking service.

Prosecutors in Sweden formally ended an investigation into rape allegations made against **Julian Assange**, the founder of WikiLeaks, a website that publishes official secrets. Mr Assange remains in custody in London while a case for his extradition to America is considered.

Parliamentary elections were held in **Belarus**, the former Soviet republic whose president, Alexander Lukashenko, has been in uncontested power for the past 25 years. The opposition won no seats at all.

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Alibaba priced its forthcoming flotation on the Hong Kong stock exchange at HK\$176 (\$22.49) a share, which could see it raise up to \$12.9bn if all the options are taken up. The Chinese e-commerce giant is already listed in New York. It had wanted to undertake a secondary listing in Hong Kong earlier this year, before the city plunged into political turmoil. Taking no chances, Alibaba's Hong Kong stock code will be 9988, numbers that symbolise enduring fortune in China.

Scaling back its IPO, the indicative price at which **Saudi Aramco** is to sell shares on the Riyadh exchange valued it at up to \$1.7trn. That is short of the \$2trn that Muhammad bin Salman, Saudi Arabia's de facto ruler, had wanted. The state-owned oil firm could raise up to \$25.6bn, below the \$100bn it had once hoped for, but still pipping Alibaba's record IPO, set in New York in 2014. Aramco is selling 1.5% of the company: 0.5% to retail investors in the kingdom and 1% to regional funds and institutions; it has scaled back plans to drum up investors outside the Gulf. The shares are expected to start trading in December.

Under pressure to boost economic growth, **China's** central bank cut its key interest rates, though by just 0.05 percentage points. The move is another signal of a shift at the People's Bank of China towards a modest easing cycle.

Australia's financial-intelligence agency accused **Westpac**, the country's second-largest bank, of failing to adequately monitor A\$1bn (\$7.5bn) in suspicious transactions, some of which were payments to child exploiters in South-East Asian countries. It is the country's biggest-ever money-laundering scandal, which could result in huge fines for Westpac.

HP rejected a takeover bid from **Xerox**, which proposed the offer earlier this month. But the maker of computers and

printers left the door open to a potential combination of their businesses.

Hip hip Huawei

America's Commerce Department said it would issue licences to some companies that will allow them to supply goods and services to **Huawei** again. It had earlier granted another 90-day waiver for commercial sanctions it has placed on the Chinese maker of smartphones and network-equipment gear, enabling American firms to carry on supporting existing products they have sold to it. The sanctions have proved to be porous, with many firms finding ways through them. Huawei has so far shrugged off the effects.

Amazon confirmed that it will appeal against the Pentagon's decision to award a \$10bn cloud-computing contract to Microsoft. Amazon had been favourite to win the contract, before Donald Trump, who has kept up a public feud with Jeff Bezos, the company's boss, suggested it should go elsewhere. Amazon says that procurements should be administered "objectively" and "free from political influence". Mark Esper, the defence secretary, said the process had been fair.



After music, film and television, internet streaming came to **gaming** with the launch of Google's Stadia platform. Users pay a subscription to access games in the cloud which can be played on any device with a strong Wi-Fi connection. Game streaming is unlikely to make consoles obsolete. Microsoft and Sony are bringing out new games consoles next year. Microsoft is also planning its own streaming service.

America's National Transportation Safety Board found that an "inadequate safety culture" at **Uber's self-driving vehicle** division had contributed to the death of a pedestrian in March 2018, the first time someone has been killed by an autonomous car. The proximate cause was the vehicle's safety driver, who was distracted by her smartphone, glancing away from the road 23 times in the three minutes before the crash.

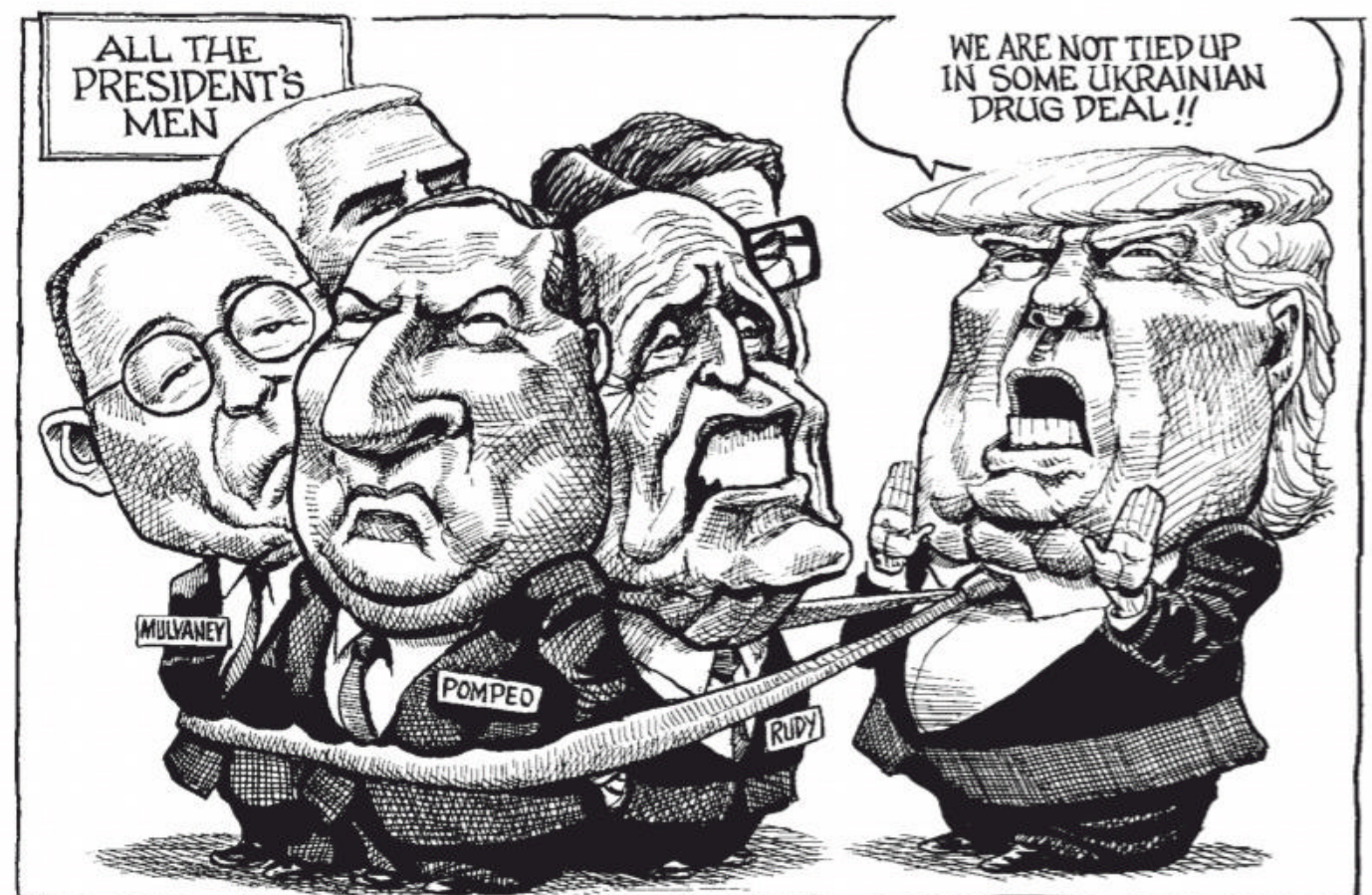
The incident has pushed back the development of self-driving cars.

General Motors filed a lawsuit against **Fiat Chrysler Automobiles**, accusing it of corrupting its negotiations with unions. The three executives at Fiat named in the suit have already pleaded guilty to charges in a lengthy federal investigation into their ties to the United Auto Workers.

India's three biggest wireless telecom firms said they would increase fees next month, ending a three-year price war that has given their customers the cheapest data packages in the world. Two of the companies need to raise cash in order to pay government fees following a court ruling. Their share prices surged after announcing the price rises.

Aiming high

Investing in e-commerce and same-day delivery has paid off for **Target**, which reported another solid set of quarterly earnings. The retailer, which in 2017 struggled with a rapid decline in sales, has also revamped its stores. The turnaround has bolstered its share price, which has risen by 90% since the start of the year.



Hong Kong in revolt

The territory is not the only part of China's periphery that resents the heavy hand of the Communist Party

A FEW DAYS ago hundreds of young people, some teenagers, turned the redbrick campus of the Hong Kong Polytechnic University into a fortress. Clad in black, their faces masked in black too, most of them remained defiant as they came under siege. Police shot rubber bullets and jets of blue-dyed water at them. Defenders crouched over glass bottles, filling them with fuel and stuffing them with fuses to make bombs. Many cheered the news that an arrow shot by one of their archers had hit a policeman in the leg. After more than five months of anti-government unrest in Hong Kong, the stakes are turning deadly.

This time, many exhausted protesters surrendered to the police—the youngest of them were given safe passage. Mercifully, massive bloodshed has so far been avoided. But Hong Kong is in peril (see Briefing). As *The Economist* went to press, some protesters were refusing to leave the campus, and protests continued in other parts of the city. They attract nothing like the numbers who attended rallies at the outset—perhaps 2m on one occasion in June. But they often involve vandalism and Molotov cocktails. Despite the violence, public support for the protesters—even the bomb-throwing radicals—remains strong. Citizens may turn out in force for local elections on November 24th, which have taken on new significance as a test of the popular will and a chance to give pro-establishment candidates a drubbing. The government's one concession—withdrawing a bill that would have allowed suspects to be sent to mainland China for trial—did little to restore calm. Protesters say they want nothing less than democracy. They cannot pick their chief executive, and elections for Hong Kong's legislature are wildly tilted. So the protests may continue.

The Communist Party in Beijing does not seem eager to get its troops to crush the unrest. Far from it, insiders say. This is a problem that the party does not want to own; the economic and political costs of mass-firing into crowds in a global financial centre would be huge. But own the problem it does. The heavy-handedness of China's leader, Xi Jinping, and public resentment of it, is a primary cause of the turmoil. He says he wants a "great rejuvenation" of his country. But his brutal, uncompromising approach to control is feeding anger not just in Hong Kong but all around China's periphery.

When Mao Zedong's guerrillas seized power in China in 1949, they did not take over a clearly defined country, much less an entirely willing one. Hong Kong was ruled by the British, nearby Macau by the Portuguese. Taiwan was under the control of the Nationalist government Mao had just overthrown. The mountain terrain of Tibet was under a Buddhist theocracy that chafed at control from Beijing. Communist troops had yet to enter another immense region in the far west, Xinjiang, where Muslim ethnic groups did not want to be ruled from afar.

Seventy years on, the party's struggle to establish the China it wants is far from over. Taiwan is still independent in all but name. In January its ruling party, which favours a more formal separation, is expected to do well once again in presidential and parliamentary polls. "Today's Hong Kong, tomorrow's Taiwan" is a popular slogan in Hong Kong that resonates with its intended

audience, Taiwanese voters. Since Mr Xi took power in 2012 they have watched him chip away at Hong Kong's freedoms and send warplanes on intimidating forays around Taiwan. Few of them want their rich, democratic island to be swallowed up by the dictatorship next door, even if many of them have thousands of years of shared culture with mainlanders.

Tibet and Xinjiang are quiet, but only because people there have been terrorised into silence. After widespread outbreaks of unrest a decade ago, repression has grown overwhelming. In the past couple of years Xinjiang's regional government has built a network of prison camps and incarcerated about 1m people, mostly ethnic Uighurs, often simply for being devout Muslims. Official Chinese documents recently leaked to the *New York Times* have confirmed the horrors unleashed there (see Chaguan). Officials say this "vocational training", as they chillingly describe it, is necessary to eradicate Islamist extremism. In the long run it is more likely to fuel rage that will one day explode.

The slogan in Hong Kong has another part: "Today's Xinjiang, tomorrow's Hong Kong". Few expect such a grim outcome for the former British colony. But Hong Kongers are right to view the party with fear. Even if Mr Xi decides not to use troops in Hong Kong, his view of challenges to the party's authority is clear. He thinks they should be crushed.



This week America's Congress passed a bill, nearly unanimously, requiring the government to apply sanctions to officials guilty of abusing human rights in Hong Kong. Nonetheless, China is likely to lean harder on Hong Kong's government, to explore whether it can pass a harsh new anti-sedition law, and to require students to submit to "patriotic education" (ie, party propaganda). The party wants to know the names of those who defy it, the better to make their lives miserable later.

Mr Xi says he wants China to achieve its great rejuvenation by 2049, the 100th anniversary of Mao's victory. By then, he says, the country will be "strong, democratic, culturally advanced, harmonious and beautiful". More likely, if the party remains in power that long, Mao's unfinished business will remain a terrible sore. Millions of people living in the outlying regions that Mao claimed for the party will be seething.

Not all the Communist elite agree with Mr Xi's clenched-fist approach, which is presumably why someone leaked the Xinjiang papers. Trouble in the periphery of an empire can swiftly spread to the centre. This is doubly likely when the peripheries are also where the empire rubs up against suspicious neighbours. India is wary of China's militarisation of Tibet. China's neighbours anxiously watch the country's military build-up in the Taiwan Strait. A big fear is that an attack on the island could trigger war between China and America. The party cannot win lasting assent to its rule by force alone.

In Hong Kong "one country, two systems" is officially due to expire in 2047. On current form its system is likely to be much like the rest of China's long before then. That is why Hong Kong's protesters are so desperate, and why the harmony Mr Xi talks so blithely of creating in China will elude him. ■

Sri Lanka's new president

Oh brother

Gotabaya Rajapaksa is a strongman. Sri Lanka needs a bridge-builder

AS SRI LANKA'S long civil war was drawing to a close in 2009, the army surrounded 100,000 civilians on a tiny sliver of beach, barely three square kilometres in size. Mixed in among them were a small number of separatist guerrillas, the remnants of a once-formidable force that had been battling for an independent state for the country's Tamil minority for 26 years. The insurgents had no compunction about using innocent villagers as human shields. The army claimed to have more scruples: it had designated the area a "no-fire zone", where civilians could safely gather. Nonetheless, it continued to shell the beach mercilessly. The UN warned that a humanitarian disaster was unfolding and urged the government to declare a ceasefire, to no avail. In the end resistance crumbled and the army took control. But the beach was left piled with bodies, with more floating in the adjacent lagoon. The number of civilians who died in the final phase of the war, the UN concluded years later after a long investigation, was probably in the "tens of thousands".

Gotabaya Rajapaksa, the man who, as secretary of defence, presided over this horrifying episode, has just been elected president of Sri Lanka (see Asia section). To Sinhalese Buddhists, about 70% of the population, he is a hero. After all, the militia he destroyed was appallingly cruel and bloodthirsty and had tormented Tamils as much as, if not more than, other Sri Lankans. To the 15% or so of the population that is Tamil, however, Mr Rajapaksa's ends do not justify his means. In Jaffna, the biggest Tamil city, he won just 6% of the vote.

Mr Rajapaksa tried to reassure minorities during the election campaign. He visited a mosque, for example, in a sop to the 10% of Sri Lankans who are Muslim. But Sinhalese groups with which he is closely aligned kept up a steady anti-Muslim diatribe, especially after suicide-bombings at several churches and hotels at Easter killed more than 250 people. Tellingly, the only district where Tamils are a minority that Mr Rajapaksa failed to carry was

Ampara, where Muslims are the biggest group.

When asked about the past, Mr Rajapaksa parries, saying that it is more important to think about the future. People in his circle admit that he made mistakes, but promise that he will do things differently this time. Many businessmen, in particular, are thrilled at the outcome of this election. They are hoping for a period of decisive economic management, after four years of bickering and dithering.

It may be that Mr Rajapaksa proves a good economic manager, although the record of his brother, Mahinda, who was president from 2005 to 2015 and whom Gotabaya intends to appoint as prime minister, was mixed. Sri Lanka certainly needs to get on with post-war reconstruction, which has proceeded distressingly slowly and would benefit from a more efficient, driven government.

For the most part, though, Sri Lanka does not need a strongman. It has been remarkably peaceful for a decade, despite the carnage at Easter. If there is a pressing concern about security, beyond the hunt for terrorists, it is that the sort of Sinhalese nationalists at whom Mr Rajapaksa has been winking will resort to mob violence.

Anti-Muslim riots have taken place not only after the bombings this year, but also in 2014 and 2018.

The election results show that Sri Lanka is still ethnically polarised. If Mr Rajapaksa really wants to demonstrate that he is a changed man, he should start by reassuring minorities. It is encouraging that he has said he sees himself as president for all Sri Lankans, not just those who voted for him. But for every gesture of unity, there has been a contrary, sectarian one. For example, Mr Rajapaksa chose to be sworn in at a Buddhist temple.

The end of the war, however bloody, held out the hope of a peaceful and prosperous future for all Sri Lankans. It would be tragic if Mr Rajapaksa undermined his own achievement by inflaming the divisions of the past. ■



American health care

Sunshine is a partial disinfectant

America's hospitals are a racket. They need a dose of transparency—and tougher antitrust action, too

THE HEALTH-CARE system in America has long suffered from two grave problems. The first is that not enough people have reasonable access to medical treatment if they fall ill. President Barack Obama tackled this with his landmark reforms in 2010, which succeeded in extending coverage to some 20m Americans who previously lacked insurance. Mr Obama cut a deal with America's powerful health-care lobbies and built a grand coalition for reform that included hospitals, insurers and Big Pharma. The law was passed after an epic battle in Congress.

Unfortunately, since that success the second problem—exorbitant costs—has spiralled even further out of control. Health

spending has risen from 17.3% of GDP before Obamacare was passed to 17.9% today. The average figure for rich countries is 9%. Now President Donald Trump is aiming to slay the monster. On November 15th he announced plans to require hospitals and insurance firms to disclose the true prices they charge. More transparency is a vital step in ending the health-care racket. But the plan will not work unless there is also a drive to boost competition in rigged local hospital markets.

Mr Trump has correctly identified a big villain behind health-care cost inflation, and it is not Big Pharma. Hospitals account for over 30% of health-care spending, whereas drugs account for ▶▶

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▶ less than 15%. Add in doctors and related professional services, and the share rises to over half. Hospital costs have been climbing by roughly 5% a year of late, compared with 1% for drugs.

This reflects pricing strategies that make Mount Rushmore look transparent. Patients and their insurance firms pay for advice and procedures provided by practitioners and hospitals. Exactly how much is a lottery. A mammogram can cost \$150 or \$550 in Philadelphia, depending on which provider you choose, but your hospital and insurer will not tell you that price in advance. A scan of your lower back can cost just \$150 in Louisiana but more than \$7,500 in California. Insurers receive big—but secret—discounts on list prices from hospitals and doctors.

Patients who are fed up have little choice. The hospital industry has consolidated in a wave of more than 680 mergers since 2010 (see Business section). Many cities and regions are dominated by one or two big hospital operators. A recent study found that, by a standard measure, over three-quarters of hospital markets rank as “highly concentrated”. Hospital chains have also been acquiring physicians’ practices in order to create large, vertically integrated health-care outfits that dominate their local market. Privately run hospital firms thrive on opacity and consolidation, which boost earnings. The motives of non-profit hospital organisations that are ostensibly run in the public interest are harder to fathom, but presumably some want to expand their empires and to boost revenues so that they can pay their senior medical staff and managers more.

In order to create more transparency, Mr Trump’s new rules mean that hospitals will say what they really charge insurance companies by 2021 and will create a price list for 300 or so common procedures, to allow patients to shop around. Insurance firms will have to make public the actual prices they are charged

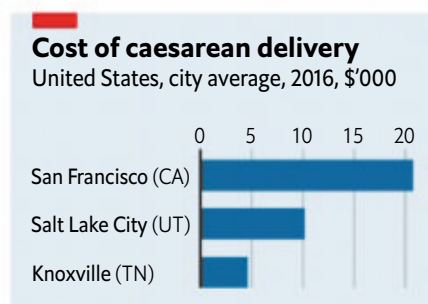
for services, after they have negotiated discounts. The rule changes do not need approval from Congress, although they will probably be challenged in the courts.

It is a good start, but reform needs to go further. Health care is not a normal market. Consumers are often not price-sensitive—you do not haggle during a heart attack. People with decent insurance plans are not directly on the hook for the vast majority of their costs. And the industry’s cosy structure means that transparency could backfire. For example, rather than expensive hospitals cutting prices, cheap ones in a market without competition might raise theirs instead, once they realise just how much insurers have been willing to pay.

Mr Trump should build on an innovative experiment in California that uses reference pricing to encourage patients to choose less expensive providers or insist that hospitals benchmark their prices to those in the most efficient and competitive hospital markets. The government also needs to stiffen the daily penalties for hospitals that fail to comply with the new rules beyond the current, paltry \$300 fine.

At the same time a big drive is needed to inject more competition into local hospital markets. This means blocking more medical mergers and may ultimately require unwinding deals that have already happened, in order to ensure that patients have a genuine choice. This in turn may demand new laws that reboot America’s rickety antitrust regulators. As in other consolidating industries, from airlines to telecoms, they have let the public down with dire consequences.

Mr Trump deserves credit for taking on a demon that none of his predecessors dared to touch. But transparency will not count for much unless it is accompanied by strong and creative efforts to weaken the grip of America’s medical oligopolies. ■



Israel and the Palestinians Unsettling

America’s decision to recognise Israeli settlements makes peace less likely

NOT LONG after Israel routed the Arab armies that surrounded it in 1967, Theodor Meron sent a “Top Secret” and “Extremely Urgent” memo to his bosses at the Israeli foreign ministry. Mr Meron, the ministry’s legal adviser, wrote that it would be illegal for Israel to settle the territory that it captured in the fighting. For decades that has also been the view of nearly all Israel’s allies. But Israel built scores of settlements anyway, so that 428,000 Israelis now live in the West Bank (not including East Jerusalem). Recognising that “reality on the ground”, Mike Pompeo, the American secretary of state, made a leap of legal logic on November 18th, saying the settlements were “not, per se, inconsistent with international law” (see Middle East and Africa section).

This is merely the latest gift from President Donald Trump to Binyamin Netanyahu, Israel’s prime minister. Others have included recognising the disputed city of Jerusalem as Israel’s capital and accepting its sovereignty over the occupied Golan Heights. These gestures seem intended to please Israel-loving evangelicals in America, and to boost Mr Netanyahu, a right-wing populist akin to Mr Trump. They also embolden Israeli annexationists, who want to take parts of the West Bank unilateral-

ly. That would doom the two-state solution, whereby a Palestinian state would be created in the West Bank and Gaza. It would thus force Israel to make a dreadful choice about its future.

Israel defends the settlements by noting that Jews have been in the West Bank for thousands of years. Their presence was recognised by the League of Nations in 1922. Moreover, Jordan’s right to rule over the land until 1967 was not widely recognised, and Palestinian sovereignty is disputed. So it is not clear whose land Israel is meant to be illegally occupying. And anyway the legal status of the settlements will be sorted out in a final agreement with the Palestinians, which is likely to include land swaps. Such arguments were enough to convince Ronald Reagan, an American president, that there was nothing inherently unlawful about the settlements, a position cited by Mr Pompeo. Other American administrations took to calling the settlements “illegitimate” rather than “illegal”.

But the more convincing argument, made by Mr Meron and backed by the UN, the International Court of Justice and most legal scholars, is that the settlements violate the Fourth Geneva Convention, which stipulates that “the occupying power shall ▶

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▶ not deport or transfer parts of its own civilian population into the territory it occupies.” The reality on the ground that Mr Pompeo ignores is that 2.6m Palestinians live in the West Bank, which most of the world, and even past Israeli leaders, see as part of a future Palestinian state. “You may not like the word, but what is happening is an occupation; it is a disaster for Israel and the Palestinians,” said Ariel Sharon, then prime minister, in 2003.

Mr Netanyahu, by contrast, courts the pro-settler crowd, who have helped him win four elections. In September he vowed to annex large parts of the West Bank, which no previous prime minister thought wise. Cynics dismissed this as a vote-getting stunt by a politician who is not really ready for annexation. But by giving the enthusiasts a green light, Mr Trump has hemmed in the prime minister—or whoever leads Israel next. The country is in political gridlock after an inconclusive election in September. If Mr Netanyahu forms a government, now or after another poll, he will come under pressure from his coalition to annex the land quickly, while Mr Trump is still in office. The prime minister, who wants his allies in the Knesset to shield him from prosecution on corruption charges, is in no position to resist.

The settlements pose no less a challenge to Benny Gantz, whose Blue and White party won a plurality of seats. Mr Gantz, a

former general who pummeled the Palestinians in Gaza, has failed to form a government of his own. He welcomed the announcement by Mr Pompeo, and may yet team up with some annexationists. But should he succeed in cobbling together a ruling coalition, he will have to grapple with the settlements, too. He has not presented any ideas for doing so. Nor has Mr Trump revealed his own long-promised plan for the “ultimate deal” between Israelis and Palestinians.

The Trump administration may not realise it, but it is pushing Israel into a dangerous corner. It is not just that the settlements are “an obstacle to peace”, as even Reagan conceded, or that those deep within the West Bank are a financial and security burden on the Israeli state. They also challenge Israel’s character.

Annexation could eat up so much land that what is left would not leave a coherent or functional Palestine. The resulting death of the two-state solution would present Israel with terrible options in the occupied territories. One path would be to give the Palestinians equal rights and watch as they matched or even outnumbered and outvoted the country’s Jewish population. Another would be to turn them into second-class citizens or corral them in Bantustans, both of which would turn Israel into a place with different laws for different peoples—an apartheid state. ■

Product design

Debugging gender bias

Silicon Valley is bad at making products that suit women. That is a missed opportunity

TAILORS WORKED out long ago that men and women have different shapes. Yet this message has failed to penetrate many other areas of design. Car seatbelts, for example, which date back to the 1880s, are often still configured for men, who tend to sit farther back than women when driving. Most protective gear used by workers is designed for men’s bodies. And today the most forward-looking place on Earth—Silicon Valley—is still embedding old-school bias into new products.

Consider virtual-reality headsets. Women are significantly more likely than men to feel sick when using them, perhaps because 90% of women have pupils that are closer together than the typical headset’s default setting (see Science section). This is not an isolated example. Most smartphones are too big to fit comfortably into the average woman’s hand, as are many video-game controllers.

An obvious part of the explanation for Silicon Valley’s design problem is that men control most of its companies—male-run firms receive 82% of venture-capital (vc) funding—and entrepreneurs often build products to solve problems or address needs that affect them personally. Male bosses and entrepreneurs may be unaware of the problems women face. They may not flag up obvious areas of concern, or ask the right questions when doing their research (famously, Apple did not originally include menstrual-cycle tracking in its smartwatch, or in the iPhone’s Health app).

Once an idea gets the green light it will then be handled by product-design and engineering teams, three-quarters of whose members are men. These teams often use data to make decisions, but lumping all users together means they may fail to spot

trends based on sex differences. Reliance on historical data, and the sparsity of data on underrepresented groups, can also create bias in algorithms. Amazon binned a hiring algorithm that was persistently sexist, and Apple is being investigated over its new credit card, which offers women lower credit limits.

Next comes testing. Naturally, designers test prototypes on their intended customers, but they may not get feedback from a broad enough group of people. There is also the risk of confirmation bias—designers may listen to what they want to hear, and discount negative reactions from some groups of users.

Tech’s design bias needs fixing for ethical, safety and business reasons. The ethical imperative is obvious: it is wrong that women have to make do with a “one-size-fits-men” world, as Caroline Criado Perez, a writer, puts it. As for safety, regulators can tackle that by clamping down on things that are dangerous to women—including seatbelts—because they are not designed properly.

But there is also a powerful business case for avoiding design bias, because huge opportunities are being missed. Women are 50% of the population, and make 70-80% of the world’s consumer-spending decisions. That means they control the deployment of more than \$40trn a year.

Change may be coming. The first voice-recognition systems struggled to understand female voices, but most now manage just fine. “Femtech” startups, which focus on women’s health and well-being, may raise \$1bn by the end of this year. vc funds and tech firms are recruiting more women. Ensuring that products are designed for everyone would lead to happier and safer customers. For the companies that get it right, that means higher profits. What is holding them back? ■






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Academic incentives

In reference to “The MBA, disrupted” (November 2nd), the most valued faculty at business schools are academics whose publications have most influenced their field, which to a large extent comes from writing in the more distinguished journals. Indeed, the desire to teach the same course instead of developing new ones reflects a desire to clear academic time for research and writing. So inventing new MBA programmes is a time-demanding activity that is generally avoided by faculty when possible.

Salaries and reputations strongly reflect publication activity. The salaries of deans strongly reflect their success at raising funds. Expecting business programmes to revise their practice and allocate substantial time and resources specifically to “thinking outside the box” in order to “spearhead the next management revolution” is, unfortunately, unlikely to happen.

THOMAS DYCKMAN
Professor emeritus
Cornell University
Ithaca, New York

You stressed the need for business schools to change, yet *The Economist's* own MBA ranking perpetuates the status quo because of its unhealthy obsession with graduates' salaries. Companies now recognise that profit maximisation is not the sole purpose of business, so you should acknowledge that the quality of an MBA is not solely determined by the money a graduate can earn. To do otherwise encourages business schools to recruit only a certain type of student who will pursue a certain type of career. The schools at the top of your ranking understand these incentives very well. Expecting them to embrace a purpose-driven view of capitalism is like asking turkeys to vote for Thanksgiving.

SAUL KLEIN
Dean
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Victoria, Canada

Religion in the public square

Banyan dismissed Australia's proposed religious discrimination bill as “virtue-signaling by the political right” (November 2nd). Rather, it is intended to help secure a fundamental freedom in a country where more than 60% of the people retain a religious affiliation. The bill would have been unnecessary had it not been for the intolerant actions of the secular left, determined to silence and shame religious believers who dare to voice their beliefs in public.

Few would be surprised if an environmental group chose not to employ an advocate of fossil fuels. Yet arms are thrown up in horror when a religious school asks its staff to be sympathetic to the doctrines of the religion in question. A doctor or a pharmacist may argue that religious belief justifies their refusal to provide a service, but if challenged in court, they will need to show that it was religious belief, and not merely prejudice, that informed their actions.

Not that the right to religious freedom is absolute; it must always be balanced against the rights of other citizens. Nor can religious practice ever be justified simply because it is motivated by faith. The law prohibits female genital mutilation and child marriage. No matter what pieties are preached by proponents of such practices, they will always be illegal.

Rather than confecting absurd examples of religious intolerance, such as the imagined expulsion of gay students, Banyan would do better to reflect on what it is that has brought this country to the point where legislation is needed to enforce the right to religious liberty. The tyrants of tolerance have only themselves to blame for having so taunted their religious neighbours that a government came to office pledged to act.

PETER KURTI
Senior research fellow
Centre for Independent
Studies
Sydney

Blowing in the wind

Jim Platts asked whether wind power is truly sustainable, taking into account its cradle-to-grave carbon emissions (Letters, November 9th). Depending on his preconceptions, Mr Platts may or may not be reassured to know that the answer is an emphatic “yes”.

A number of studies convey this, including one by Camilla Thomson and Gareth Harrison in 2015 for ClimateXChange. They conclude that the cradle-to-grave carbon payback for onshore wind farms is six months to two years, unless they are built on forested peatlands; if that is the case the payback period can be up to six years. For offshore wind the range is five months to one year. All of these are well within an assumed lifetime of 20 years.

The authors also considered the impact on efficiency of “conventional” generation of operating at lower capacity because of the presence of wind power in the system, and conclude that the impact is marginal. Wind turbines that were constructed up to 30 years ago are still going strong.

KIT BEAZLEY
Malmesbury, Wiltshire

Electing a prime minister

Could *The Economist* stop sarcastically drawing attention to the apparent paucity of Boris Johnson's mandate? Bagehot is the latest culprit: “Mr Johnson was installed in Downing Street in July by an electorate of just 160,000 Conservative Party members” (November 2nd). Winston Churchill (in 1940), Anthony Eden, Harold Macmillan and Alec Douglas-Home were put in office as prime minister by only a handful of people. Jim Callaghan was selected as Labour leader and both John Major and Theresa May as Tory leader by between 300 and 400 MPs. Gordon Brown became prime minister without a vote being taken in the Labour Party at all. I don't recall *The Economist* banging on about the lack of mandate for these prime min-

isters; okay, except for Mr Brown (Bagehot, August 2nd 2008). Furthermore, before Mr Johnson, only Eden actually called an election soon after entering Number 10.

I hold no brief for Mr Johnson, but he won the Tory leadership through the accepted party system. A prime minister's mandate is justified by the rules that provide it, not by a crude numbers game.

KIERON O'HARA
The Hague

An eventual taste of freedom

Romania was mentioned only once, as “a grisly counter-example” to the bloodless disintegration of the Soviet Union in “Thirty years of freedom, warts and all” (November 2nd). Indeed, Romania's exceptionally bloody revolution may deserve its own article later this year when it celebrates the end of the Ceausescu regime, which culminated in the execution of the president and his wife on December 25th 1989.

My late father was imprisoned in the late 1980s for crossing the border into Yugoslavia. In 2014 we took a road trip, crossing four European borders. He was amazed that there were virtually no controls from Romania to France. It was one of the highlights of his life. A bloody revolution, yes, but some stories do have a happy ending.

ELENA OCENIC
Sibiu, Romania

The bald sage of New York

We can all relate to having a cognitive bias (“This article is full of lies”, November 2nd). An episode of “Seinfeld” nailed it with the advice that George Costanza gave to Jerry before a lie-detector test: “It's not a lie, if you believe it.”

MATT DEMICHIEI
Warrensburg, Missouri

Letters are welcome and should be addressed to the Editor at
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Borrowed time

BEIJING AND HONG KONG

A generation shapes its identity on the anvil of Xi Jinping's intolerance

SINCE THE middle of November, Hong Kong has been staring into the abyss. The violence attending its nearly six-month-old protest movement—both its participants, approvingly, and China's central government, furiously, brand it a revolution—has stepped up a gear. Police have increased their use of tear-gas, rubber bullets and water cannon. Protesters who once carried nothing more offensive than an umbrella now wield bows and specialise in petrol bombs. Vigilante violence has flourished. The first deaths—a student who fell running from the police and a street-cleaner hit by a brick apparently thrown by a protester—have been recorded.

On November 17th, in the most dramatic stand-off yet, the police began moving against protesters at the Hong Kong Polytechnic University (PolyU) who were mass-producing Molotov cocktails. The protesters barricaded themselves in. Riot police tasked with getting them out threatened to

use lethal force in doing so.

The fears which that provoked have waned. International calls for the police to stay their hand may have contributed to a decision to wait for the protesters to emerge—as many have, cold, tired, hungry and frightened. Thanks to mediation by social workers and a few local politicians, 300 protesters under the age of 18 were allowed to leave, though their personal details were carefully taken down. Others have made dramatic escapes. But as *The Economist* went to press 60 or so remained behind the barricades. Before making his own escape Mok, a 23-year-old graduate, told our correspondent that, “Even if we are dying on the campus or in the underground tunnels, we are not going to surrender.” With the language of martyrdom abroad, the risk of a bloody ending remains.

The violence of the Hong Kong protests, and of the response to them, is hardly remarkable by international standards.

Much worse has happened in Baghdad, Beirut, Santiago and Tehran over the past months. But by the standards of both Hong Kong and China's Communist Party, these events are shocking. No one would have predicted in May that a proposed change to the territory's extradition laws could lead to a sustained rebellion lit by burning vehicles. For one thing, China seldom treats rebellion with anything less than dire repression. For another, Hong Kongers tend not to see themselves as revolutionaries. But that, it seems, is changing. The protesters are willing to use violence in the service of decency and their way of life—to burn universities in order to save them.

Catching fire

Hong Kong has never been a democracy. But in the later years of British rule its Legislative Council (Legco) gradually became more representative of the people. The territory's courts enjoyed genuine independence, and its citizens a free press. As well as boasting one of the world's most vigorous economies, the territory bore most of the hallmarks of a free society.

Today, Hong Kong's local district councils, for which elections are due to be held on November 24th, are the only tier of government chosen entirely through universal suffrage. But when China reclaimed the territory in 1997 it agreed that its form of

▶ government, courts, free press, trade relations, financial system and way of life should remain unchanged for 50 years: “one country, two systems”, in the phrase of Deng Xiaoping, then China’s leader. Though some of the territory’s autonomy was eroded in the 2000s, China largely kept to the deal, its concerns over excessive freedoms offset by a thriving economy and, to some extent, the opprobrium it would face should it break its word.

But around the time that Xi Jinping, China’s current leader, came to power in 2012, the rate of erosion quickened. The government in Beijing pushed for a highly unpopular programme of “patriotic education” at schools to engender loyalty—a push that did not succeed, but still self-defeatingly contributed to the radicalisation of some of the territory’s young people. Proposed reforms that would have let Hong Kongers choose their chief executive, but in effect restricted the choice to a slate picked by Beijing, led to the Occupy Central protests of late 2014.

This year the issue originally at stake was a bill which would have allowed anyone in Hong Kong accused of a crime in mainland China to be tried there—which is to say, in a system Beijing controls. Outrage at this new erosion brought 1m people on to the streets. Carrie Lam, the territory’s chief executive, ignored them. Her intransigence led to even larger protests. Organisers claim that a demonstration on June 16th brought 2m on to the streets—a turnout almost ten times larger than Martin Luther King’s March on Washington provided by a population less than a twentieth that of America in 1963. Civil servants, church groups, executives and the staff of Hong Kong’s biggest employers all joined in, as did teenagers, children and babes in arms.

The heart of the protests, though, was to be found among young, well-educated Hong Kongers fighting for their city’s democratic autonomy. For most of them that fight was, to begin with, metaphorical. For some—those now known as the frontliners—it was not. They looked back on the non-violent protests of Occupy Central when, as Joshua Wong, one of Occupy’s leaders, put it, the police had arrested “anyone with a megaphone” and learned their lesson: they would be leaderless, anonymous and comfortable with violence.

In “Longstreet”, a 1970s television programme, Bruce Lee tells his student “to be formless, shapeless—like water”; to take whatever form the circumstances require; to flow, creep, drip or crash. “Be water” became the movement’s watchword, votes on encrypted messaging apps its leaderless model of co-ordination.

The frontliners’ early forays beyond previous norms—blocking roads with pavement railings and shouting taunts at the police—now seem, by their own admis-

sion, almost quaint. Direct clashes were few. The storming of Legco on July 1st, and the subsequent daubing of its chamber with slogans, shocked the authorities and some of the populace. But the writing on the walls was in paint, not blood.

Boiling point

Other symbolic gestures were more aesthetically pleasing. A remarkably catchy, crowdsourced Cantonese anthem, “Glory to Hong Kong”, first heard at rallies, ended up sung by flash mobs of office workers during lunch breaks. A moment when a young girl and boy, forming a human chain, found themselves too shy to hold hands and instead gripped the two ends of a biro took flight on social media; within a day it had been mashed up with Michaelangelo into memes showing the spark of life, or freedom, flowing from one to the other. The “Goddess of Democracy” who graced the Tiananmen Square protests—herself a repurposing of the Statue of Liberty—appeared again, now known as “Lady



Liberty” and kitted out with the practical but now also iconic appurtenances of protest: hard hat, gas mask and umbrella.

The police met the water’s rising tide with what in retrospect seems like tolerance. When, three weeks after the storming of Legco, the frontliners painted slogans on the Liaison Office, symbol of the Chinese Communist Party’s authority over Hong Kong, the police were furious at having been outwitted. Yet when *The Economist* asked one officer what he and his colleagues near the office intended to do in the face of protesters barricading the road, he replied, with a wry smile: “Wait till the MTR [the underground system] closes and protesters take the last train home.”

Elsewhere on the MTR, though, that night saw a decisive escalation. Men with triad links and metal staffs entered the Yuen Long station in the New Territories looking for democracy protesters on trains. They laid into passengers indiscriminately; local police, apparently turning a blind eye, failed to respond. That incident did more than any other to discredit a police

force that used to be called “Asia’s finest”. Today, only Mrs Lam uses the phrase.

Since then protesters have vandalised (or, in protest slang, “renovated”) state banks, Hong Kong’s biggest bookseller (which is owned by the Liaison Office) and restaurants with sympathies assumed to lie with the Communist Party. Rioters now set fires not only on the streets but inside buildings. On November 6th a pro-establishment politician with known links to the triads in Yuen Long was stabbed in broad daylight. People fear being attacked simply on the basis of being Mandarin-speaking mainland Chinese. Nihilism is trumping romanticism: “If we burn, you burn with us”, a rebel slogan from the climax of the Hunger Games saga, has gained currency. Earlier this month it was given awful form when a bystander confronting protesters was doused with something flammable and set on fire (he survived).

Police commanders express bewilderment that the mass of ordinary, peace-loving Hong Kongers are not repelled by such scenes on the streets. Many are. But they are repelled yet more by the police. A survey published on November 15th by the Hong Kong Public Opinion Research Institute found that 83% blame the government, and especially the police, for the increase in violence. In a separate poll, 51.5% reported zero trust in the police force, up from just 6.5% before the protests began.

Hong Kongers are appalled that police have lined uniformed schoolchildren against walls for random searches and have arrested 11-year-olds. Reports are growing of physical mistreatment in detention. Rules of engagement that in July were consistent with best international practice—rubber bullets fired only below waist height, tear-gas used to disperse not to kettle—have been thrown out of the window. Beatings at the time of arrest have become commonplace, sometimes escalating to frenzy. On November 11th an unarmed protester was shot in the stomach at point-blank range. And all this with impunity. Officially, only one officer out of over 30,000 has as yet been suspended for any action against a protester.

It is possible to see a terrible symmetry at work, with frontline ninjas in helmets with camera mounts uncannily resembling the black-clad police of the rapid-action unit known as the Raptors. Each side’s epithets dehumanise the other—“dogs” for the police, “cockroaches” for the protesters. The litanies of brutality they recite match each other crime for crime. But a large part of the public, from taxi drivers to secretaries, sees no such balance. On October 1st, China’s national day, residents of high rises in Wanchai concealed hundreds of protesters suddenly cornered by riot police. Crowds scream at riot police in shopping malls and housing estates. Asia’s fin- ▶

est have become *haak ging*—"black police".

Police commanders blame Mrs Lam and her administration for forcing them to deal with the ever-worse symptoms of a problem which can only be sorted out politically. But Dennis Kwok, who represents the legal profession in Legco, says the police now take direct orders from central-government officials. Chris Tang Ping-keung, who was installed as police commissioner on November 19th, immediately changed the force's motto from serving with "Pride and Care"—which aligned it with the citizens to whom it is nominally accountable—to serving with "Duty and Loyalty". That will play well in Beijing.

Swirling waters

China's official narrative about Hong Kong is that Western "black hands" are training, organising and even paying protesters to destroy Hong Kong—part of a larger plot to hold down a rising China. When America's Senate passed a bill supportive of the protesters on November 20th Beijing reacted with a fury that grew out of and fed that narrative. Many mainlanders, bombarded by state media with images of protesters insulting China or waving foreign flags, long to see the protests crushed.

The Chinese government is clear that it wants things sorted. But it has held back from sending in the People's Liberation Army (PLA) and paramilitary police to quell the disturbances—indeed, though one can never know what a secretive leadership is planning, it may never seriously have been considered. In leaked comments from a private meeting with businessmen, Mrs Lam implied that China's threats had been so much bluster. One of her advisers says that, although the protests represent a big loss of face to China's leadership, the loss of face that would come with abandoning all semblance of "one country, two systems" would be worse.

For a government that makes much of its decisiveness under the brilliant leadership of Xi Jinping, the absence of anything resembling a strategy to sort out Hong Kong is striking. The best spin that officials can put on it is that their leaders are playing a long game, waiting for popular sentiment to turn against the protesters and reconcile itself to something like the status quo ante. This seems unlikely—but possibly looks more plausible if you sincerely believe, as hardliners say they do, that Hong Kong opinion polls cannot be trusted because they are conducted by universities and think-tanks that are hotbeds of Western liberalism, and if your view of the territory has long been coloured by reports from Liaison Office officials who tell you what you want to hear.

A deeper problem is that the government in Beijing has pre-emptively undercut the possibility of a satisfactory settle-

ment. As the Hong Kong police argue in private, the unrest needs a political solution. But the Communist Party has systematically constrained the space in which the give and take of Hong Kong politics can take place. Those constraints created the dissatisfaction that led to the protests; coming to some accommodation would require setting some of them aside. But China's leadership is unwilling to countenance such action. An example: when Hong Kong's high court overturned a ban on face coverings imposed by Mrs Lam, the National People's Congress in Beijing made its disapproval clear.

If expecting politics to work in a place where they have tried to remove that possibility fails, China's leaders "have no Plan B," according to a senior adviser to Mrs Lam with close links to Beijing. And so things are left in the hands of Mrs Lam and her paralysed, incompetent government. Mrs Lam is showing the same intransigence in the face of calls for an independent investigation into the causes of the unrest and into police behaviour as she originally did over the extradition bill. When in an unaccustomed fit of good sense she acknowledged the need to reach out to young people, she did so at a youth camp organised by the reviled PLA—and in the Mandarin of the overlord rather than Cantonese.

With no one in power taking the initiative and violence ratcheting up, the outlook appears grim. But the district-council elections set for November 24th could possibly help move the action away from the streets. These elections, mostly concerned with rubbish collection and the management of public housing estates, have never previously been a big deal. This time democrats see them as an opportunity to show that the energy of the streets can be channelled into the ballot box.

With a democrat contesting every council seat and 386,000 (mainly young) new

voters, the poll offers the chance for a symbolic *coup de théâtre* and, indirectly, a shift in the composition of Legco. Half of the committee's 70 members are directly elected—six of the others come from the district councils. The election results will also affect the make-up of the committees, tightly circumscribed by Beijing, which every five years choose the chief executive.

It might seem strange, in the current circumstances, that the elections are going ahead. But both sides want them. Mok, the protester behind the barricades at PolyU, says that though he views the elections as part of the tainted system he is fighting, he and his comrades are determined to vote. The government, for its part, desperately wants to show that some things are carrying on as normal. And for the elections to go ahead, it says it needs calm. This puts democratic leaders in something of a spot. They need the frontliners to leave the barricades—yet saying so out loud would risk splitting the protest movement.

When his pupil in "Longstreet" worries that wateriness does not sound like the way to beat his fearsome opponent, Bruce Lee upbraids him: "You want to learn the way to win, but never accept the way to lose." The Hong Kong protesters know that they are not going to win a liberal democracy any time soon. But nor do they necessarily need to follow Lee's last advice: that the pupil must learn the art of dying. Some in Beijing acknowledge that a fundamental change has taken place in Hong Kong, and suggest that the central government will be "very cautious" about its next steps. In response to the suggestion that the Communist Party had lost the hearts and minds of a whole generation in Hong Kong, one thoughtful person in the capital said: "Oh, two." That is the case for giving Hong Kong the political space to start sorting out the mess itself. It is not a case Mr Xi is likely to take to. But some waters flow slowly. ■



Going with the flow



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WASHINGTON AND BUCHAREST

Donald Trump is making America's battle in eastern Europe much harder

THE DIPLOMATS who have testified to Congress over the past two weeks have underlined a fundamental point about the impeachment investigation into Donald Trump: it grows out of America's fight against corruption in eastern Europe. First George Kent, a State Department official, explained that since Ukraine's revolution in 2014 America had come to see corruption as a vital tool of Russian influence. Promoting the rule of law, Mr Kent said, was not just a human-rights concern but at the heart of American security policy.

Then Marie Yovanovitch, a former ambassador to Ukraine, recounted how figures linked to Ukrainian oligarchs had convinced President Trump to have her removed. The prize Mr Trump sought, an announcement that Ukraine was investigating the son of his electoral rival, former Vice-President Joe Biden, was rooted in Mr Biden's role as point man for rule-of-law concerns in eastern Europe. America had

tried to fight corruption in Ukraine, and corruption in Ukraine was fighting back.

America's effort to combat graft in central and eastern Europe is now in trouble. The Trump administration has given it only intermittent support. Meanwhile, the impeachment investigation is highlighting behaviour in America that resembles the practices it condemns elsewhere. The damage is "incalculable", says a senior State Department diplomat (and life-long Republican). "It will take decades to rebuild our credibility. What other countries are seeing in this White House is everything we've preached against."

This is a pity. Anti-corruption activists in former communist countries have relied on American support ever since the end of the cold war. American aid has backed independent investigative media, trained judges and prosecutors and helped set up transparent registers for government procurement. The State Department budget

for Europe and Eurasia (\$615m last year) is a lifeline for civil-society organisations. In Ukraine, Romania and Moldova, America has supported reformist politicians when they came under attack from oligarchs. In Poland and Hungary it has backed independent judges when ruling parties tried to subvert the courts.

As relations with Russia soured early this decade, American intelligence agencies grew concerned about Russian money-laundering flows. "Corruption was being used as a tool of coercion by outside actors, but it was also rotting NATO and EU members from inside," says Victoria Nuland, an architect of policy under the Obama administration. Mr Biden began visiting central and eastern Europe to stress that America now saw corruption as a national-security issue.

"We always felt we had the support of the United States embassy," says Cristian Ghinea, a Romanian anti-corruption activist and member of the European Parliament. America and the EU defended Romania's tough anti-corruption prosecutor when she came under attack. In Bulgaria American pressure repeatedly helped to protect civil-society groups from government reprisals.

America's emphasis on fighting corruption began to waver in 2017, when A. Wess Mitchell took over responsibility for State ►

► Department policy in eastern Europe. He believed America's sharp criticism of corruption was hurting it diplomatically, pushing countries like Hungary, Romania and Bulgaria closer to Russia. Mr Mitchell resigned early this year. But while many ambassadors still pursue anti-corruption policies, they can no longer be sure the White House is behind them.

Instead of backing anti-corruption stances by its embassies, the Trump administration has sometimes undercut them. Mr Trump's withdrawal of Ms Yovanovitch (and the failure of Mike Pompeo, the secretary of state, to defend her) had a chilling effect on diplomats. Bill Taylor, who replaced Ms Yovanovitch as ambassador, has testified to a "second track" of diplomacy, in which those with personal connections to Mr Trump (such as his lawyer, Rudy Giuliani) sidelined the government's official policymaking process.

A similar split has emerged in Hungary, where Mr Trump's politically appointed ambassador (a big campaign donor) arranged a visit to the White House by Viktor Orbán, the prime minister. That circumvented officials who wanted to keep Mr Orbán's corrupt and Russia-friendly government at arm's length.

In Ukraine, the anti-corruption reformers whom America supported for years have become collateral damage in the impeachment drama. Defenders of Mr Trump have revived baseless allegations against AntAC, a renowned rule-of-law group, that were originally concocted by Ukrainian officials the group accused of corruption. Pro-Trump social-media botnets have spread conspiracy theories about Daria Kaleniuk, the group's director. "It is the first time we have been hit with such a well-organised smear campaign from America. We are used to that coming from kleptocrats here in Ukraine," says Ms Kaleniuk.

The impeachment conflict may also hurt independent anti-corruption prosecutors, such as those in Romania, who depend for information on co-operation with American intelligence agencies. Those agencies will be less eager to share information if they do not think the White House cares about the issue. Anti-corruption activists say it does not; they have learned to phrase their appeals as efforts to protect American investors. "Words like 'rule of law', we understand now, don't open any doors with this administration," says Melissa Hooper, of Human Rights First, an American advocacy group.

Under Mr Obama, budget messages to Congress described foreign aid for "strengthen[ing] rule-of-law and anti-corruption measures" in Europe as part of America's strategy for countering Russian aggression. In Mr Trump's latest budget message the word "corruption" does not appear in connection with Russia. USAID

still offers grants for rule-of-law programmes, but the administration has tried to slash their budgets each year. For 2020 it asked that non-military aid to Ukraine be cut from \$250m to \$145m, and to Moldova from \$52m to \$18m. So far Congress has kept aid at the higher level, and anti-corruption activists in the region say American embassies still support them.

In other places America is simply a less significant part of the story. In Slovakia, where a huge anti-corruption movement over the past year has upended the political establishment, the Americans "haven't been that important", says Miroslav Beblavy, an MP from an anti-corruption party. Relations have been dominated by Slovakia's decision in August to buy American

F-16 fighter jets. Indeed, many countries in the region are buying American hardware. Romania and Bulgaria have both recently bought F-16s. They would be happy to see relations go back to a more transactional basis with fewer pesky questions. "They're all buying our planes because that's how they get influence," says Ms Hooper.

Yet the security provided by such deals will be illusory if formerly communist countries do not battle corruption. On the American side, the political will is dwindling. Many frustrated anti-corruption experts have left the State Department, Treasury and other agencies; others are considering it. "They can survive another year," says a former State Department official. "Four would be hard." ■

Switzerland's coffee stockpile

A nation of have-beans

If disaster strikes, the Swiss want to be caffeinated

TO DEFEND THEIR independence the Swiss have mountains, conscription and a fierce sense of self-reliance. They also have a vast stockpile of food, medicine, animal feed and cooking oil, which they have maintained since the 1920s. This makes sieges easier to withstand, but costs a fortune. So in April the Federal Office for National Economic Supply announced a plan to trim it a little. In future, it suggested, it would no longer pay for a huge emergency supply of coffee. This wonderful drink, it claimed, is not "vital for life".

The Alpine nation's coffee-lovers and sellers choked on their macchiatos. Switzerland's 8.5m residents sip around 9kg (20lb) of coffee per person annually, twice as much as Americans, according to the International Coffee Organisation. A Swiss breakfast without coffee would be like a Swiss army knife without a tool for removing stones from horses' hooves. A poll on Twitter (paid for by Migros, a supermarket chain, which owns Delica, a coffee brand), found that two-thirds of respondents could barely imagine a life without coffee. The federal office took note of the outrage and postponed a decision about the plan's implementation until next year. It may abandon it altogether.

The 15 big Swiss coffee retailers, roasters and importers, such as Nestlé, are required by law to store heaps of raw coffee. Together, these mandated coffee reserves amount to about 15,000 tonnes—enough for three months' consumption. The government finances the storage costs through a levy on imports of coffee. All 15 companies are in favour

of maintaining the coffee reserve—as long as they are paid for it.

IG Kaffee, a lobby group, asks why the government wants to scrap a stockpile that has served Switzerland so well. Shortages are possible, it warns. Low water levels of the river Rhine last year, for instance, led to bottlenecks in the coffee supply chain. A longer interruption would have "devastating" consequences for the industry. Moreover, coffee has health benefits, especially in moments of stress, claims IG Kaffee. Quite so. Food shortages, were they to happen, would surely be stressful. Also, the Swiss army can hardly be expected to remain alert without coffee. Come to think of it, is there enough chocolate in case of a national emergency?



No one feels neutral about coffee



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Romanian medicine

Still in critical condition

The EU's worst health-care system struggles to reform

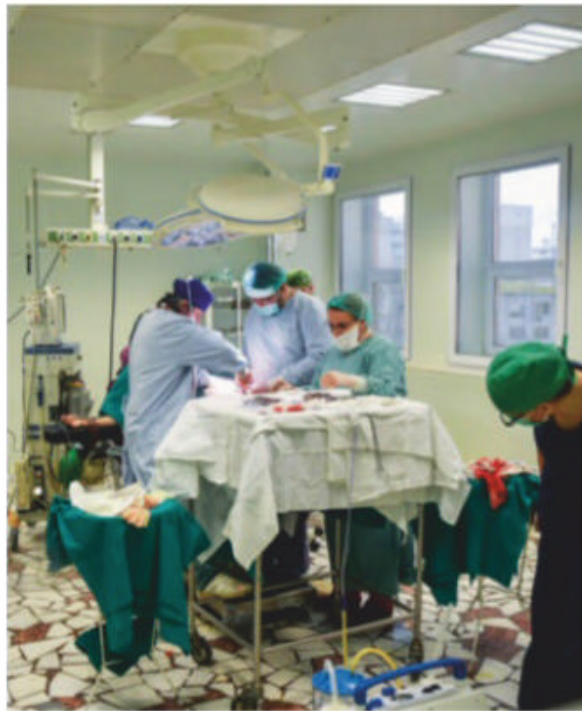
“WE HAVE HIGHER wages, we do not need bribes,” exclaims a poster taped to a glass screen at Slatina County Emergency Hospital in Romania. Five doctors draped in stethoscopes smile encouragingly: “We let corruption suffer, we will cure you!” Still, Romania’s health care consistently ranks as the EU’s worst, according to the Euro Health Consumer Index. Despite wages doubling in the past five years, corruption, underinvestment and an exodus of trained staff are still a plague.

The culture of expediting care with petty bribes is notoriously hard to root out. Even more worrying, however, are the large sums of money thought to be laundered through heavily marked-up deals with providers of equipment and supplies. In a big case in 2016, Hexi Pharma, a supplier of antiseptics to 350 public hospitals, was found to have diluted them significantly. A report accused hospital directors of taking a 30% cut on contracts.

Eurostat reckons Romania has the EU’s lowest spending on health care, both per head (a 13th of what Luxembourg, the front-runner, spends) as well as by share of GDP. No new government hospital has been built since communism fell in 1989. The EU has offered \$170m to fund construction, but no work has started. So the existing ancient buildings are biological time-bombs. Last December 39 babies were infected with an antibiotic-resistant superbug at one of the country’s best maternity hospitals. Romania has Europe’s highest rate of hospital-acquired infections.

Though the country produces high numbers of medical graduates, many do not stay to practise. Since joining the EU in 2007, Romania has haemorrhaged 15,000–20,000 doctors, who move in search of better pay. That leaves an estimated third of hospital posts in the country vacant. Only 10% of doctors work in rural outposts that are often understaffed and poorly equipped. As a result, one in four Romanians has insufficient access to essential health care, admits the ministry of health.

The government is keen to show that progress is being made. Medical salaries are growing faster than those in other sectors, rising from 88% to 122% of the national average in the past five years. As part of a crackdown, doctors are being asked to sign anti-corruption declarations. On July 15th Romania’s then health minister announced that undercover patients are be-



Romanian roulette

ing sent into state hospitals in order to expose corrupt staff. A day later, she announced her first catch.

But much more must change. Adapting old hospitals to today’s sanitary standards may prove more expensive than building new ones, says Cristian Vladescu, head of the National School of Public Health, though that will be politically hard. Rooting out corruption will take years. Until then, better not get ill in Romania. ■

Farm subsidies

Milking taxpayers

Farmers in some countries get much more than others

IN THE SUMMER EU member states squabbled over top European jobs. At least the fighting was fairly brief. Not so the agonising deliberations over the EU’s seven-year budget, or the “multi-annual financial framework” (MFF), which have been under way for nearly two years. Officials had hoped to agree a deal by the end of the year. Though the budget was discussed again on November 19th, its chances seem slim. The European Commission has proposed spending €1.1trn (\$1.2trn), or 1.1% of the combined national income of the EU27 (excluding Britain) between 2021 and 2027. Frugal governments in the north want to spend no more than 1%. Some others, meanwhile, want to decide the shopping list before they agree on the bill.

A big, contentious item is agriculture, which gobbles up 37% of spending in the current MFF. Once mocked for creating mountains of butter and lakes of wine, the common agricultural policy (CAP) is less

wasteful than it used to be, and has shrunk as a share of overall spending (see chart). The commission wants to shift funds from agriculture to research and technology. That means, for the first time, a cut in absolute terms—of around 5%, says Alan Matthews of Trinity College, Dublin.

The CAP’s champions, which include France and Ireland as well as eastern European countries, want to maintain current spending. In February Emmanuel Macron, France’s president, told farmers that spending should not shrink even by a euro. But looking at the numbers a different way might cause these countries to think again.

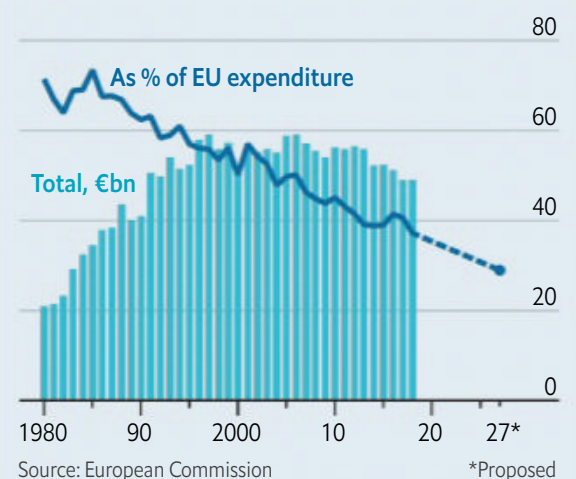
France is often assumed to be keen on the CAP because it gets the most cash. A better measure, though, is to look at receipts as a share of farmers’ income. This is what the OECD, a club of mostly rich countries, does—though it calculates figures only for the EU as a whole. In a new paper, researchers from the Centre for Global Development (CGD) work it out for each member. They look at how much subsidy farmers receive and add an estimate of the protection afforded by the EU’s tariffs, which shelter home produce from foreign competition.

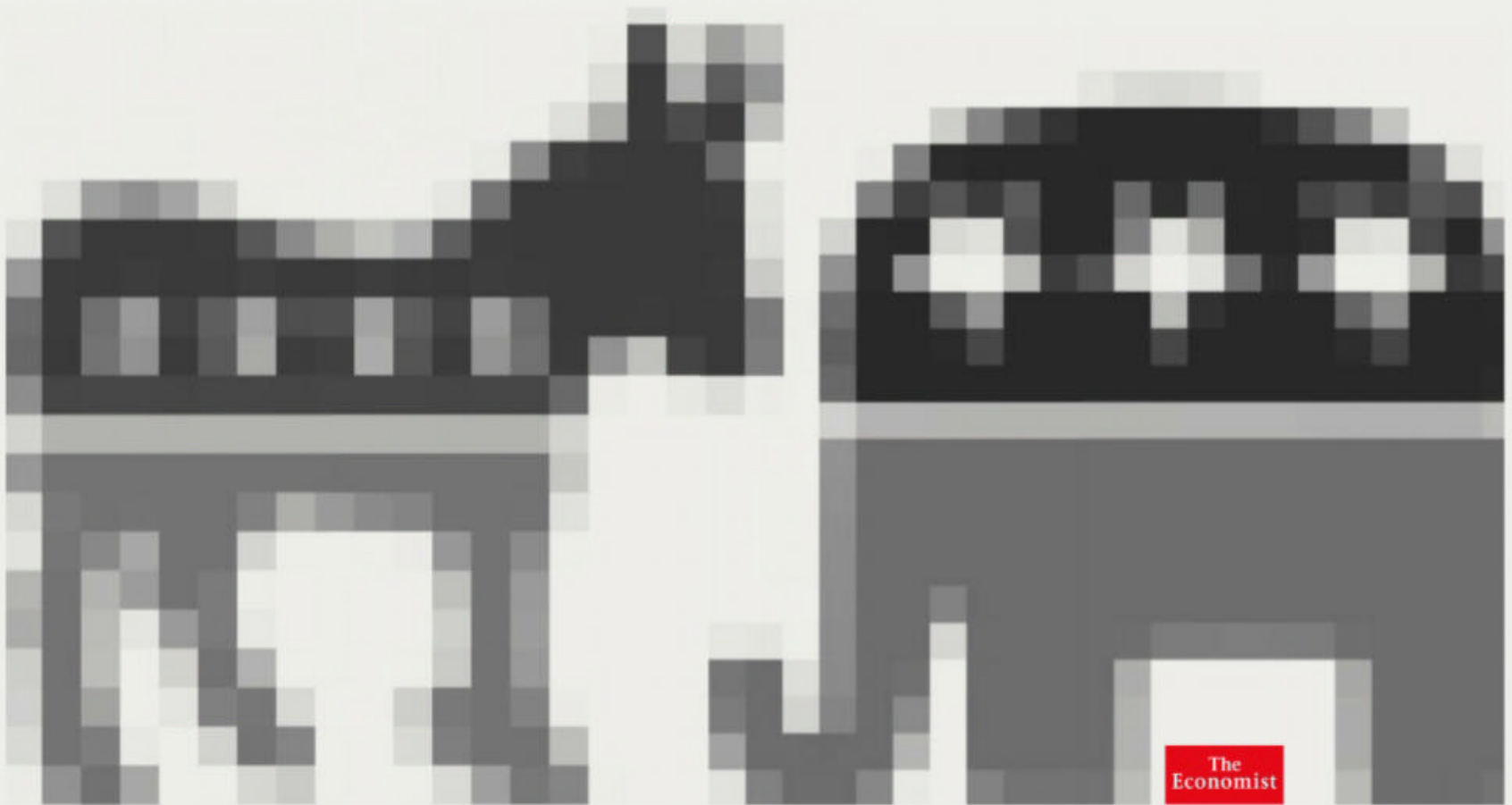
Seen in this way, the flow of money looks rather different. Latvia does best: a whopping one-third of its farm income comes from EU support. Greece and Estonia also fare well. Although they champion farm subsidies, France, Luxembourg and Ireland fare only moderately well—as does CAP-hating Britain. At the bottom end, Dutch farmers get a mere 7% of their income from EU support. Rather than reflecting deliberate policy choices, these differences reflect the fact that subsidy rates were often linked to historical values of production, or set when a country joined the EU, says Ian Mitchell of the CGD. This might make politicians—and farmers—in some countries more amenable to cuts that make the level of support more uniform.

That would allow more time for politicians to decide how to spend the money. One question is whether funding should be more closely tied to efforts to re-▶▶

Not such a mountain

CAP expenditure, 2011 constant prices





US elections/Mars missions/Beethoven's anniversary/Europe reconfigured/
Nuclear angst/China's target/Tokyo Olympics/The splinternet/Climate crunch/
One Africa/AI visions/Dubai's World Expo/Global money/Post-election Britain/
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duce greenhouse-gas emissions. John Springford of the Centre for European Reform, a think-tank, notes that farming emissions have been creeping up since 2012, partly because of increases in livestock. But the commission's cuts seem concentrated, bafflingly, on the part of the agricultural budget that could be used to do so, while sparing farm subsidies.

In early November an investigation by the *New York Times* revealed that politicians in Hungary and other central Euro-

pean countries were rigging land sales to capture subsidies or directing EU cash to their chums. That raises the question of whether the EU should monitor its funds more closely. Payments also tend to be linked to a farm's acreage, meaning that large landowners get the biggest handouts. The commission wants to cap the size of payments, but former communist countries, where farms tend to be large, oppose that. European taxpayers, it seems, will keep getting milked. ■

In Saintines, the non-partisan Mr Desmoulins has been mayor for fully 18 years. He runs three primary and two nursery classes in the village, to try to keep young families from moving away. The local population is growing. Standing in his town-hall bread shop on a weekday morning, the mayor greets clients by name. "A meal without a baguette," he comments, "just isn't a meal."

Not every mayor has an entrepreneurial streak like Mr Desmoulins. Many are livid at the government's decision to abolish a residential tax that used to provide a big chunk of their revenues, even though the government says it will compensate them directly. At the mayors' annual congress in Paris this week, President Emmanuel Macron promised to work with them, pointing to efforts such as the roll-out of fibre-optic networks and backing for a non-profit project to open 1,000 cafés in small villages. The stakes are not purely social. A study in 2016 by Jérôme Fourquet, a polling analyst, showed that the absence of a post office, grocer or café in a village, along with distance from a railway station, correlated with an increase in the vote for Marine Le Pen's populist National Front (now the National Rally).

Indeed Ms Le Pen came top in voting at European elections this year in Saintines. Mr Desmoulins, who plans to run yet again at municipal elections due next year, is pushing back. He has already put in his application to open a café under the new scheme. Nursery pupils in the village now get school lunches. Behind the bread counter, Brigitte Sraczyk, a town-hall employee who used to clean classrooms, sells about 50 baguettes a day and enjoys the social contact as much as her clients seem to. "Oh, I don't go to shops with unmanned checkout tills," says a pensioner, stepping in from the rain for a baguette and a natter. "A little 'Bonjour Monsieur, Bonjour Madame' every day never killed anybody." ■

France

Their daily bread

SAINTINES

A septuagenarian mayor tackles social decline in a corner of rural France

IT IS MID-MORNING, but the cornflower-blue shutters at what was once a cheery café are closed and rusting. Near the church, the grocer's is boarded up too, its paintwork peeling in the cold damp air. Even the *boulangerie*, which once sold the morning baguette to this village of some 1,100 people, has gone. Nestling amid forest and cereal fields in northern France, Saintines encapsulates many of the difficulties of rural decline—but also a distinctly French effort to fight it.

Off the high street, past the abandoned former post office, lies the entrance to the town hall. Tucked inside, freshly baked baguettes are lined up in a wooden rack behind a counter that also serves as a rural post office. Customers can pick up a loaf, send a parcel, even register a new baby, all in the same spot. Jean-Pierre Desmoulins, the 73-year-old mayor, has turned bread into a public service, and the little town hall into a social hub. "It creates a meeting place, a point of social contact," he says. "Sometimes, people spend half an hour here just chatting."

Saintines belongs to what might be called in-between France: neither remote enough for village life to revolve around farming seasons, nor close enough to big cities to be a mere dormitory. Over the years, the village has lost jobs and shops alike. Work at the local matchbox factory has all but disappeared, and with it the once-vibrant local cafés. Cars, like baguettes, are essential to daily life. Nearly 90% of village residents drive to work.

The village fits a countrywide trend. Between 2003 and 2014 France lost 7,000 cafés, a drop of 17%. Over the past six years alone, the number of *boulangeries* in France has shrunk by 18%, to 30,000. The upshot is a loss of daily social contact, lives spent in the car and a new form of solitude. This is

the potent mix that helped to mobilise the *gilets jaunes* (yellow jackets) protesters, who set up camps on the country's road junctions and roundabouts a year ago, initially to protest about a green tax on motor fuel. Away from the violence seen in the cities, many of these places recreated a festive, communal spirit that has been lost in car-dependent semi-rural areas. Today there are more roundabouts in France than there are cafés or *boulangeries*.

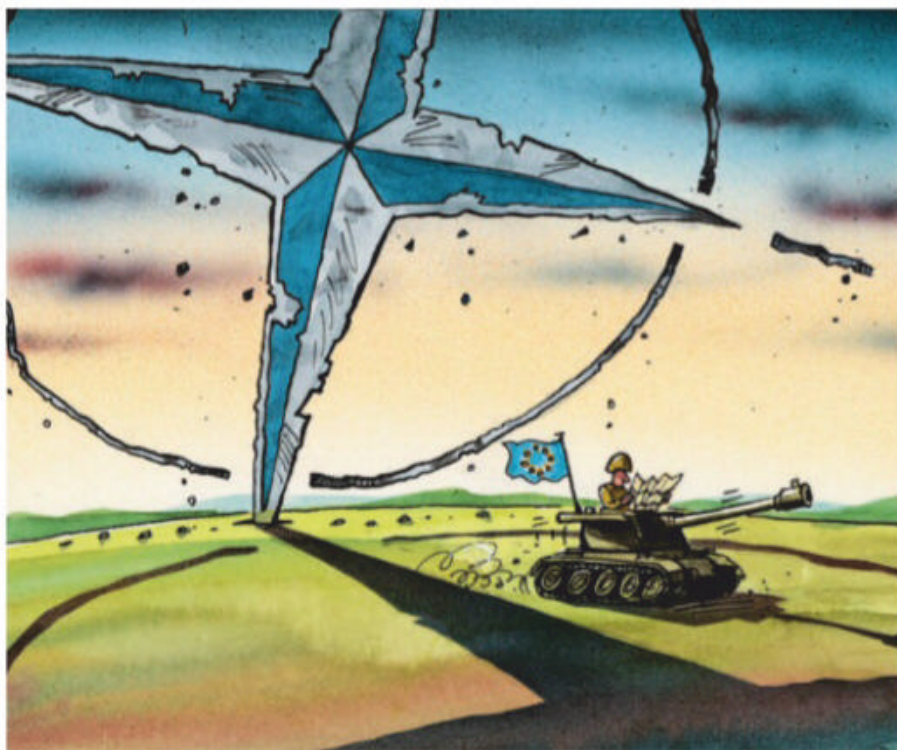
Yet for all the desolation, Saintines also dispels the myth of France as merely a centralised country run from Paris. Like almost every village across the country, it boasts its own town hall, displaying the national flag. France has 35,000 directly elected mayors—three times more than in neighbouring Germany. Half of them run villages with fewer than 500 people. And polls consistently show that French mayors are the most trusted of all France's elected leaders.



Welcome to Le Pen country

Charlemagne | Hedges and wedges

European defence is picking up speed, without agreeing on a destination



TWENTY YEARS ago George Robertson, then the head of NATO, mocked the European Union. Noting the EU's lack of guns and fondness for complex organisational charts, he quipped: "You cannot send a wiring diagram to a crisis." In an interview with *The Economist* published on November 7th, Emmanuel Macron, France's president, flipped the charge. NATO was experiencing "brain-death", he said, and America might not show up to defend it in a crisis. But Europe "has the capacity to defend itself", he insisted. Since then, the debate about what Europe ought to do for itself, and how that might affect NATO, has raged in public and private.

Mr Macron has some support for his crusade to beef up Europe's powers. "Both the willingness and ability to do more than its fair share are dwindling in the United States," warned Annegret Kramp-Karrenbauer, Germany's defence minister and Angela Merkel's successor as leader of the governing CDU party, in a speech that day. Europe could be strong "if we want it to be, and if we remove the obstacles in our way". There has been no shortage of wiring diagrams, and even some action. Ursula von der Leyen, president-elect of the European Commission and previously German defence minister, wants "bold steps in the next five years towards a genuine European Defence Union". To that end, Thierry Breton, France's new commissioner for the single market, will be double-hatted as director-general for the defence industry and space. He will preside over a European Defence Fund which will devote €13bn (\$14.4bn) over seven years to boosting research and stitching together the continent's fragmented defence industry.

That follows an alphabet soup of initiatives, cooked up over the past few years. A scheme known as Permanent Structured Co-operation (PESCO) was initiated in 2017 and now includes almost four-dozen projects that span the prosaic (a Eurodrone), the cosmic (a space-surveillance network) and the cloak-and-dagger (a school for spooks, run by Greece and Cyprus). In 2018 Mr Macron spearheaded the creation of a European Intervention Initiative (E2I), a more exclusive club of 14 countries—including some from outside NATO and the EU—that will jointly plan for future crises, with the aim of producing a "common strategic culture".

Europeans are even pooling sovereignty in areas once guarded jealously by states. On November 8th the EU decided to put the

European Border and Coast Guard (also known as Frontex) on steroids. It will grow from 1,300 secondees to a standing corps of 10,000, with a 26% jump in funding next year, to €421m. For the first time, the EU will be able to dispatch gun-toting men and women clad in EU uniforms to patrol its fringes, without asking member-states to cough up guards.

Yet for all this activity, there is a provisional quality to the rising edifice of European defence. Europeans see the storms coming and know they must build. But what the final structure should look like, and what its purpose ought to be, is left to another day. Mr Macron's intervention was intended to inject a sense of urgency into these questions, but its effect has been to widen the cracks.

In her speech on November 7th, Ms Kramp-Karrenbauer repeated the customary pieties of Franco-German comity. But on November 17th she spoke with more candour. Whereas her own aim was to strengthen Europe's "ability to act" in support of NATO, "the French are seeking strong European co-operation to replace NATO," she said. Whether that is true or not, it reflects mistrust of French intentions. Germany wants a stronger Europe to work through EU institutions. Mr Macron finds these plodding and ineffective; hence his resort to extra-NATO coalitions like E2I, a project to which Germany signed up with gritted teeth.

A more serious disagreement concerns the severity of Europe's predicament. Mr Macron cast doubt on whether President Donald Trump would honour Article 5, the promise that an attack on one NATO member will be treated as an attack on all. That fear is commonplace in think-tanks and chancelleries across Europe. But in most countries doubt has not yet slipped into fatalism. In a poll in 2018 majorities in all nine European countries surveyed said that America would come to the aid of Europeans if they were attacked—including 60% in France. Mr Macron believes there is little to lose; Germans, and those in uneasy proximity to Russia, like Poland, realise how much further damage Mr Trump could do to NATO if Europeans provoke him.

Steady on

To talk down NATO without a safety-net in place is negligent. Yet for all the talk of a European army, the continent's current schemes and spending will not—and are not intended to—plug an America-sized hole. Ms Kramp-Karrenbauer's speech was full of exhortation for Germany to do more. But her answer to when Germany would meet NATO's target of spending 2% of GDP on defence was dismaying: in 12 years' time, and that is not settled policy. The CDU's Social Democrat partners object to a budget boost that would turn Germany into the third-biggest military spender in the world.

Even beyond Germany, the share of European defence spending devoted to science and technology has dropped by over a third since 2016. And while new defence schemes may eventually build habits of co-operation, it will take time. Chasing pirates and training Malian soldiers is one thing. Fighting Russia is completely different. Even Mr Macron's pet project, E2I, was last year cruelly dubbed "Erasmus for soldiers" by Nick Witney, a former head of the European Defence Agency, after a student-exchange programme. Mr Macron's willingness to move fast and break things is predicated on the fear that NATO might collapse sooner rather than later. His fellow leaders worry that pressing the panic button may hasten that collapse, by deepening Europe's own fissures and antagonising Mr Trump. "The Plan B Macron is now actively pushing is being rejected by at least half of Europe," says Ulrich Speck of the German Marshall Fund. "The hedge is becoming the wedge." ■

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The election

The battle for Brexitland

GRIMSBY

Labour may be about to lose control of one of its greatest northern strongholds



SWING SEATS

THE LABOUR PARTY has held Great Grimsby for 74 years. The Lincolnshire constituency's past MPs include Anthony Crosland, who wrote one of the party's most important post-war texts, "The Future of Socialism", and Austin Mitchell, who

once claimed that Grimsby would vote Labour even if the party put up a "raving alcoholic sex paedophile".

Yet the seat may be about to fall. A poll for *The Economist* by Survation suggests that the Conservatives lead Labour by fully 13 points (see chart). The usual caveats apply: local polling is tricky, the sample small and there are three weeks to go. But the big lead of the Tory candidate, Lia Nici (pictured), implies not only that Labour is in danger of losing one of its most dependable seats. It also suggests that Boris Johnson's targeting of working-class, pro-Brexit towns in the north and the Midlands could well succeed. A realignment in British politics may be in the making.

Labour's decades in charge of Grimsby

have seen steep decline. In the 1950s the town was home to the biggest fishing fleet on earth. The docks were a thriving community of small factories making nets and fishing gear, busy shops and smokehouses. Trawlers packed the harbour, as the world's biggest ice factory, built to provide crushed ice for ships, loomed over everything. Now many of Grimsby's fine buildings are crum-

bling and its streets quiet.

The gutting of the fishing industry has devastated related trades (there were once eight jobs onshore for every one at sea). At 5.3%, Grimsby has one of Britain's highest unemployment rates, and the social problems that go with it. Ex-fishermen can be found drinking in pubs at 9am. Drug gangs have set up in the homes of vulnerable people, a practice known as "cuckooing".

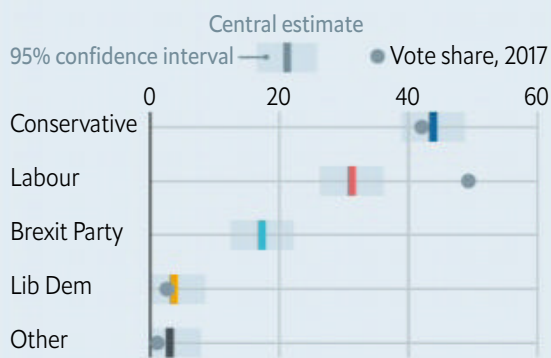
Such decline has created a powerful feeling of being ignored by Westminster and taken for granted by Labour. Locals complain that "London" is more interested in wasting billions on white elephants like HS2, a railway connecting the capital to big northern cities, than in improving the dire local rail links. In so far as "they" notice the east coast at all, they spray money at Hull, on the Yorkshire side of the Humber (Grimbarians' dislike of Londoners is as nothing compared with their disdain for "Yorkies").

All this helped to persuade Grimsby to vote by more than 70% to leave the European Union, one of the highest shares in the country. Of the 70-odd constituencies that backed Brexit by more than 65%, the Tories already control 38; they now have their eye on the Labour-held remainder in the north and Midlands (see map overleaf).

Mr Johnson's pro-Brexit message seems to resonate. Grimbarians blame the EU for destroying their fishing industry with its regime of quotas, and regard Brussels as

Grim news for Labour

Britain, Great Grimsby constituency
2019 general election voting intention*, %



Sources: Survation; *The Economist*

*Telephone poll of 401 adults surveyed on November 14th-15th. "Don't know" and refused removed

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▶ the embodiment of faraway and out-of-touch power. There is also unease about immigration. Grimsby had almost none until an influx of eastern Europeans after 2004 to work in the one remaining bit of the fish industry, processing imported fish.

Locals have no time for Jeremy Corbyn, Labour's leader. Three complaints are loudest: he is not a patriot; he is more interested in minorities than "people like us"; and he represents the hijacking of the Labour Party by London. Mr Mitchell expressed the sentiments of many locals when he recently urged people not to vote for Mr Corbyn and his "mob of cosmopolitan meritocrats who love the [EU] more than those at the bottom of society's top-heavy heap".

This has caused acute problems for Grimsby's Labour MP, Melanie Onn. She has agonised over Brexit, backing Remain and repeatedly opposing Theresa May's deal, before voting for Mr Johnson's version. She was conveniently out of town for Mr Corbyn's two visits to Grimsby. Christopher Barker, the local Brexit Party candidate, says he has searched the internet for pictures of her with her party leader, only to come up blank.

Can the Conservatives turn all this angst into victory? There are plenty of straws in the wind other than our poll. The Tories took control of the local council in May. They have found a good candidate in Ms Nici, who was brought up in Grimsby and worked in local television. She puts a positive spin on the town's plight, admitting that it is "a bit rough around the edges" but pointing out that it has a legacy of mansions and parks from its glory days, and that it is embracing new technologies. The world's biggest offshore wind farm, Dogger Bank, is being constructed off the coast. The Tories nevertheless face two hurdles.

The first is that the Brexit Party has a clear message and a dynamic candidate. Mr Barker is an outsider—he has a posh accent

and Yorkshire roots—but he is battle-hardened from recent European elections and is eloquent (if wrong) in arguing that a no-deal Brexit would not only honour democracy but revive the fishing industry. The decision of his party to stand down in Tory-held seats has blunted its insurgent message—the 17% it scores in our poll is lower than the 25% notched up by its forerunner, the UK Independence Party, in 2015. But there is no doubt the Conservatives would rather the Brexit Party wasn't there.

Their second hurdle is that, after three-quarters of a century, Labour has a powerful local machine. The Tories operate from a broom cupboard of an office, smaller even than the Brexit Party's headquarters. Labour can call on the support of trade unions like Unite, which has an office in town. It can also remind voters that the party of Old Etonian Mr Johnson is even more culturally alien than the party of Islingtonian Mr Corbyn.

But the signs are that the Labour Party will need an extraordinarily successful campaign to retain this deepest-red of constituencies. Perhaps Ms Onn could do as her predecessor, Mr Mitchell, once did, and change her surname to Haddock. ■

The monarchy

The panned old Duke of York

When he was down, he was down

IN HIS WRITINGS on the role of the monarchy, Walter Bagehot, this newspaper's most famous editor, warned against letting in "daylight upon magic". The glare from an LED softbox light panel certainly did Prince Andrew no favours. Defending his association with Jeffrey Epstein, a now-dead convicted paedophile, in an interview with the BBC, and denying an accusation by one of Epstein's victims that he had had sex with her when she was 17, the prince—aka the Duke of York—looked pasty and shifty, his answers implausible and arrogant.

He said staying with Mr Epstein was "convenient". No doubt it was. Mansions in the centres of the world's great cities usually are. But his claim that his primary purpose in spending four days at Mr Epstein's house, during which he attended a dinner party there, was to break off the friendship face-to-face stretched credulity, especially when he put it down to his "tendency to be too honourable".

But it was the *de haut en bas* tone that was most astonishing. His alibi for one night on which he was said to have had sex with the girl was that he had been taking



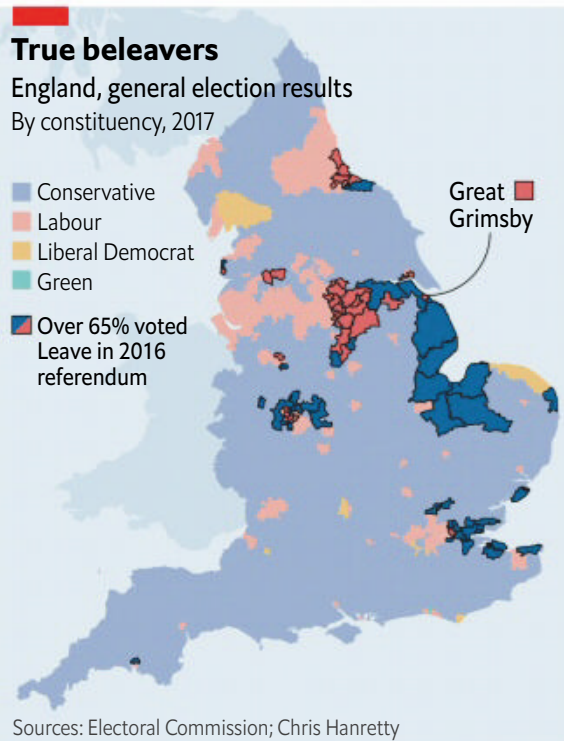
He had ten thousand excuses

his daughter to the Woking branch of Pizza Express; he said he remembered it because going to Pizza Express in Woking was a "very unusual thing for me to do". He denied having hosted a party on the grounds that it was "just a straightforward...shooting weekend". And he failed to notice the stream of very young women in and out of Epstein's houses because they were full of staff—to whom one would, obviously, pay no attention.

The interview has done the prince permanent damage. On November 20th, after several businesses distanced themselves from his charities, he announced that he would be stepping back from royal duties "for the foreseeable future". The bigger question is whether the monarchy has been damaged. Andrew is said to be the queen's favourite, and it seems likely that she approved the interview. Even so, support for the monarchy will probably be unaffected. In the past quarter-century it has moved in a narrow band, from 65% to 80%. That may be in part because of the popularity of the incumbent, whose ratings politicians would kill for. According to YouGov, a pollster, she is the most popular royal, with 72% approval, and the most admired woman in the country.

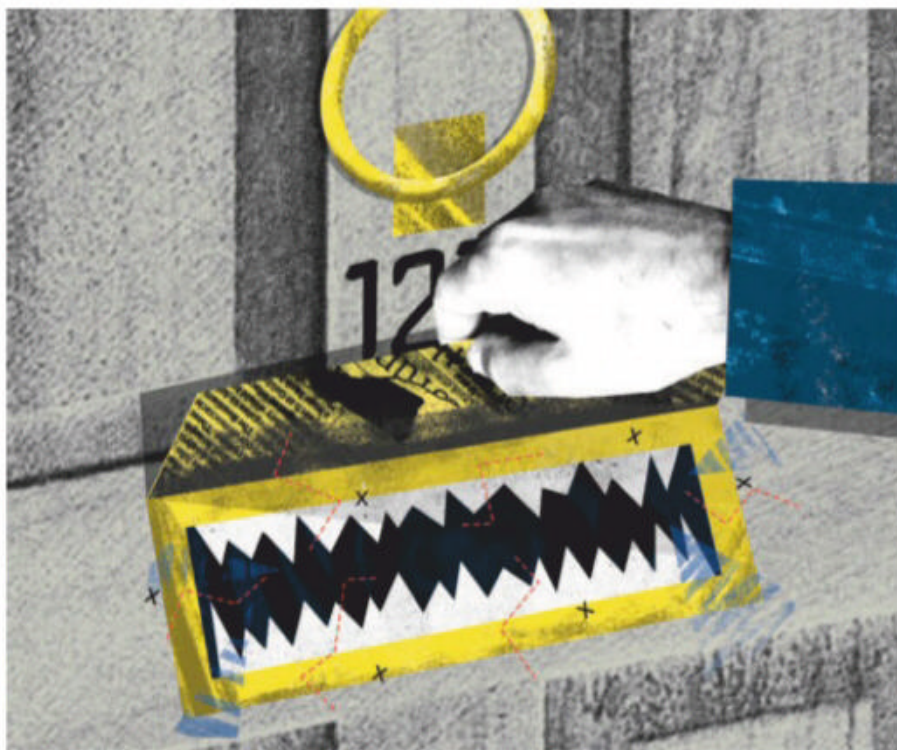
The queen's most important quality is her ability to keep her mouth shut, a skill which neither Andrew nor his elder brother Charles has mastered. By sounding off about a wide range of subjects about which he has more opinions than knowledge, the heir to the throne has annoyed many.

The queen's willingness to keep her counsel has allowed her to remain a symbol rather than a person, and thus a focus, as the royal website puts it, for "national identity, unity and pride". Prince Andrew has certainly united the nation in the past few days, but not in the way that his mother would have wished. ■



Bagehot | Knock knock

Old-fashioned canvassing can still make all the difference



A BRITISH ELECTION still means knocks on the door and uneasy garden-path chats. You're settling down to the new season of "The Crown" when democracy intrudes in all its irritating vulgarity. If you tell the candidate you are wavering, you are in for a long conversation. If you express enthusiasm, you might end up with a poster in your window and a spell rapping on doors yourself.

Street-by-street canvassing is costly in terms of time and effort, consuming the lives of front-line politicians, as well as novices, for weeks. It is also a pain. At this time of year it gets dark at 4pm and—if this columnist's experiences over the past few days are anything to go by—pours with rain 24 hours a day. Politicians have always faced dangers on the stump, such as slathering dogs and snapping letter boxes. The perils are worse in polarised times. The police recently released guidelines for candidates on how to stay safe while canvassing. Lest we forget, Jo Cox was murdered by a far-right fanatic during the referendum campaign of 2016.

Why do politicians still engage in pavement politics in the age of the internet? Haven't the guys in Silicon Valley invented magic algorithms that can target every conceivable demographic? Some of today's canvassing techniques are strikingly similar to the sort described in Anthony Trollope's political novels of the Victorian era, with spending promises taking the place of free alcohol.

The answer is partly that canvassing provides parties with local knowledge. Banging on doors is not only the best way to identify your supporters. It is also the best way to gauge degrees of warmth or hostility. Waverers can be targeted for another visit. Get-off-my-lawn types can be written off. Old-fashioned canvassing works seamlessly with modern technology, as canvassers use apps such as Minivan Touch that allow them to feed doorstep responses into a central database. These data are then used for the get-out-the-vote effort on election day, when thousands of volunteers will make sure that "definites" get to the polling station and "persuadables" are given one last push.

Even more important is the fact that canvassing forces politicians to look voters in the eye—to deal with their constituents as individuals, rather than as concocted stereotypes such as "Worlington Man". This columnist spent a little time following Sam Gyimah, a former Tory rising star who sacrificed the safe seat of East

Surrey to stand as a Liberal Democrat in marginal Kensington. Mr Gyimah explained that a lot of what he was doing was "pushing waverers into my column" (Kensington is full of rich people who dislike both Brexit and Jeremy Corbyn, Labour's leader). He spent a remarkable amount of time chatting to wavering voters, vanishing for such a long time at one point that his fellow canvassers worried that he had been kidnapped. The hard slog is made up for by magic moments. One door he knocked on was opened by Sir Tim Sainsbury, a former Tory minister and donor, who gave Mr Gyimah his endorsement (and a big cheque).

Mr Gyimah points out that his new party has 120,000 members, three-quarters of whom have joined since 2015. They are younger than the Lib Dems of old, and fired up about the Brexit debacle. He also points out that his new party is polling twice as well as it was at this stage of the race in 2017. But for all his enthusiasm the most important battle across the country is between Labour and the Tories. Who is doing better at old-fashioned pavement politics?

The blunt answer is Labour. The party has far more members than the Conservatives—perhaps some 540,000 (though the figure is disputed at the margins) to the Tories' 160,000. It has a Praetorian Guard of Momentum members who are capable of doing exactly what their name describes: arriving en masse in marginal constituencies and giving the local campaign a shove. Momentum is particularly proud of its "decapitation" strategy of targeting senior Tories with less-than-impregnable majorities, including Iain Duncan Smith in Chingford and indeed Boris Johnson in Uxbridge.

Labour has also done more than the Tories to select candidates who look like their constituents. Parties of all stripes have long parachuted high-flyers into winnable seats, none more so perhaps than New Labour, which sent the Miliband brothers of Primrose Hill to South Shields and Doncaster. But this is more of a problem for the Conservatives than for Labour. For one thing, the party's membership is concentrated in the south, whereas Labour's members are more dispersed. What's more, fielding outsiders reinforces the stereotype that Tories are out-of-touch snobs. Mr Corbyn's Labour Party has favoured candidates with deep local roots, such as Angela Rayner and Lisa Nandy, over androids with PPE degrees from Oxford. Local roots matter most in the north, where regional identities are more pronounced than in the south-east.

Labour has also done better at preserving long-standing traditions of street politics while embracing innovations. The great parties used to have rival political gatherings in the north, the Durham Miners' Gala for Labour and a Northumberland Pageant in Alnwick Castle for the Tories. Whereas the Pageant died long ago, the Miners' Gala marches on. Labour has created a new class of £3 (\$3.90) supporters in order to boost its numbers. It has also outsmarted the Conservatives in using the internet to organise people on the ground. The Tories got into trouble with the Electoral Commission in 2017 because they paid to bus in supporters to target constituencies. Labour used a free ride-sharing app.

Who's there?

The Conservatives are well ahead in national polls. They are also showing signs of making the gains in the north that they regard as crucial to winning a majority. This columnist has found a lot of support for making Brexit happen and a great deal of hostility to Mr Corbyn. "I'm a moderate Labour supporter, so I'm voting Liberal Democrat," said one teacher in Bishop Auckland, matter-of-factly. Whether Labour can use its superior ground game to frustrate the growing expectation of a Tory victory is another matter. ■



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Protests in Iran

Putting out fire with gasoline

Rises in the price of petrol are fuelling unrest in Iran

AFTER A BIG rise in the state-controlled price of fuel on November 15th, anger erupted across Iran. Protesters in more than 100 cities blocked traffic, torched banks and burned down petrol stations. They targeted anything that smacked of the state, even mosques and ambulances. It was the most dramatic expression of hostility to the ruling ayatollahs since a disputed election in 2009 sparked a “green revolution” that shook the regime for a year. The most violent unrest occurred in Khuzestan, an oil-rich province on the Persian Gulf, and in a belt of commuter suburbs and small towns ringing Tehran, the capital. Amnesty International, a human-rights watchdog in London, said over 100 protesters nationwide had been killed.

Complaints about petrol prices have turned into denunciations of the regime. Protesters burned portraits of the supreme leader, Ayatollah Ali Khamenei, and shouted “Mullahs get lost!” Two years ago working-class Iranians demonstrated angrily when the government raised the price of eggs. This time middle-class car-owners also joined the protests. The gulf between

the ruling clergy and Iran’s 83m people appears to be widening.

The government knew its decision to raise the fuel price would bring trouble. It had repeatedly suggested it would do so, only to back down. This time the government waited until midnight on November 15th, just as the Iranian weekend began. It then announced a 50% increase in the price of the first 60 litres of petrol that may be bought every month (enough for a car’s tank of fuel) and a threefold increase for any more purchases. As the first snow of the year fell, the government hoped that people would stay indoors. No such luck.

So far, the regime shows no sign of backing down. In some places security forces opened fire to protect public buildings. The

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government turned off the internet and jammed satellite television. Videos shared online showed gunmen shooting into crowds of protesters. Citizens near the sites of protests received anonymous messages saying: “We know you are here.”

The various branches of Iran’s government, often at odds, have closed ranks behind a newly formed Supreme Council of Economic Co-ordination, which signed the decision to raise prices. Mr Khamenei publicly backed the president, Hassan Rouhani, whom he has often criticised. The supreme leader denounced the protesters as “thugs” and blamed “the centres of villainy around the world that oppose us” for stirring up the unrest.

It is unclear why the clerics took this gamble. Petrol arouses passions in Iran like no other commodity. Ever since its British-run oilfields were nationalised in 1951, Iranians have considered ridiculously cheap fuel a birthright. Many believe that Ayatollah Ruhollah Khomeini, the Islamic Republic’s founder, promised the people free energy in 1979. Iran has some of the world’s most heavily subsidised petrol. The refined stuff costs less than crude—and less even than bottled water. Cheap fuel prompts many Iranians to commute to cities from distant satellite towns with low rents, or even to drive in from the provinces each day. Others make a living by smuggling petrol abroad. Air pollution in Tehran is, unsurprisingly, terrible.

Recent economic data may have given the government a false sense of confi- ▶▶

► dence. Mr Rouhani has boasted that it has fended off America's campaign to exert "maximum pressure" on Iran, after President Donald Trump's ditching of the deal to curb Iran's nuclear programme. Iran's currency, the rial, has recovered a bit, after plummeting by 60% when Mr Trump imposed sanctions on countries that buy Iranian oil. Tax rises, land sales and petrochemical exports have partly compensated for the loss of oil revenues. Last month the World Bank predicted that inflation would fall by almost a quarter in the year ahead and that an 8.7% fall in GDP this year would be followed by a return to modest growth. Iran is still the Middle East's second-biggest economy after Saudi Arabia.

All the same, Mr Trump's sanctions are hurting. Mr Rouhani had budgeted to export oil this year at a rate of 1.5m barrels per day, but Iran is struggling to find buyers for a third of that. Revenues should have covered the subsidy bill, estimated at \$25bn (5% of GDP), but are 70% below budget, says an Iranian finance official. So the people are paying the price. The fall in the rial's value and soaring inflation have sharply cut the purchasing power of public-sector workers. A senior civil servant on the equivalent of \$2,000 a month at the start of this year may now be earning \$400. Food prices are rising faster than inflation, hitting the poorest hardest. Middle-class families, too, are slipping into penury as they exhaust their savings. Poverty has soared.

The clerics know they must somehow dampen the anger. Parliamentary elections are due early next year. Mr Rouhani says that the savings from the reduction in petrol subsidies will be distributed as welfare. Some 18m households (three-quarters of Iran's population) will qualify, say officials, acknowledging the extent of deprivation. But few Iranians trust the government to keep its promise. Mr Rouhani previously cut the welfare payments his predecessor, Mahmoud Ahmadinejad, made after raising fuel prices a decade ago. Moreover, many fear that rising transport costs will push up the price of groceries, wiping out the benefits of additional welfare.

Mr Trump is sure to proclaim Iran's troubles as an American foreign-policy success. "The United States is with you," tweeted Mike Pompeo, America's secretary of state, to the protesters. But it is unclear whether the latest bout of unrest will spur the regime to reform, let alone topple it. Previous protests have faded. Repression may curb the latest ones. The authorities have kept city centres under control. Oil workers have not gone on strike to back the protesters. The opposition is incoherent.

Meanwhile, the regime is toughening up. It has become more belligerent abroad, crueller at home and less democratic. So far, the protests have failed to make it change course. ■

Israel and the Palestinians

Unsettled status

JERUSALEM

America says Israeli settlements in the West Bank are legal. Others disagree

THE ANNOUNCEMENT ON November 18th by Mike Pompeo, the American secretary of state, was unscheduled but not unexpected. After a legal review by his department, Mr Pompeo said, Israeli settlements in the West Bank were found to be in line with international law. That declaration was just the latest in a series of gestures by the Trump administration benefiting Israel over the past two years.

The move is wholly in tune with Donald Trump's tendency to disregard diplomatic norms, as he did when he recognised Israel's sovereignty over the occupied Golan Heights and Jerusalem as Israel's capital. Despite some dissenting views, the international consensus for decades has been that the settlements Israel has built in the territories it captured in its war with Arab states in 1967 are indeed illegal. They are deemed to contravene the Fourth Geneva Convention, which says "the occupying

power shall not deport or transfer parts of its own civilian population into the territory it occupies".

Israel, undeterred, has clung to its own interpretation of international law. Over the past 52 years it has built scores of settlements, both in East Jerusalem, which it formally annexed in 1967, and in the wider areas of the West Bank (which Israel calls Judea and Samaria). Palestinians, and much of the rest of the world, regard these, as well as the Gaza Strip, as belonging to a future Palestinian state.

Settlements have been built and expanded under every Israeli government of the past half-century, whichever party was in power. Labour regarded the occupied territories as bargaining chips in negotiations over a future peace deal with Jordan or the Palestinians. Likud, the party of the present prime minister, Binyamin Netanyahu, sees the West Bank as the ancient Jewish homeland, never to be relinquished. According to Peace Now, an Israeli advocacy group, 428,000 Israeli settlers live in the West Bank (not including East Jerusalem), alongside 2.6m Palestinians.

The timing of the announcement may well have been engineered by pro-settler elements in the Trump administration. Chief among them is David Friedman, Mr Trump's former bankruptcy lawyer and his current ambassador to Israel, who has been pushing for such a shift. It was partly in response to a ruling on November 12th by the European Court of Justice, reinforcing European Union guidelines that food products exported from the West Bank settlements should not be labelled "Made in Israel", but specify that they were processed in the occupied territories.

Mr Pompeo's announcement is unlikely to have any immediate impact on the ground. The settlements have been growing at a steady clip anyway; in the three years since Mr Trump took office, 30,000 new settlers have arrived. Although Mr Netanyahu's government has in this period officially added only one new settlement, settlers have independently opened 26 new "outposts", with the government usually turning a blind eye.

For the Palestinians, whose leaders were swift to condemn the move, it will not change much either. They cut off all talks with the Trump administration two years ago, after it recognised Jerusalem—the putative capital of a future Palestinian state—as Israel's capital. Mahmoud Abbas, the Palestinian president, had already rejected Mr Trump's much-vaunted peace plan (the "deal of the century"), though it is unclear whether it will ever actually be presented. The administration has since ordered the closure of the Palestinian mission in Washington and cut nearly all the funding it provided to the Palestinian Authority, which runs parts of the West Bank



but has lost control of the Gaza Strip to its Islamist rival, Hamas. Following the announcement about settlements, the State Department warned Americans of potential unrest in Jerusalem, the West Bank and Gaza. But in the short term it is unlikely to lead to a big surge in violence.

So it is easy to dismiss the administration's change of policy as an empty gesture, aimed at a domestic audience, and intended mainly to appeal to the pro-Israel evangelical American voters Mr Trump will need for re-election in 2020. But it could have important effects in the longer term.

Mr Netanyahu has announced a number of times this year that he intends in the near future to annex parts of the West Bank formally. His political rival, Benny Gantz, also welcomed Mr Pompeo's announcement, though he has presented no plans for dealing with the settlement issue. After an inconclusive election in September, Israel is in political deadlock; neither leader has been able to form a ruling coalition. But America's shift will probably encourage any future Israeli government to move ahead with annexation. ■

Development economics

Helicopter money

Cash handouts benefit not just recipients, but their neighbours too

ECONOMISTS HAVE long argued that people should give each other money rather than gifts, since it is hard to know what others truly want. Though they have failed to ruin Christmas, a study in Kenya shows how they are changing the war on poverty by encouraging cash handouts to the poor.

Of 142 countries in a database compiled by the World Bank, 70% now use unconditional cash transfers as part of their welfare programmes. About 40% have conditional payments, in which recipients must fulfil certain obligations, such as getting their children vaccinated or enrolling them in school. Brazil's *Bolsa Família*, launched in 2003, is now the world's biggest such scheme. It helped slash the country's extreme-poverty rate from 9.7% to 4.3% in a decade. China's unconditional cash-transfer programme, *dibao*, boosts the incomes of 69m people, according to the World Bank, though many poor households miss out because of corruption and red tape.

Most research has found that both types of cash transfers reduce poverty, and that conditional ones can boost school attendance and improve public health. Still, some economists worry about unintended consequences. Spending on one thing

means not spending on another. Grants targeted at some people might disadvantage their business competitors. And large handouts could cause inflation in isolated areas where markets are thin.

A new working paper, however, alleviates many of those concerns—and goes further.* Cash grants, it seems, benefit not just the recipients, but their neighbours, too. Between 2014 and 2017 GiveDirectly, a charity, handed \$1,000 to more than 10,000 randomly chosen households in rural Kenya. This amounted to around 75% of a typical local family's annual expenditure. The authors found that consumption rose by 13% for both the households that received the grants and neighbours who received nothing. Wages for the latter rose substan-

Ivory Coast

Crocodile fears

YAMOUSSOUKRO

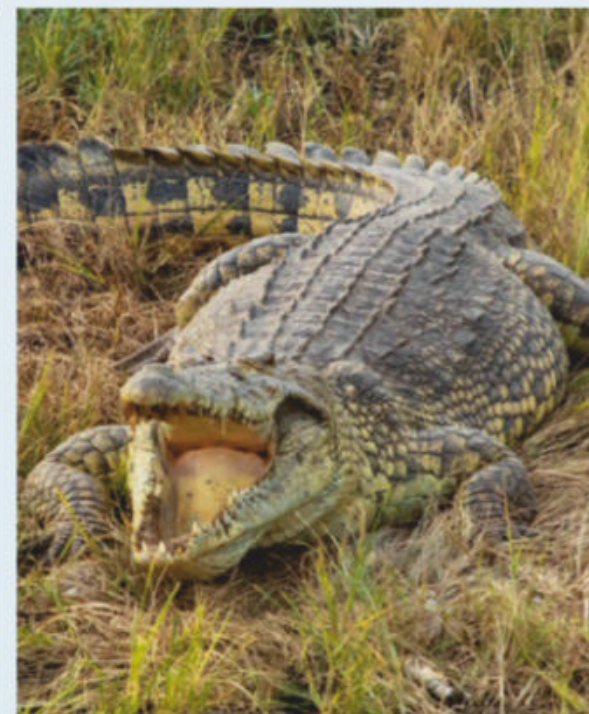
A former president's pet reptiles are terrorising the capital

THE FIRST president of Ivory Coast, Félix Houphouët-Boigny, liked to build monuments to himself. After independence he erected a new political capital on top of his remote home village, Yamoussoukro. No expense was spared. He equipped the city with a Concorde runway, West Africa's first ice-skating rink, the largest basilica in the world and a grand palace, surrounded by an artificial lake filled with crocodiles.

Since the president's death in 1993 officials have preferred to work in the commercial capital, Abidjan, leaving the political capital to fall into disrepair. But potholed roads and broken streetlights are not the only problems locals face. The president's pets have escaped into the city's waterways, and reproduced. "There has been no policy for the crocodiles. If you go near the water, they will eat you," frets Souaga Gérard, a teacher.

The crocodiles were gifts from Moussa Traoré, the brutal dictator of next-door Mali. "It was a sort of 'This is how I deal with my enemies' gesture," says a Western diplomat. For more than three decades they were looked after by a wiry keeper, Dicko Toki. He gave them names like "Capitaine" and "Chef de Cabinet" and kept them in check with a blunt machete. In 2012, however, Mr Toki was allegedly dragged out into the lake by Chef de Cabinet, never to be seen again.

In the wild, crocodiles can get by with only the occasional meal. The oxen that the presidency buys to feed them every month ought to be enough to satisfy even the hungriest of them. Alas, irresponsible tourists have developed the habit of paying locals good money (around \$5 a



Many crocs, no keeper

chomp) to see them gobble down live chickens. This rich diet has allowed the animals to grow and multiply. There were about 20 originally, but no one knows how many there are now—or how many people they have killed. "It is particularly dangerous in the rainy season when there are floods," says Mr Gérard.

In most cities in Africa hardly anyone would shed a tear at the removal of cold-blooded killers, or their conversion into stylish handbags. But Yamoussoukro's crocs have a sacred aura, thanks to the big man to whom they once belonged. Some say anyone who does them harm will be cursed. So when they come out of the water looking for a snack, the palace guards do not shoot them. Instead, firemen are called to put them gingerly back.

tially, suggesting that grant recipients paid their employees more. Meanwhile local prices rose by less than 1%. The authors estimate that local GDP rose by \$2.60 for every dollar granted. The comparable figure in America has been estimated as \$1.50-2.

The authors did not track a different kind of spillover effect, however: feelings of envy at witnessing the good fortune of others. An earlier paper found that neighbours of recipients reported significant declines in life satisfaction, though their finances had not changed. ■

*"General equilibrium effects of cash transfers: experimental evidence from Kenya", by Dennis Egger, Johannes Haushofer, Edward Miguel, Paul Niehaus and Michael Walker. November 2019

Kenya

Trouble brewing

KERICHO

A row over who owns farmland is making life difficult for foreign companies

MANY KENYANS still resent the British colonists who once ruled them, an attitude their schools encourage. The colonists bilked the natives of choice land and ruthlessly suppressed the Mau Mau rebellion, a land-related insurgency waged against them in the 1950s.

Land grievances remain a powerful undercurrent in Kenyan politics today. At independence in 1963 the departing British set aside money to buy back land in the “White Highlands”, which had been reserved for settlers, and redistribute it among land-hungry Africans. Though many benefited, much of the land went to those with political connections. The family of Kenya’s first president, Jomo Kenyatta, was among the biggest winners. The politicians, however, were happy to let foreign companies own big tea and coffee plantations, so long as they got seats on the board and a share of the profits. The colonists had turned tea and coffee into mainstays of the economy; it was too risky to hand over all the big estates to cronies.

In the past land in Kenya was less explosive an issue than in some other African countries. In Zimbabwe and South Africa white farmers owned a far greater share of the best land, making them a visible sign of racial inequality and historical injustice, as well as an easy target for populist politicians. In Kenya this was not the case.

However, thousands of Kenyans have been killed in ethnic clashes linked to land, as tribal groups of smallholders face off against each other, often egged on by politicians. Big commercial farms have largely escaped trouble. But times are changing and multinational firms that own large tracts of land are feeling the heat.

In 2010 Kenya adopted a devolved constitution that hands hefty powers to 47 newly created counties. It also created a National Land Commission with a mandate to address “historical land injustices and recommend appropriate redress”. In addition it lopped a nine off the 999-year leases granted to foreign owners of big farms in the former White Highlands. But it failed to specify when the 99 years started, allowing some governors to make the dubious claim that land confiscated by Britain before 1920 is now fair game.

Kericho, the capital of Kenya’s tea country, is a verdant spot. Emerald-green estates stretch as far as the eye can see, hugging the western escarpment of the Rift

Valley. Set 7,000 feet above sea level, the climate is perfect for growing tea, Kenya’s biggest export, which fetched \$1.4bn last year. For Paul Chepkwony, the governor of Kericho County, these plantations are a reminder of the way the British stiffed his Kipsigis tribe of their land.

Under British rule the colonists took half the land on which the Kipsigis grazed their cattle, turning it into tea estates. Mr Chepkwony demands that the British government pay compensation to 115,000 Kipsigis and their descendants, who lost their land. (It will not.) Mr Chepkwony also says that a ruling in February by the new land commission allows him to increase land taxes on tea estates and demand a preposterous \$20bn or so in profits that he claims were illegally acquired—equivalent to nearly a quarter of Kenya’s annual GDP.

The burden, he feels, should fall primarily on three firms that grow tea on disputed land: Finlays, Unilever and George Williamson. If they cough up, they would be welcome to stay on as tenants of the Kipsigi people, he says.

To Mr Chepkwony’s irritation, the multinationals are not playing ball. They have resisted his demands to surrender their title deeds for inspection. They have also challenged the land commission’s ruling. Kimutai Bosek, the governor’s legal adviser, warns that such recalcitrance could prompt frustrated Kipsigis to take the law into their own hands. The tea companies

do not take such threats lightly. In June the governor of a neighbouring county led an invasion of an estate, uprooting tea bushes.

Historic land disputes are vexing multinationals in other sectors, too. Kakuzi, a big British agricultural firm, and Del Monte Kenya, which grows 13,000 acres of pineapples, have faced demands to surrender large chunks of their plantations.

County governors are also using their new powers to make life difficult off the farm. Tata Chemicals, an Indian soda-ash miner, has been slapped with a \$166m land-tax bill it says it cannot pay. Local politicians are also complicating things for Tullow, an Anglo-Irish company trying to extract oil in northern Kenya.

All this leaves Uhuru Kenyatta, Kenya’s president and Jomo’s son, in a bind. Aside from fears that those with land grievances could one day turn to his family’s vast holdings, he presents himself as a champion of foreign investors. Yet, preoccupied by a power struggle in his government and wary of alienating voters ahead of an election in 2022, Mr Kenyatta has remained aloof. His silence may damage the economy.

Multinationals are not just big taxpayers but also sizeable employers. Del Monte is Kenya’s largest exporter of canned pineapples. Nearly two-thirds of tea processed by big firms comes from smallholders. When landless peasants organised by the ruling party seized big commercial farms in Zimbabwe, the economy collapsed.

Some say Kenya’s land commission should look at under-utilised farms owned by politicians. Or that Mr Kenyatta could do more good by reducing corruption, boosting urban employment and helping smallholders make their farms more productive. Many Kenyans have legitimate land grievances, but making implausible demands of profitable firms does not seem the best way of addressing them. ■



Storm over what’s in a teacup



Pre-impeachment

They were all in on it

WASHINGTON, DC

Donald Trump's hand-picked ambassador to the European Union weakens Republican defences against impeachment

AN ODDITY OF President Donald Trump's defence against the allegation that he hijacked American policy towards Ukraine in search of a political advantage is that he admitted much of what he was accused of from the start. Even as his defenders denied he had offered President Volodymyr Zelensky a quid pro quo—military aid in return for a corruption investigation into a son of Joe Biden—Mr Trump released an edited transcript of a call between the two leaders that suggested this was precisely what he had done. The testimony given to the House impeachment inquiry on November 20th by Gordon Sondland, Mr Trump's ambassador to the European Union, suggests this was a savvy tactic.

Facing a possible charge of lying to Congress—on account of his previous testimony—Mr Sondland went all in. Good-relationships-for-investigations is exactly what Mr Zelensky was offered, said the Trump political appointee and hotel magnate. To get an

Oval Office meeting with Mr Trump, Mr Zelensky needed to announce the opening of two investigations: one into Hunter Biden—who once sat on the board of a Ukrainian energy firm, Burisma—and another into a debunked conspiracy theory that Ukraine, not Russia, was responsible for cyber-meddling in America's 2016 election.

Mr Sondland said he had heard this from Rudy Giuliani, the president's lawyer and fixer: "Mr Giuliani's requests were a quid pro quo." He said he was not expressly told, but had assumed, that Mr Trump also held up \$391m of military aid to Ukraine shortly before his call with Mr Zelensky as part of the same attempted bargain.

Previous witnesses to the impeachment probe being conducted by the House Intelligence Committee had characterised the disruption in American policy towards Ukraine in similar terms. Yet, in the absence of higher-level testimony, some Republicans had tried to characterise this as a

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rogue play by middle-rankers. Not so, said Mr Sondland. He had discussed Mr Trump's proposal to Mr Zelensky with Vice-President Mike Pence; Mike Pompeo, the secretary of state; and Mick Mulvaney, the White House chief of staff. "We followed the president's orders," he said. "Everyone was in the loop. It was no secret."

The response of Adam Schiff, the Democratic chairman of the committee, was also significant. He asked Mr Sondland to confirm, as the ambassador then seemed to, that Mr Trump was asking Mr Zelensky to do him a valuable favour. The Democrats seem to believe this will support an impeachment charge of attempted bribery. Mr Schiff also hinted at another charge, contempt of Congress (the third count against Richard Nixon), when he lamented that the administration had refused to release Mr Sondland's documents as evidence.

Mr Schiff's Republican counterpart Devin Nunes appeared not to know what had hit him. His earlier remarks to Mr Sondland, in which he commiserated with him on being drawn into the Democrats' "sham impeachment", suggested he did not expect him to cause trouble. Instead Mr Sondland, looking relaxed and good-humoured, had blown up many of the defences Republicans have tried to surround Mr Trump with. Had the president himself denied the allegations against

him, instead of admitting most of them while rubbishing his accusers, he might look as starkly exposed as Nixon was.

Where does this leave his defenders? Probably not close to deserting him: most Republican voters are still with Mr Trump. For committed partisans, the ambassador's testimony left a chink of plausible deniability. He claimed not to have been aware until recently that the president's interest in Burisma was linked to Hunter Biden. Despite having had much direct communication with him, Mr Sondland also did not claim Mr Trump outlined the quid pro quo to him personally. Even as he spoke, meanwhile, those he had implicated rushed to knock him. Mr Trump suddenly claimed not to know him terribly well. Mr Pence's office denied the account was accurate.

Yet defending Mr Trump has undoubtedly got harder. An underhand coercion exercise that Republicans have variously claimed did not exist, or had been exaggerated by vindictive liberals, or was carried out by rogue officials, appears to have been extensive and directed by the president. That might seem to leave his defenders with only one cogent fallback: Mr Trump's suspicions against Hunter Biden and Ukrainian election-hackers, however sketchily based, were sincere enough to warrant his pressure on Mr Zelensky. Yet Mr Sondland also made this hard to maintain. The Ukrainians did not need to actually launch any investigations, according to Mr Sondland. "He had to announce the investigations," the ambassador said. "He didn't actually have to do them, as I understood it."

In the absence of any powerful debunking of his testimony, there may be only two arguments left for Mr Trump's defenders to marshal against his accusers. The first, which may take the form of any manner of distraction or conspiracy theory, is: Go whistle. Most Republican voters love the president, don't care about Ukraine, and their elected representatives are not about to disappoint them. This is probably good enough for most House Republicans.

The other argument is a slightly loftier version of the same, and goes like this. Mr Trump, an unconventional president, was ill-advised, even wrong, on Ukraine. But the allegations against him, though partially proved, are insufficient to justify his impeachment and removal, an unprecedented step—especially in an election year. Indeed to remove Mr Trump, the Republican senators who are already settling on this line will suggest, would be undemocratic. Call this the "Merrick Garland argument"—or, go whistle in McConnell-ese.

The advantage of both arguments for Mr Trump's defenders is that they are impervious to further revelations. Their weakness is only that they might seem to leave future presidents free to suborn foreign policy for personal gain without fear of sanction. ■

The turnout game

Everything in moderation

WASHINGTON, DC

Why a left-wing nominee would probably hurt Democrats

A THEORY of elections in America has taken root among pundits, especially on the left. It holds that partisan polarisation has pushed voters so far to their ideological sides that swing voters play little role in elections. In this view, winning is all about turning out the base. The *New Republic*, a left-leaning publication, has gone so far as to advise Democrats to nominate more progressive candidates that can stoke turnout among the progressives in their party. Such advice is wrong-headed. Public polling and political science provide ample evidence that moderates fare better than ideologues in American elections.

For much of the past century, scholars and politicians alike have believed that courting swing voters is the quickest path to electoral victory. Under this "median-voter theory", posited in the American context by Anthony Downs in "An Economic Theory of Democracy" in 1957, voters cast ballots for whichever candidate best matches their ideology. Downs's followers today believe that the moderate middle is a better place to be than the far-left or far-right because it puts candidates closest to the largest number of voters.

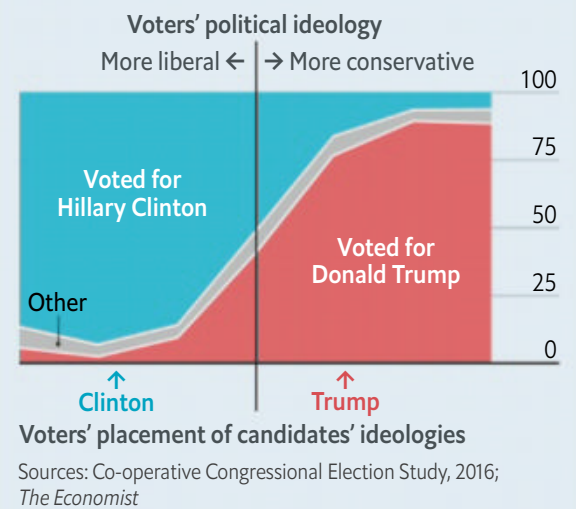
In the 2016 election, Donald Trump may have succeeded partly by taking more moderate stances on government spending and foreign policy than Republicans who came before him. According to *The Economist's*



Bland is grand

That moderate Mr Trump

United States, 2016 presidential vote
By voters' self-described ideology, % of total



analysis of survey data from the Co-operative Congressional Election Study (CCES), a 65,000-person poll overseen by Harvard University, voters thought Hillary Clinton about twice as ideologically extreme as Mr Trump, relative to their average position (see chart). Voters may have rewarded Mr Trump for ditching orthodox but unpopular conservative talking points.

Recent developments have laid bare the problems with the median-voter theory, though. The country has experienced a rise in partisanship, diminishing the number of people in the moderate middle. As the parties have separated ideologically, vote-switchers have declined in number. According to the CCE, a combined 7% of voters switched from voting for Democratic to Republican presidential candidates, or vice versa, between 2012 and 2016 (5% of them were Democrats and 2% Republicans).

If there are few swing voters, some analysts argue, then elections must be primarily about catering to the parties' ideologically extreme bases. In such a world, politicians win simply by turning out as many voters from their side as possible. But while the median-voter theory has its problems, this new hypothesis is unfounded. So-called "mobilisation theory" posits that an extremist nominee could increase turnout among its party's voters. It fails to account for the effects that political extremity has on turnout in the other party.

According to research from Andrew Hall and Daniel Thompson of Stanford, extremist candidates for the House of Representatives between 2006 and 2014 did increase turnout in their own party, but they galvanised the other party's voters even more. The authors suggest that nominating an extremist candidate increases turnout for the opposing party by between 4 and 10 percentage points more than turnout for their own party. Such candidates pay a tax on their extremity at the ballot box, because they drive opposition voters to the polling booth. ■

Louisiana politics

A familiar gumbo

NEW ORLEANS

A rare Democratic win in the Deep South will not trouble Republicans

LOUISIANA'S GOVERNOR John Bel Edwards, the only Democrat in the deeply Republican Deep South to hold his state's top office, won a second term on November 16th, a result that was startling from nearly every angle. Mr Edwards hung on for a 51-49% victory over Eddie Rispone, a businessman, despite furious efforts by President Donald Trump to turn the race into a referendum on impeachment. The result has been misread in some corners as a repudiation of Mr Trump or as evidence of a turn towards the Democratic Party on the part of Louisiana voters. It was neither.

Despite governing a state where 58% of voters plumped for Mr Trump, Mr Edwards is popular. His achievements—a balanced budget, criminal-justice reforms—have been cautious, bipartisan affairs. He is an avid hunter and a diehard pro-lifer, taking away two of the most reliable lines of attack on Democrats in this part of the country. Mr Trump told voters that Mr Edwards was coming for their guns, but it is not clear anyone bought that.

The fact of Mr Edwards's victory is important. But it is worth asking why an incumbent with a record of competent governance barely eked out a win over a feeble opponent, when four years ago, as a virtual nobody, he crushed a longtime Republican standard-bearer. The only explanation for the tight margin was what is going on in Washington. Mr Trump's presidency, and the impeachment inquiry, have further hardened partisan divisions and nationalised races that used to be parochial affairs.

Mr Edwards's perceived strength explains why his opponent was Mr Rispone, the low-wattage owner of an electrical-contracting firm. Mr Rispone's only competition in the primary came from Ralph Abraham, who shared some of Mr Rispone's attributes but lacked his money. Mr Rispone ran a campaign that consisted largely of attaching himself to Mr Trump—he attacked Mr Abraham for briefly questioning Candidate Trump's fitness after the "Access Hollywood" tape. He portrayed Mr Edwards as a "liberal trial lawyer". He appeared at just one debate, rarely spoke to the media and offered few policies, saying only that he would hold a convention to rewrite the state constitution if elected. How? Mr Rispone did not say.

Mr Edwards tried mightily not to antagonise Mr Trump. A day after the election he told Tyler Bridges of the *Times-Picayune*

Californian pests

Something rodent in the state

SANTA BARBARA

A bill in California would make it harder to control the state's thriving rats

COUNTING RATS in a city may be impossible. But with plump specimens scurrying about during the day on State Street, the main shopping drag in Santa Barbara, a tourist destination in California, it appears that the beach town's rodents are numerous. In fact, rats seem to be thriving statewide. Louis Rico, of American Rat Control, says Los Angeles's rat population has probably grown by 50% in five years, bringing public-health problems. His Los Angeles County firm is "busy as heck". Los Angeles comes second on a ranking of America's "rattiest" cities by Orkin, a pest controller.

What is behind the rat boom? Thanks to the end of California's long drought, more fruit has fallen from trees or is tossed into the compost piles that rats love. Lengthening warm seasons have increased rodent breeding. Also to blame are policies that have restricted homebuilding in California and thereby driven up rents. Homelessness is soaring as a result—California is home to 12% of Americans but nearly half the country's "unsheltered", according to federal statistics. The resulting outdoor defecation feeds roaches for rats to eat. Clutter and food in homeless encampments offer rats hiding places and additional grub.

Despite all this, California appears likely to become the first state to outlaw most use of a highly effective type of rat poison. California already restricts the use of single-dose rodenticide, as the anticoagulant poison is often known, to licensed pest controllers. But pressure groups pushing for a ban have gathered support from mostly liberal lawmakers.

A rat that emerges from a bait box "weaving around sick" is like "a little ticking time bomb", says Lisa Owens Viani, head of Raptors are the Solution, a Berkeley outfit that sponsored AB 1788, as the bill is named. The predators most vulnerable to death from secondary poisoning are coyotes, foxes, raccoons, skunks and birds of prey, says Stella



A lunch pail Democrat

McMillin, a scientist at California's Department of Fish and Wildlife who supports the bill. Mountain lions are not too susceptible, she says. Many were outraged nonetheless after a mountain lion succumbed to rodenticide in September in California, raising to five a National Park Service count of such deaths since 2002.

San Francisco's experience sheds light on what might happen if the bill becomes law. Roughly five years after a moratorium in 2008 on single-dose rodenticide on city property, rat colonies began showing resistance to multidose poisons, says Luis Agurto of Pestec, which has a thriving rat-control business in San Francisco. Many rats had associated their illness with the slow-acting poisoned food and avoided it, a phenomenon known as "bait shyness". San Francisco's mayor when the moratorium was introduced was Gavin Newsom. Opposition to "super-toxic rodenticides" was part of his campaign last year to become California's governor.

and the *Advocate* that he had avoided paying attention to the president's appearances in the state for fear it would cause him to say something intemperate. He allowed himself one dig on election night. "God bless his heart," he said of Mr Trump, to a jubilant crowd—a backhanded compliment which, in the South, roughly translates as "Forgive him; he's a moron."

Mr Edwards promises to protect the

achievements of his first term: less incarceration, a rise in teachers' pay, balanced budgets. The biggest new idea he has put on the table is a promise to put more state money into early childhood education. Whether even such a modest agenda can be brought to fruition will depend on the legislature, which has a nearly veto-proof Republican majority. Four years of gridlock seems a likely outcome. ■

Back-channel diplomacy

The art of the shadow deal

Previous presidents have sometimes chosen to bypass official foreign-policy channels. Donald Trump's pressure on Ukraine was something darker

AMERICANS USED TO recoil at secret diplomacy as an affront to democracy. Back-channel intrigues thwarted accountability, concentrated power in the presidency and bred mistrust. In 1918 Woodrow Wilson piously announced that he sought “open covenants of peace, openly arrived at”. Yet Wilson himself found it expedient to use a close political adviser, Edward House, as a back channel to foreign leaders. “Colonel House”, as his Texan factotum was known, was given quarters in the White House and became Wilson’s chief negotiator in Europe to end the first world war.

Successive presidents have found at least three sensible reasons for secret diplomacy. The first is to rely on an especially trustworthy aide, like House. Harry Hopkins, a shrewd adviser to Franklin Delano Roosevelt, functioned as almost a one-man State Department—eclipsing the actual secretary of state, Cordell Hull. Hopkins, like House, was so close to his boss that in 1940 he moved into the White House. Roosevelt once told another politician “what a lonely job this is, and you’ll discover the need for somebody like Harry Hopkins who asks for nothing except to serve you.”

During the second world war, Roosevelt put Hopkins in charge of the Lend-Lease aid programme. In January 1941 he sent him, frail from stomach cancer, to London, in the Blitz, to establish a direct connection to reassure Winston Churchill. Hopkins was amused by the “rotund” and “red faced” prime minister, reporting to Roosevelt that “the people here are amazing from Churchill down and if courage alone can win—the result will be inevitable. But they need our help desperately.”

Soon after Nazi Germany invaded the Soviet Union in June 1941, Hopkins undertook a harrowing trip to see Josef Stalin. In Moscow, blacked-out to withstand German air raids, his hosts provided him with a bomb shelter equipped with caviar and champagne. At the Kremlin, Stalin admitted to Hopkins that it would be hard for the Russians and British to win without the Americans joining the fight. Chilled by Soviet tyranny, Hopkins was nevertheless impressed by the resolute “dictator of Russia”: “an austere, rugged, determined figure in boots that shone like mirrors”, whose “huge” hands were “as hard as his mind”.

John Kennedy, too, found it helpful to reach out to the Russians through his most trusted man: his brother Robert Kennedy,



What would George Washington do?

appointed attorney-general in an act of breathtaking nepotism. Although foreign policy was well outside his brief at the Justice Department, Robert cultivated the Soviet ambassador, Anatoly Dobrynin, and befriended Georgi Bolshakov, a military-intelligence officer. Early in the Cuban-missile crisis, Nikita Khrushchev ordered Bolshakov to tell his American friend that the Russians were placing only defensive weapons in Cuba—an obvious lie.

Yet the back channel worked when it mattered most. At the height of the crisis, on October 27th 1962, the president got his brother to invite Dobrynin to his office at the Justice Department. If the Russians would disable their missile sites in Cuba, Robert Kennedy said, there would be no invasion of Cuba. When, as expected, Dobrynin asked about withdrawing Jupiter missiles from Turkey, he confidentially replied that the president saw no “insurmountable difficulties”, insisting only that the swap should be done a few months later and kept secret. This would become part of the deal that brought the superpowers back from the brink of nuclear war.

A second standard use of a back channel is to hold exploratory talks that could easily blow up. If there is to be egg on someone’s face, it should not be the president’s.

Barack Obama’s administration did this

in the early stages of its nuclear deal with Iran, using a back channel in Oman starting in 2011. When the Omanis suggested a discreet meeting between American and Iranian officials in Muscat, the Obama administration gingerly chose an exploratory meeting with a lower-level delegation, led by Jake Sullivan, an aide to Hillary Clinton, the secretary of state. “We had been burned so many times in the past few decades that caution seemed wise,” writes William Burns, the former deputy secretary of state, in his book “The Back Channel”.

In February 2013 Mr Burns led an American delegation to a second meeting in Oman—the first of many 17-hour flights to Muscat in unmarked planes with blank passenger manifests. The secrecy, Mr Burns writes, was meant to keep opponents of a nuclear deal in both Washington and Tehran from scuppering the initiative at the outset. Mr Obama once told Mr Burns, “Let’s just hope we can keep it quiet, and keep it going.”

A third reason for shadow diplomacy—which often overlaps with the second one—is to start talking with a reviled enemy state. In such cases the White House will face blowback from opponents at home and allies abroad. The prime example is Richard Nixon’s opening to China.

The Nixon administration tried numerous clandestine channels to Mao Zedong’s regime, including through Charles de Gaulle in France, the communist tyrant Nicolae Ceausescu in Romania and the military dictator Agha Muhammad Yahya Khan in Pakistan. Mao sent back almost identical invitations through the Romanian and Pakistani channels for an American special envoy to visit Beijing. Henry Kissinger, then Nixon’s national security adviser, coveted the historic first trip to Beijing for himself. When Nixon suggested sending the elder George Bush, the American ambassador to the United Nations, Mr Kissinger cut him dead: “Absolutely not, he is too soft and not sophisticated enough.”

A stomach for subterfuge

In July 1971 Mr Kissinger secretly flew from Rawalpindi to Beijing, explaining away his 49-hour absence with a cover story that he was recovering from a sick stomach at a Pakistani hill resort. His mission paved the way for Nixon’s own visit in February 1972.

There was a terrible human price for the Pakistani channel. Pakistan’s dictatorship was slaughtering its Bengalis in one of the worst atrocities of the cold war. Before Mr Kissinger’s first trip to China the CIA and State Department secretly estimated that some 200,000 people had died. “The cloak-and-dagger exercise in Pakistan arranging the trip was fascinating,” Mr Kissinger told the White House staff when he returned to Washington. “Yahya hasn’t had such fun since the last Hindu massacre!”

▶ Bill Clinton faced a similar problem while brokering an end to the war in Bosnia. After the Bosnian Serb leaders Radovan Karadzic and Ratko Mladic were indicted by a UN war-crimes tribunal in July 1995, the Clinton administration kept them at arm's length. Yet it maintained several secret channels to them: through a European Union envoy, the UN force commander in Bosnia and Russia's deputy foreign minister. Mr Karadzic also flaunted his relationship with Jimmy Carter, a former American president turned mediator.

In September 1995, while NATO was bombing Bosnian Serb forces, Richard Holbrooke, Mr Clinton's hard-charging peacemaker, met Slobodan Milosevic, Serbia's president, at a hunting lodge outside Belgrade. The Clinton administration preferred to work with Milosevic, who had not yet been indicted for war crimes. Yet Milosevic told Holbrooke that Messrs Karadzic and Mladic were at another villa 200 metres away. Holbrooke despised the fugitives but had grimly made up his mind to meet them. In exchange for a halt to NATO's bombing, the Bosnian Serbs grudgingly agreed to lift their siege of Sarajevo. In the formal peace talks that followed at Dayton, the Americans excluded Messrs Mladic and Karadzic and dealt mainly with Milosevic.

There is a darker reason for circumventing normal foreign-policy channels: to break the law. Some of the examples here are less about secret diplomacy than covert action, but they are chilling.

In December 1971, when Pakistan attacked India, Nixon and Mr Kissinger used back channels while illegally helping Pakistan with American military supplies—particularly American-made warplanes sent from Iran and Jordan. Pentagon and State Department lawyers and White

House staffers warned that this would violate a formal American arms embargo on Pakistan. As Mr Kissinger told Nixon, "It's not legal, strictly speaking, the only way we can do it is to tell the shah [of Iran] to go ahead through a back channel." A few days later Mr Kissinger told the president that they would get an envoy secretly to "get the god-damned planes in there."

The national interest, or mine?

Perhaps the closest precedent to President Donald Trump's pressure on Ukraine to investigate the front-runner in the Democratic primary comes from Nixon's presidential campaign in 1968. That year Nixon, as the Republican nominee, set up a personal channel to the South Vietnamese government. Nixon could pass messages to South Vietnam through Anna Chennault, a well-connected Republican fundraiser. A few months later Nixon's campaign got word that Lyndon Johnson's administration might be about to declare a halt to its bombing in Vietnam to spur peace talks—a thunderclap that might have won the presidency for his faltering Democratic rival, Hubert Humphrey, Johnson's vice-president. Just before the election, that sort of deal seemed imminent—but then South Vietnam suddenly backed out.

Johnson was convinced that Nixon's campaign had been involved. "Keep Anna Chennault working on SVN [South Vietnam]," Nixon had ordered H.R. Haldeman, his future White House chief of staff, according to Haldeman's notes. The FBI, which was wiretapping the South Vietnamese embassy, told Johnson that Chennault had passed on a message from "her boss", which was: "Hold on. We are gonna win." Johnson raged privately: "This is treason." More accurately, such actions would prob-

ably have been a crime under the Logan Act, which bans private American citizens from interaction with foreign governments "to defeat the measures of the United States".

Historians have not been as sure as Johnson about Nixon's guilt, but two recent biographies, by Evan Thomas and John Farrell, both conclude, with varying degrees of certainty, that Nixon worked to hold South Vietnam back from peace talks that might have helped Humphrey. In hindsight, it is not clear how much of an opportunity was lost to end the war, but Nixon could not have known that when he gambled with Vietnamese and American lives.

On Ukraine, Mr Trump went to great lengths to circumvent his own White House and State Department, where professionals might recoil at pressuring a foreign government to dig up dirt on a domestic rival. Rudy Giuliani is not a government official but his personal lawyer. In his telephone call to Ukraine's president, Volodymyr Zelensky, on July 25th Mr Trump said, "I will have Mr Giuliani give you a call."

Unlike previous presidents, Mr Trump had no proper reason here to operate in the shadows. His administration was dealing not with a pariah such as Mr Karadzic, but with an elected democratic leader. Mr Giuliani is no Harry Hopkins, Henry Kissinger or Richard Holbrooke. Hopkins, Holbrooke and others may have worked in secret, but they were carrying out official policy that was meant to serve American national purposes, not personal or political goals. If there is any historical precedent for Mr Trump's Ukraine channel (other than his own campaign's dealings with Russia in 2016), it is that of Nixon stalling peace talks in Vietnam for his own political good. Yet Nixon in 1968 was only a candidate; Mr Trump was exploiting his power as president, able to hold up a summit with Mr Zelensky and to withhold \$391m in military aid that had been authorised by Congress.

Marie Yovanovitch, a former ambassador to Kiev, testified to Congress that "unofficial back channels" between the White House and corrupt Ukrainians led to her removal by Mr Trump. This points to another difference. Back channels have in the past been used by presidents as a way to bring American influence to bear on the world. This one worked in the opposite direction. Mr Giuliani's scheme gave people working against American policy a line from Kiev into the Oval Office.

The White House will always be tempted by the shadows. Presidents rather more scrupulous than the current one have been lured into secret diplomacy and dodgy covert operations, from the Bay of Pigs to the Iran-contra scandal. Enough secret misbehaviour has already gone on in foreign policy. If Mr Trump is permitted to use back channels abroad to target political rivals at home, that will set a terrible precedent. ■



Harry Hopkins, right, channel to Churchill

Lexington | Impoachment

On America's extreme obsession with dogs and what it means



AFTER ALMOST two decades of visiting and living in India, it was only after your columnist had his first child there that he glimpsed the soul of the place. Everyone loves a baby, but Indians seem to love them more. Housewives and security guards would trip over themselves to greet Lexington's newborn on his morning promenades through Delhi. On domestic flights, suited executives would unbuckle and demand to walk it shushingly up and down the aisle. With a baby to hand, Indian social constraints melt away.

Lexington experienced something similar while travelling home from North Carolina with a six-week-old Jack Russell terrier bitch. The sight of the small white dog reduced most other travelers to a gurgling mess. Oohs and aahs tracked your columnist's progress across the airport concourse in Charlotte. Beaming executives proffered phones for a selfie with the puppy—or to display a picture of their own pooch. Getting Betsy (as the white dog would become known) through security caused pandemonium.

Most rich countries have become strikingly pro-dog in recent decades. But Americans seem to love dogs more. They are likelier to own a dog than any other nationality—with a dog for every four people, they are twice as likely as the French. Not even the doggy British can match the canine dramas that colour American public life. Nothing was more damaging to Mitt Romney's career than the revelation that one summer holiday he strapped an Irish setter called Seamus to the roof of his family station wagon. (His presidential campaigns will be remembered for the image of Seamus defecating in fear.) Nothing is more emblematic of Pete Buttigieg's claim to be boringly conventional than his and his husband's dogs Truman and Buddy. Dog love is an American condition.

To ponder this your columnist visited the National Dog Show in Philadelphia. One of only three large "benched" shows—meaning its 2,000-odd canine entrants are easily accessible to the public, for petting and one-way conversation—it is also a Thanksgiving staple. Airing at noon, right after the Macy's Parade, the show will be watched on television next week by up to 25m people (roughly twice as many as Donald Trump's pre-impeachment hearings).

The show-dogs excited predictable emotions in the crowds milling around them. "It just brings happiness to see all these dogs in one space," said Shari Marder, all aglow beside a parade of Portu-

guese water dogs. "You just feel really good inside," said her husband Mitch. "They're wannabe humans and I love them," said their daughter Eva. Divining human emotions in dogs is a symptom of canine mania that has reached its apogee in America. It is hard to switch on television without seeing a dog schooling its owner somehow, often for the purpose of selling cars or acid-reflux tablets. Indeed, while canine theorists point to the role of loneliness in fuelling the dog craze, American capitalism appears to be equally important. Led by the \$70bn pet-products industry (represented at the national show by a thousand stands selling dog accoutrements), it has rebranded canines as people, in effect, only better.

The fact that America's dog obsession took off in the go-go 1950s and 1960s supports that. Word searches suggests America became suddenly vastly likelier to use the word "pet" at the end of that period. The initial beneficiaries were pedigree dogs, a creation of 19th-century upper-class Britons that America's thriving middle-classes embraced with gusto. It is even tempting to view this development, to paraphrase an Indian cricket writer, as a case of pedigree dogs being an American pastime accidentally invented in Britain. Nothing is more American than the triumph of man over nature represented by the weirdly sheeplike Bedlington terrier or devilish snout on a Bull terrier. Yet the appeal of pure breeds probably owed less to eugenics than aspiration—and still does. The Pembroke Welsh corgi, best known for its association with Queen Elizabeth II, is far more popular in America than Britain.

The example of eastern Europe suggests that a recent agrarian past is another dog booster. America has that too: dog ownership is heaviest in the heartland. Averse to regulation, it also disdains the dog-precluding rules of northern European places such as Sweden, where canines cannot be left alone for more than six hours.

There are exceptions to the dog love these conditions have unleashed. African-Americans are much less likely to own a dog than whites. Hispanics, as on many indicators, are in-between. There are also subtler distinctions in the tenor of Americans' love. Since the 1990s, for example, right-on coastal Americans have increasingly spurned pure breeds in favour of a rescue dog from their local pound. This has forced pedigree breeders to hawk their wares creatively. There was much talk at the National Dog Show of therapy dogs and the need to "preserve" breeds—and much of it dubious.

Give me your tired, your poor, your huddled doggies

The newfangled belief that dogs are good for your health (also promoted by the pet-industrial complex) appears to be exaggerated: owning a dog is no more accurate a predictor of longevity than owning a sports car. And most pedigree breeds, after a century of in-breeding, are in dire need of genetic diversity. Meanwhile demand for mutts (or "randomly bred dogs" as David Frei, the face of NBC's dog-show coverage, considered it more respectful to call them) has outstripped supply in liberal coastal states. This is driving imports from harder-knock conservative places, such as Alabama and Texas, where dogs are still free to be dogs.

It is heartening to see America quietly smoothing over its regional differences in this way. In the process, social-contagion theory suggests, it may erode them and America become more united, in this way and otherwise, one nation under dogs. A whimsical thought, perhaps. But your columnist offers it as one who has felt the force of canine contagion. People who bang on about their dogs are absurd, he has always thought. Yet while he was chatting to the terrier folk in Philadelphia, a strange force caused him to show them pictures of Betsy, doing all manner of clever things. ■



Brazil

Paper strongman

SÃO PAULO

Jair Bolsonaro is hemmed in by congress, his advisers and his own misjudgments

THE PRESIDENTS of Brazil's two houses of congress live side by side in modern mansions in Brasília, the capital. In May they built a door in the wall that divides their gardens, so they could meet without attracting notice. The political mood was fevered. A scandal involving the oldest son of President Jair Bolsonaro was dominating the news. Worries about whether the government would reform the unaffordable pension system had pushed the real, Brazil's currency, to less than 25 American cents for the first time since October.

The garden-gate gambit seemed to work. On October 22nd congress enacted a constitutional reform of the pension system that will save the government 800bn reais (\$196bn) over ten years, about 10% of this year's GDP. The change is a big step towards solving two of the country's main problems: a massive public debt; and state spending that is both too high and skewed towards transfers and salaries. (The real re-

mains weak for other reasons.)

Mr Bolsonaro, a right-wing populist who has been in office since January, had little to do with the reform. The fight was led by Rodrigo Maia, the president of the lower house of congress, and his counterpart in the senate, Davi Alcolumbre. Their main ally in government was the pro-market economy minister, Paulo Guedes. The president, normally the main pitchman for any reform, kept a low profile.

His bystander role is one of the many oddities of his administration. Brazilians elected the former army captain, until 2017 an obscure congressman with a fondness for dictators, to express anger at crime, corruption and economic decline. Although

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he entered office sounding like a strongman, he has been hemmed in by congress, by his advisers and by his own ill-judged behaviour and that of his family. This balance of forces has contained some of his dangerous impulses while allowing better policies, like pension reform, to get through. It has also frustrated progress in areas where voters most expect it.

Mr Bolsonaro's plans for fighting crime and corruption are in tatters. Unemployment is high and economic growth remains sluggish. The president's approval rating is an unimpressive 35%. His socially conservative agenda, which includes loosening guns laws and curbing "socialism" in schools, has made little progress, even though he seems to care most about it. In other areas he has reversed himself: for example, he has dropped his earlier hostility towards China.

The clearest way in which Mr Bolsonaro has put his stamp on Brazil is negative. On November 18th the space agency reported that the pace of deforestation of the Amazon had risen by nearly 30% in August 2018-July 2019 from the same period a year before. It reached its highest level since 2008. He has been a cheerleader for economic development in the Amazon and weakened enforcement of environmental laws.

The splintering of power in Brasília makes it hard to guess how the remaining

▶ three years of Mr Bolsonaro's presidency will play out. The release from jail on November 8th of Luiz Inácio Lula da Silva, who was Brazil's president from 2003 to 2010, gives the left-wing opposition the leader it has lacked until now. Some observers wonder whether scandals surrounding Mr Bolsonaro's sons, who are given to anti-democratic rants, will bring his presidency to an early end.

Optimists think that strife and chaos in Brasília will not hinder reforms, and might even help. A member of the government's economic team contends that Mr Bolsonaro's preoccupation with fighting culture wars serves as a "smokescreen" that allows Mr Guedes and Mr Maia to take the lead on economic legislation. In congress there is an "an unprecedented consensus that we must make progress on the economic agenda, independent of the government", says the lower-house leader, Mr Maia.

That consensus may not hold. This month Mr Guedes proposed a trio of constitutional changes, including one to make it possible to freeze public servants' pay in a fiscal emergency. But he did not tell congress which to prioritise. An overhaul of the enterprise-crushing tax system is "necessary", says Aguinaldo Ribeiro, who is coordinating one in the lower house, "but no one can agree on the details".

The mood may be shifting against the state-slimming reforms favoured by Mr Guedes. "No one is talking about health or education policy," says Tabata Amaral, who belongs to a "parliamentary front" of first-time legislators who defied their parties to vote in favour of pensions reform. They want action to improve social services. The window for reforms is closing, warns Zeina Latif of XP Investimentos, a broker.

On measures to fight corruption it has slammed shut. Mr Bolsonaro had raised hopes by naming as his justice minister Sergio Moro, who as a federal judge had led the Lava Jato (Car Wash) investigations. These led to the conviction of scores of politicians and businessmen. Mr Moro convicted Lula, the most prominent of the Lava Jato miscreants.

But now all three branches of government are working against the anti-corruption agenda. Mr Bolsonaro has lost enthusiasm, perhaps because his son Flávio, a Rio de Janeiro senator, is a target of a money-laundering probe. Mr Moro has been hurt by revelations that as a judge he collaborated improperly with prosecutors. His omnibus bill to fight crime and corruption is stuck in a lower-house committee. "Moro's agenda is dead," says Eduardo Cury, a legislator from São Paulo. It cannot help that dozens of legislators besides Flávio Bolsonaro are under investigation.

The judiciary itself has dealt Lava Jato a blow. This month the supreme court ruled that convicts should remain at liberty until

they exhaust their appeals, the decision that led to Lula's release. That threatens the investigations, whose success is based largely on plea bargains by suspects who avoid jail by implicating other wrongdoers. Now witnesses can put off prison instead by appealing their verdicts.

"There's little appetite" for Mr Bolsonaro's socially conservative agenda, says Fernando Bezerra, the government's leader in the senate. In the face of congressional opposition the president withdrew a decree to allow millions of Brazilians to carry guns. The legislature has also pushed back

against destruction of the Amazon. As wildfires raged in September Mr Maia pushed through the lower house a measure to compensate small farmers and indigenous groups for preserving forest.

Congress's more assertive role is among the bigger surprises of Mr Bolsonaro's surprising presidency. "For the first time the legislature is not just an appendix of the executive," says Michel Temer, who was Brazil's president from 2016 to 2018. That has helped economic reform. But congress cannot be trusted to contain corruption. Nor is it likely to still the chainsaws. ■

Fantasy economics

Venezuela's virtual gold rush

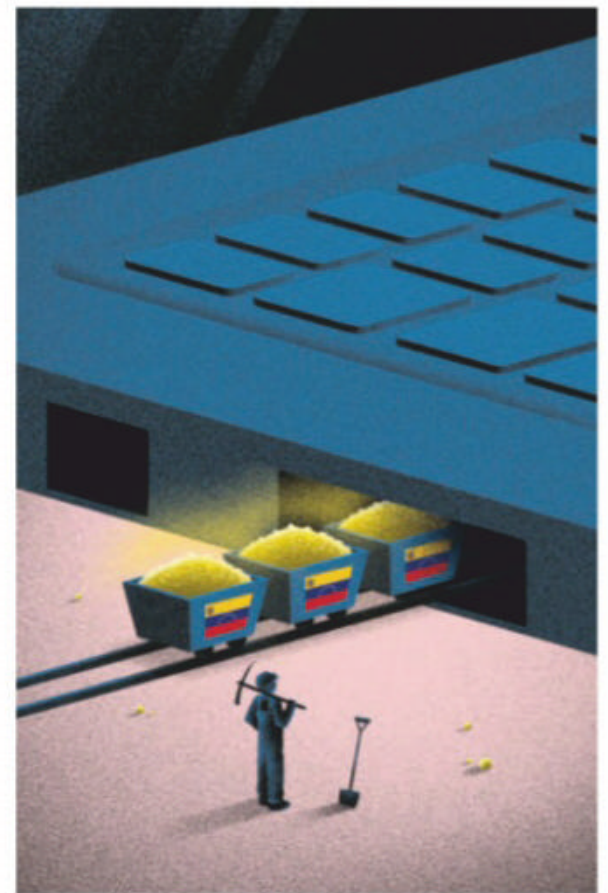
Where paper currency is worthless, it pays to unearth digital treasure

CORRUPTION, INCOMPETENCE and sanctions have devastated Venezuela's oil industry, the country's main source of hard currency. But Venezuela's economic crisis has encouraged the growth of another: the "farming" of virtual gold in the artificial worlds created by video games. Venezuelans spend hours on end playing massively multiplayer online roleplaying games (MMORPGs) to extract gold coins (the currency in RuneScape) or crystal ones (Tibia). They sell these for real money, via intermediary websites, to other gamers, who spend them on such virtual valuables as weapons, armour and magic potions.

Venezuelans playing RuneScape can earn 500,000-2m gold pieces an hour by mass-murdering dragons and mass-producing runes. At current exchange rates 1m coins are worth about 50 cents. A gold farmer can earn \$40 a month, a tidy sum in a country where the minimum wage is worth \$7.50 a month. Some farmers trade the coins for Bitcoin, which, though more volatile than most conventional currencies, is more stable than Venezuela's bolívar. (The mining of real gold, some of it illegal, is another source of income for desperate Venezuelans.)

"Real-world trading" is not new. It began in the smoke-filled gaming rooms of South Korea in the late 1990s. In China in the mid-2000s perhaps 50,000 "gold farms" harvested virtual gold round the clock. The farmers collectively earned hundreds of millions of untaxed dollars.

Game developers resisted. Gold farmers are not really playing the game, they contend. Some hack into other people's accounts and steal their virtual gold. Excess gold farming can cause in-game inflation—though less than the 200,000% that



the IMF forecasts for Venezuela this year. Some providers of free games sell virtual gold themselves, and dislike competition from unlicensed gold farmers.

After its heyday in the 2000s gold farming declined. MMORPGs became less popular. Game developers beefed up their compliance teams. eBay, where gamers auctioned virtual goods, banned gold farming, as did South Korea. Lately, though, MMORPGs have had a nostalgia-fuelled comeback, and gold farmers in crisis-hit Venezuela have been quick to profit.

Their assiduity irks other players. It has degraded the buying power of gold coins on the Grand Exchange, a RuneScape market ▶▶

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▶ where players can buy virtual necessities such as coal, maple logs, scimitars and green dragon hides (which can be turned into armour). When Venezuela suffered nationwide power cuts this year, sales of these goods nosedived. That is because “farmers” without electricity could not produce any gold, and the lack of virtual coin forced up the prices of imaginary kit.

Two years ago a Reddit user who calls himself Cerael published a racially abusive guide on how to kill Venezuelans in the “player-v-player” places where gold farming occurs. Moderators removed the post

and the intemperate comments on it. Jagex, RuneScape’s British developer, has banned real-world trading and intermediary websites. This month the company won a lawsuit that put two gold farming websites out of business.

Yet the industry will not die. Although developers want the games to be competitions of skill and dedication, illicit markets will form wherever supply and demand exist (a truth that is lost on Venezuela’s socialist leaders). When one intermediary website is shut down, a new one pops up to replace it. The resources required to shut

down each small-scale Venezuelan gold farmer are too large to make the effort cost-effective. It is not worth the game developer’s time “to enforce the rules at that level of granularity”, says Edward Castronova, who researches virtual worlds at Indiana University.

The recent re-release of “World of Warcraft Classic”, the 15-year-old original version of a popular MMORPG, will probably give gold farming another fillip. And so long as it is hard to make a living in the real Venezuela, plenty of Venezuelans will toil in the world of fantasy. ■

Bello Metamorphosis in Chile



The painful birth of a different country

IN 2014 MICHELLE BACHELET, a Socialist, swept into Chile’s presidency for a second time on a programme of radical reform of tax, education and pensions. She also aspired to enact a new constitution that would guarantee “more balance between the state, the private sector and society”, as she told your columnist over tea at the Moneda presidential palace. She argued that her “struggle against inequality” was a last chance to deal with discontents that, if neglected, could push Chile towards populism.

At the time that seemed alarmist. And several of Ms Bachelet’s reforms were poorly designed. They faced implacable opposition from business and the right. Her public standing was hurt by a scandal involving a bank loan secured by her son. But in retrospect Ms Bachelet was right on the big things. For the past month, because of the discontents she identified, Chile has been seared by a social conflagration. This has seen huge peaceful protests, savagely violent disorder and heavy-handed policing.

A different country is set to emerge. Chile inherited from the dictatorship of Augusto Pinochet both a fast-growing market economy and a “market society” of pay-for-it-yourself pensions, health care and education. Under democratic governments over the past 30 years, social provision has been incrementally reformed. Chileans are much less poor and their incomes are less unequal. But that is not how many of them see it. The protests are a cry for more redistribution and better public services.

Ms Bachelet’s successor, Sebastián Piñera, a billionaire businessman turned politician of the centre-right, was elected on a promise to boost economic growth by correcting her reforms. Lacking a congressional majority, he made little

progress. His handling of the protests has been erratic. After the Santiago metro suffered co-ordinated arson attacks last month, he declared that Chile was “at war” and sent the army to the streets. For many Chileans, that stripped credibility from his subsequent criticism of policing that has left six dead and some 2,400 hurt, more than 200 with eye injuries. Almost 2,000 police have been injured, too, but they failed to prevent the burning of churches, supermarkets and public buildings.

Mr Piñera promised an immediate increase in the minimum pension (but to only \$165 a month), a small increase in the minimum wage and measures to cut the cost of medicines and electricity. He resisted other changes: a cabinet shuffle was smaller than expected and he dodged demands for more taxes and for a new constitution. “It was too little, too late,” says Hernando Muñoz, who was Ms Bachelet’s foreign minister.

The president has now lost control of events. His new finance minister, Ignacio Briones, agreed with the opposition to raise taxes, to finance higher pensions and

better health care. After a general strike and violent protests on November 12th, the president was talked out of reimposing a state of emergency. Instead, Gonzalo Blumel, his new interior minister, negotiated a national accord for a referendum in April on whether to have a new constitution and what kind of body should write it. All parties except some on the far left and the far right have signed it. The accord enjoys 67% popular support, according to one poll this week.

Protests are starting to tail off. The agreement offers Chile a potential path back to peace and consensual reform. There are safeguards against a constituent assembly following the path of Hugo Chávez’s Venezuela. Its job will be purely to draft a constitution, and two-thirds of its members must agree on the text. “The great majority of Chileans are sensible,” says Patricio Navia, a political scientist. “They want to share out the cake better, they don’t want to blow up the cake.”

Others are more pessimistic. “The neoliberal experiment is completely dead,” according to Sebastián Edwards, a Chilean economist. What will replace it? Some fear a descent into fiscal populism. The economy has already taken a hit, and investment is unlikely to recover until the outline of the new model is clear. Chile has discovered some harsh truths about itself. Its once-admired police force, the Carabineros, have shown themselves to be incompetent as well as brutal. The intelligence service has been proved to be clueless.

Many in the moderate centre hope that from this catharsis will come a political model that preserves a competitive market economy while creating a European-style welfare state. That would be a breakthrough for Latin America. Getting there will not be straightforward.





Sri Lankan politics

Gota hand it to him

COLOMBO

A polarising figure easily wins an election and takes office as president

THE SYMBOLISM of the venue clanged as clear as a temple bell. For his inauguration on November 18th Gotabaya Rajapaksa, the newly elected president of Sri Lanka, chose a sacred shrine in the ancient capital of Anuradhapura. The massive stupa houses relics of the Buddha. More pointedly, in a country often troubled by sectarian rifts, it commemorates the defeat in 140 BC of Elara, a Tamil Hindu king, and the reunification of Sri Lanka under his Sinhalese Buddhist rival, King Dutugemunu.

The ceremony felt like a coronation. The vast mound of the stupa gleamed white, as did the shirts of Mr Rajapaksa's supporters, setting off the crimson of the processional carpet and of the robes of shaven-headed Buddhist monks thronging to bestow their blessing. Crimson is also a brand marker for the Rajapaksas, chosen by the new president's uncle to represent the famed red finger millet of their home region in the south of the island.

Mr Rajapaksa won 52% of the vote despite a crowded field. His victory was expected. His family has been in politics since the 1930s. When his brother, Ma-

hinda, this generation's senior Rajapaksa, ran the country as president from 2005 to 2015, Gotabaya served as his defence chief. He earned a nickname—the Terminator—by overseeing a swift and brutal conclusion to the 26-year civil war. The conflict had pitted a vicious and tenacious Tamil separatist group against the state, which is dominated by Sinhala-speaking Buddhists, who are 70% of the population.

I'll be back

Sinhalese duly voted for Mr Rajapaksa in huge numbers. His main rival, Sajith Premadasa, although himself Sinhalese and the son of a former president assassinated by Tamil rebels, scored barely 30% in the southern, largely Sinhalese part of the country. In the Tamil-dominated north, Mr Premadasa earned some 80% of votes, despite largely ignoring Tamil concerns.

Ethnic rifts were not nearly as visible when the older Mr Rajapaksa was ousted in an electoral upset in 2015 by a coalition of reform-minded Sinhalese and frightened minorities. He could not run for president again this time, because the term limits

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that he had abolished had been reinstated by the outgoing government in an effort to trim executive powers he was widely seen to have abused.

Mahinda (Sri Lankans habitually refer to politicians by first names) is back again anyway. Rather than linger as a lame duck, Ranil Wickremesinghe, the prime minister and long-time political opponent of the Rajapaksa clan, resigned. Mahinda will take over as interim prime minister until parliamentary elections are held, probably in March.

With the momentum of victory behind them and a third brother, Basil, having built the family electoral vehicle, the Sri Lanka People's Front, into a formidable machine, the Rajapaksas are expected to sail to an easy parliamentary majority. Should that be as big as two-thirds—and many analysts think it will be—the Rajapaksas would not just control the presidency and parliament, but be able to revise the constitution, bolstering the power of the executive however they like.

To many Sinhalese the prospect of such total dominance by a single clan is appealing. This is not just because of the Rajapaksas' charms, deep pockets, lingering influence in state institutions such as the army and police, and their digitally savvy ground game. Two other factors have helped whet voters' appetites for strongman rule.

One was the perceived dither and incompetence of the outgoing government. This was perpetually hamstrung by petty rivalry between the calculating Mr Wickre- ▶▶

mesinghe and the little-lamented departing president, Maithripala Sirisena, a former camp-follower of the Rajapaksas who destructively lashed out against his relegation to a figurehead role. The shock of multiple Islamist terror attacks on churches and hotels on Easter Sunday, which left 268 people dead, underscored the dysfunction. Despite plenty of prior intelligence, security agencies failed either to communicate the danger or take preventive action. “The outgoing government itself fostered the argument for a stronger government,” says Jayadeva Uyangoda, a political scientist.

Fears inspired by the Easter attacks added substance to another factor that has boosted the Rajapaksas: a persistent and widespread narrative of Sinhalese victimhood. This seems silly, given their numerical superiority: Tamils are just 15% of the population, and Muslims a mere 10%. But ancient rivalry with Tamils, added to almost 500 years of Portuguese, Dutch and British rule, plus the rise of successful cosmopolitan minorities such as Muslim traders and English-speaking Christian professionals, has generated “nativist” resentment. Building on their reputation as the heroes who beat the Tamils, the Rajapaksas have cheerfully allowed Buddhist extremists to whisper on their behalf. “The message that went out through temples everywhere was: ‘This is the only country we have, and we must save it from the Tamils and the Muslims,’” says a minister from the outgoing government. “They really took the genie out of the bottle.”

Many Sinhalese would dismiss such talk as alarmist. Two of the most notoriously chauvinist groups, led by right-wing Buddhist monks and blamed for stoking repeated sectarian riots, have declared that they will dissolve themselves, their job apparently done. “We feel that after 71 years [since independence] during which the Sinhala race was being degraded and humiliated, we finally have a leader we can trust,” declared the leader of one group, Galagoda Aththe Gnanasara.

If the symbolism of Mr Rajapaksa’s inauguration was not reassuring to Tamils, nor was his pick of General Kamal Gunaratne as defence minister. In the closing days of the war, Mr Gunaratne commanded an elite unit that hunted Tamil leaders, gaining a reputation for egregious cruelty. Mr Rajapaksa scorns Tamil demands for a federation and has pledged to stop war-crimes investigations. But Malinda Seneviratne, a commentator seen as close to the Rajapaksas, says tut-tutting about war records is a preoccupation of only the English-speaking elite. “The last government just lied to Tamils and gave them nothing, so what’s wrong if Gota calls a spade a spade?” he asks. “As for the defence minister, are you going to get a soft guy to do the job when ISIS is blowing things up here?” ■



Rural Japan

Home is where the art is

HONJIMA

Avant-garde sculpture helps to revive a dying region

ON A WINDSWEPT beach on Honjima, a small island in the Seto Inland Sea in southern Japan, three stylised ships’ hulls sway in the breeze. They are suspended on poles and fixed to the sand with four rusty anchors each. Oval mirrors underneath reflect the tangled red netting from which the hulls are made and the lead-coloured sky above the deserted beach. The ships are the work of the Russian artist Alexander Ponomarev. They form one of many sea-themed artworks displayed on Honjima during the Setouchi Triennale, an art festival spanning 14 locations around the Inland Sea (which is known as Setouchi).

The triennale and more permanent museums and installations on some of the bigger islands have turned Setouchi into a tourist destination. Honjima has become a hipster hot spot. Stylishly dressed visitors traverse the island on rented bicycles looking for scattered artworks before cycling back to the harbour to relax over a cappuccino in a café that also peddles designer furniture. That is a big change: before the artists and their fans arrived, Honjima was in apparently terminal decline. Fishing, the main local industry, was dying. Locals had been leaving in droves to seek opportunities elsewhere. The remaining islanders, most of them old, were left with crumbling houses and the environmental fallout from defunct industries.

Now hundred of thousands of visitors

travel to the islands every year (and more than 1m in the year of the triennale), up from 100,000 15 years ago. This has had pleasant consequences for everyone from hoteliers and restaurateurs to a local railway, which reports solid revenue growth. It has also slightly dampened the speed at which the islands lose inhabitants. A handful of new arrivals from elsewhere in Japan, some of them young families, are settling permanently every year. Takamatsu, the bustling port city from which ferries serve many of the islands, is awash with trendy bars and arty brunch joints. Two schools recently reopened on one island.

Encouraging such trends was precisely the point of the triennale, says Shinobu Tsunekane from the organising committee in Takamatsu. Organisers wanted to slow the decline but also to instil pride in local customs: “People have been leaving because life on the islands is inconvenient—we want to make them happier and more comfortable with it again.”

Outsiders are convinced enough by the idea to copy it. Remote rural areas all over Japan have started their own art festivals in the hope of attracting more visitors and, potentially, new residents. In Shandong province in China, the authorities are in the process of turning an island into an art site, citing the Setouchi region as a model.

Locals are more equivocal. Islanders were initially wary, says Kenjiro Kaneshiro of the Fukutake Foundation. It runs the permanent museums and installations using funding from Benesse, an education conglomerate, and started to install art on the island of Naoshima in the 1990s. Research by Meng Qu of Hiroshima University suggests that some residents worried that their home would become a theme park. Such worries may not be entirely unfounded: a leaflet from Benesse outlining the company’s “vision” bangs on about the beauty of nature, the purity of village life and its superiority to sin-filled cities. There is not much discussion of the drawbacks of island life.

Still, Mr Ponomarev’s ships on Honjima were constructed with the help of local craftsmen. The hulls mirror the shape of vessels used by the sailors on whom passing cargo ships used to depend to navigate treacherous currents to reach the ports of Kobe and Osaka. Wooden fishermen’s houses built by the island’s carpenters shelter exhibits exploring the dangers of the sea. On Naoshima and Teshima, the main islands colonised by Benesse, sculptures and museums are designed to fit into and reflect their surroundings. Islanders are consulted about new projects during occasional meetings.

Some residents are thrilled. “I like all the art and the crowds that come to look at it,” says Naohisa Okuyama, who was born on Naoshima, left to work in the garment ►►

trade and returned to run a coffee shop. “I’m learning so much I didn’t know about before.” The owner of a joint selling coffee and rice balls on neighbouring Teshima is less effusive. On the one hand, the art scene has revived and changed her business. “I had to close my strawberry farm because there weren’t enough customers, but then the tourists came and I heard they liked coffee.” On the other hand, she says, the revival only goes so far. Professional jobs remain scarce. Her daughter left the island long ago to take a government job.

Takahiro Kubo, a construction worker on Naoshima, concurs: “It’s good business for those of us who work in tourism or construction, less so for the rest.” On balance, he welcomes the transformation. The only thing he really worries about is overcrowding. “Outsiders are buying up houses. And trying to get a ferry during the festival.” ■

Thai politics

Future backwards

BANGKOK

An opposition leader loses his seat in parliament but battles on

EVEN AFTER the verdict of Thailand’s constitutional court on November 20th, supporters of the Future Forward party, gathered outside, kept signing a portrait. It showed a beaming Thanathorn Juangroongruangkit, leader of the party. His actual face was far more grave as he sat in the courtroom, listening as the judges retroactively disqualified him from the election in March at which he became an MP. The decision marks the start of what will probably prove a prolonged period of difficulty for Mr Thanathorn and his party.

The case turned on Mr Thanathorn’s ownership of shares in v-Luck Media. Under Thailand’s constitution and its web of election laws, owners of shares in media firms are barred from running for parliament. Mr Thanathorn (pictured) insists that before the election was called he sold his shares in v-Luck, publisher of glossy magazines such as *Jibjib* (*Cheep cheep*), the hard-hitting inflight publication of Nok Air, a budget airline. What is more, v-Luck ceased publishing months ago. But the court, which sees no problem with military coups, quibbled about how long it took him to cash the cheque from the sale and noted that the documents proving his case came from the company, not from regulators. For Mr Thanathorn, whose family owns a giant auto-parts firm, publishing was only a tiny sideline, even when v-Luck was a going concern. He says the case was trumped up for political reasons. He recently sued the

seven election commissioners for rushing it to court. They deny wrongdoing.

The ruling was hardly a surprise given Future Forward’s staunch opposition to the government of Prayuth Chan-ocha, who seized power in a coup more than five years ago. The party’s platform of reforming the army, decentralising government and breaking up business monopolies won it support from young Thais but enmity from the ruling elite. Founded less than three years ago, it is the third-largest party in parliament, and is paying for its popularity. More than a dozen lawsuits have been stacked up against Mr Thanathorn and other figures in the party. Meanwhile dozens of other MPs accused of maintaining media interests continue to serve unmolested. “I’ve been in this system for over 30 years and I believe this case should have been dismissed,” says a civil servant.

Removing Mr Thanathorn from parliament changes little. He had already been suspended as an MP in May, pending the court’s decision. Other MPs from the party have proved themselves more than capable of lampooning the government without him. Mr Thanathorn remains party leader and will continue to campaign noisily against the subversion of democracy.

How long will he be allowed to stay a thorn in Mr Prayuth’s side? The latest ruling may herald others that could eventually lead to Mr Thanathorn’s imprisonment and the dissolution of the party. “This is the first domino,” reckons a Thai academic. It’s not as if judges shy away from decisions with big political ramifications. Since 2006 the constitutional court has invalidated two elections and dissolved seven political parties. Mr Thanathorn is undeterred. “It is a long journey and we’ll keep moving forward,” he declared outside the court. ■



They don’t like the cut of his Jibjib

South Korea’s alliance with America

Cracks in the cladding

SEOUL

America demands that South Korea pay much more to host American troops

AMERICAN DIGNITARIES like to talk about their country’s “ironclad” commitment to its alliance with South Korea and Japan, which has long been the main building block of the security architecture of north-east Asia. But when General Mark Milley, America’s representative on the trio’s joint military council, last reaffirmed that commitment on November 15th, his two fellow soldiers had plenty of reasons to be sceptical. Donald Trump, America’s president, has long complained of the costs of military alliances, which he thinks are a “bad deal” for America, and has mused aloud about bringing troops home. For months America has been pressing the governments of Japan and South Korea to provide more money to help defray the expense of deploying American troops to their countries.

On November 19th South Koreans were given yet more reason for doubt. Merely an hour into a second day of talks about how to divvy up the cost of stationing American troops in South Korea, American negotiators walked out. South Korea was “not responsive” to America’s request for “fair and equitable” cost-sharing, said James DeHart, America’s chief negotiator. Jeong Eun-bo, his South Korean counterpart, said that although his country remained committed to finding a mutually agreeable solution by the end of the year, America’s demands were unacceptable “in principle”. South Korea’s foreign ministry said that America had demanded a “drastic increase” in the South Korean contribution.

This year South Korea paid about \$920m towards the cost of keeping America’s 28,500 troops in the country, mostly to cover the salaries of local staff and utility bills for bases. That in itself marks an 8% increase on the previous annual fee, to which South Korea begrudgingly acquiesced after fraught negotiations last year. South Korea also pays for military construction. A new base outside Seoul was built almost entirely by South Korea, at a cost of about \$10bn. Although America has not made its demands public, it has reportedly requested a rise in the annual contribution to \$5bn, with a similarly daunting increase suggested to Japan, which hosts more than 50,000 American troops.

The row puts further strain on the region, amid a fierce diplomatic and commercial dispute between South Korea and Japan and stalled nuclear talks with an in-

creasingly strident North Korea. South Korean officials were particularly put out when Mark Esper, America's defence secretary, speaking during a press conference during a visit to the Philippines, did not rule out a drawdown of American troops if the two sides failed to reach an agreement. (The previous week, on the same day that General Milley had tried to put a brave face on things, Mr Esper had told his counterpart in Seoul that South Korea was a rich country which "could and should" pay more for its defence.)

America's demands are likely to in-

crease anti-American sentiment among ordinary South Koreans, the vast majority of whom are keen on the alliance but oppose another big increase in South Korea's contribution. There is rare unanimity among both the progressives in government and the conservative opposition that America is engaged in an unacceptable shakedown of a longstanding ally. Civic groups of various political stripes have held rallies in recent days, some urging America to remain committed, others telling American troops to "go home".

Resolving the impasse will be hard.

With legislative elections due in April, Moon Jae-in, South Korea's president, will be reluctant to make any big concessions. For all Mr Esper's tactlessness, a drawdown of American troops is unlikely. But America's demanding attitude and unpredictability are already pushing South Korea to hedge its bets. Over the weekend South Korean and Chinese defence officials agreed to co-operate more closely. This is practically meaningless, but highly symbolic. If America continues to mistreat its allies, it may yet push them into the arms of the very power it needs their help to contain. ■

Banyan Shinzo Abe's record roll



Japan's nimble prime minister is now its longest-serving

THIS WEEK Shinzo Abe became the longest-serving prime minister in Japan's history, with 2,886 days in office. He pipped Taro Katsura, who served three times in the early 20th century, a remote age. But to win the record for the longest uninterrupted spell in office, Mr Abe—who had a brief time as prime minister in 2006-7, dogged by ill health, before returning to power in 2012—will have to stay on until August 24th. Many remember the man he has to beat, not least Mr Abe: Eisaku Sato was his great-uncle. Mr Abe is also the son of a foreign minister and grandson of another notable post-war prime minister, Nobusuke Kishi. In Japan, fate favours some families over others.

Sato's time in office, from 1964 to 1972, was a golden age. East-West rivalry was a fixed, predictable thing, and Japan sat firmly under all-paid-for American protection. It was able to concentrate on breakneck growth of 10% a year, driven by exports to the West. Even the Vietnam war was good for pacifist Japan, generating demand. Meanwhile, a dose of inflation kept debts under control.

When Mr Abe came to office in 2012 he inherited a very different Japan. The greying population was shrinking. The stockmarket was down two-thirds from its peak. Growth was slow and deflation was debilitating—not least because it constrained government revenues. Japanese feared the world was passing them by. Mr Abe changed the psychology. Japan, he declared, "is back."

The marketing was slick: "Abenomics" as a programme of structural reform never matched what it claimed on the label. But Mr Abe had luck: an upswing in global growth. He added gobs of deficit spending. Monetary tinkering led to a sharp fall in the currency, a tourist boom

and higher stockmarket. Young Japanese out of college are now confident of a job—one reason Japan is not fertile ground for populism. Problems remain. Despite a push for more female employment, women still struggle to shine, not least in Mr Abe's male-dominated government. Meanwhile, the state's huge debts and welfare payments for the old are underpinned by an ever-smaller workforce. Yet the crisis this may one day generate will be for a future prime minister.

The world takes notice of Japan once more—think, this year, of a new emperor's enthronement and the success of the Rugby World Cup; next year the Tokyo Olympic Games will make a splash. Mr Abe, a tireless traveller, promotes open markets even as America turns inward. Improved relations with some other Asian democracies, especially Australia and India, are a hedge against a rising China and an unpredictable America. So too is a stronger defence posture, pushing the bounds of Japan's pacifist constitution.

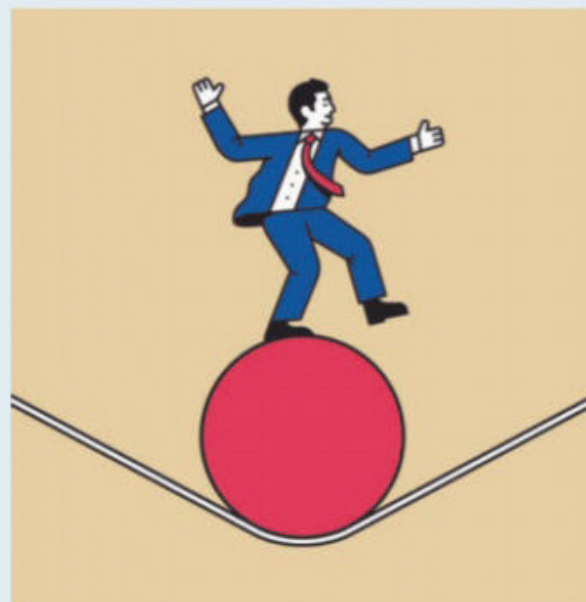
Mr Abe, a nationalist, has never had truck with war-guilt masochism. Like his

grandfather (whom the Americans imprisoned on suspicion of war crimes) and great-uncle before him, he views American protection as a necessary but temporary expedient. At Kishi's grave in 2012 Mr Abe vowed to "recover the true independence" of Japan. Yet his dream of excising the pacifist parts of the constitution will almost certainly founder for lack of support.

Even so, he and revisionist allies in his Liberal Democratic Party (LDP) have shifted Japan rightward, with some insidious consequences. The move has soured relations with neighbours including China and, most damagingly, South Korea. At home, it has undermined press freedom and shrunk the public space for airing contentious issues. Older Japanese are more worried about Mr Abe's chest-thumping nationalism than the young—and in 2016 he lowered the voting age.

No opposition troubles Mr Abe, so expect him to breeze through Sato's record. In theory, he must step down by September 2021 at the latest: there are no term limits on being prime minister, but the LDP has a nine-year limit on its presidency, which he holds. The betting has long been that, basking in the success of the Olympics, he will announce his retirement as prime minister next autumn. But it is far from clear who within the LDP might succeed him. So another possibility emerges: that Mr Abe calls a snap general election next year before the start of the Olympic Games.

That would give him the mandate to serve out his LDP presidency. Even then, it would not take much to rewrite the party constitution to allow him to serve longer. And so Mr Abe's most telling legacy might prove to be the lack of a successor.





Nuclear weapons

Warheads up

China's nuclear arsenal has been strikingly modest, but that is changing

I'M NOT AFRAID of nuclear war," boasted Mao Zedong, China's leader, in Moscow in 1957. Mao noted that even if half of China's population were to perish in a radioactive inferno, 300m would remain. His Soviet hosts, who were hardly known for their softhearted devotion to human rights, were shocked. Yet despite Mao's insouciance, China did not follow America and Russia into the arms race that saw them pile up 60,000 nuclear weapons in the three decades after that speech.

China is a military behemoth, but a nuclear minnow. It accounts for well over half the increase in global defence spending since 1990, but its nuclear stockpile is just 2% of the world's total, with a paltry 290 bombs—about the same as France or Britain. Nor does it have much to deliver them with. The country is thought to have fewer than 90 launchers for its land-based missiles (compared with America's 400) and just 20 nuclear-capable bombers (America has 66), according to the Federation of

American Scientists, a research group.

China's nuclear modesty is striking in other ways, too. America and Russia both keep their weapons on high alert, with nuclear warheads attached to missiles even in peacetime. They reserve the right to be the first to use nuclear weapons in a conflict. And they have lots of tactical weapons (less destructive ones) that can be used on the battlefield instead of against cities.

The PLA Rocket Force—the unit in charge of nuclear weapons—does not appear to do any of this. It is not thought to keep warheads attached to missiles, even though that makes them slower to use and more vulnerable to pre-emption in a crisis. China also says it has a policy of No First Use, meaning that it would launch nuclear

weapons only in retaliation for a nuclear strike from another country (although American officials are sceptical). And it does not seem to have any tactical nuclear weapons, perhaps because it doubts they could be used without escalating a conflict.

China has a conservative view of deterrence. "China's attitudes toward nuclear weapons have remained relatively constant from Mao Zedong to Xi Jinping," note Fiona Cunningham of George Washington University and Taylor Fravel of MIT. "China has sought to maintain the smallest possible force capable of surviving a first strike and being able to conduct a retaliatory strike." But what has sufficed in the past may not in the future.

When President George W. Bush pulled America out of the 30-year-old Anti-Ballistic Missile (ABM) treaty in 2002, China was alarmed. The missile defences that he was withdrawing to develop would have little hope of intercepting thousands of Russian missiles at once, but they might be capable of swatting away a relatively paltry volley from China. Barack Obama continued to invest in missile defence. Then Donald Trump doubled down, spending over \$10bn on missile shields in 2019 and pursuing exotic schemes like space-based lasers to zap missiles. China was particularly incensed by America's deployment of a THAAD missile-defence system in South Korea in 2017, whose radar, Chinese experts

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argued, would be able to peer into their country and distinguish real warheads from decoys.

At the same time, America intensified work on long-range conventional missiles that could hit any spot on Earth with great accuracy within an hour. The Pentagon is pouring billions of dollars into hypersonic gliders that can do just this (China is building these too, but its own gliders seem to lack the range to hit America).

China fears that such weapons might wipe out most of its warheads and launchers. Even rudimentary American missile-defences would then be able to mop up the “ragged retaliation” from China’s surviving nukes. Many American strategists reckon that this strategy—known as damage limitation—is preferable to accepting mutually assured destruction. America believes that this possibility gives it a psychological advantage in any crisis.

In response, China seems to be coming out of its nuclear shell. For one thing, it is making its weapons more nimble. At a parade to mark 70 years of Communist rule on October 1st, the star of the show was the DF-41 missile. It is thought to be China’s first road-mobile (ie, easy to hide) and solid-fuelled (ie, quick to launch) missile that is capable of hitting any part of America.

Chinese missiles are also being stuffed with more warheads, which makes it easier to overwhelm and bamboozle missile defences. And China is steadily working towards longer-range nuclear missiles for its submarines. That allows it to strike America from the safety of its own waters.

Because new weapons require warheads, nuclear modernisation is also driving nuclear expansion. China’s armed forces “doubled their nuclear arsenal in about the last decade, and they’re on track to double it again in the next decade”, noted Rear Admiral Michael Brooke, director of intelligence for America’s Strategic Command, in August. Though 600 warheads would still be just a tenth of the American or Russian total, it would increase pressure on China to join arms-control talks with those countries.

As China makes its nuclear forces more credible—less vulnerable to pre-emption, and more likely to get through missile defences—America grows nervous, argues Caitlin Talmadge of Georgetown University. If America cannot hope to destroy most of China’s missiles, then it cannot easily threaten China with a nuclear strike without putting its own cities at risk. American policymakers worry this will embolden China and unnerve American allies like Taiwan and Japan.

American leaders might then “ramp up competition further”, suggests Ms Talmadge, spending yet more on missile-defence and offensive weapons to restore their advantage. That could tip China into

another bout of nuclear expansion—and so on. “Nuclear competition between the United States and China is almost certain to intensify,” she concludes.

Such competition might be especially unstable because the two rivals have wildly different views of nuclear strategy, according to a recent paper by Ms Cunningham and Mr Fravel in the journal *International Security*. Chinese officials are overconfident about their ability to prevent a conventional war from turning nuclear, they argue, while American ones are overconfident about their subsequent ability to keep a nuclear war limited in scope. Making things worse, the two countries lack a dedicated nuclear dialogue, largely because China is wary of giving away too much information. For now, China’s parades are doing the talking. ■

The dangers of studying abroad

Thar be dragons

QINGDAO

Ex-commandos prepare students heading overseas for the worst

THE DRILL-SERGEANT barking orders is a former commando who lost bits of two fingers while deployed in South Sudan. His 100-odd young charges are dressed in camouflage uniforms and army boots. After a bit of marching in time they are shown how to abseil out of a besieged building.

The group under instruction are not conscripts, however, but students hoping to study abroad. “There is nothing very frightening about education in the West,” said China’s then-leader, Deng Xiaoping, to



his American guest, Henry Kissinger, in 1979. His words signalled a dramatic opening: Chinese students would at last be allowed to study in countries that were enemies of communism. Today hundreds of thousands of them head abroad every year, mostly to Western countries. Many, however, are more apprehensive than Deng suggested they should be.

Their fear is not of ideological contamination, but of the petty crime and shootings that China’s state media highlight as a scourge of Western societies. For Wang Xuejun, this is an opportunity. A veteran of Chinese peacekeeping and international relief work, he is the founder of Safety Anytime, a company that runs security-training programmes for anxious Chinese who are preparing to sojourn abroad. His customers are taught how to respond to gun-toting assailants, kidnapping attempts and terrorist attacks, among other perils. But the bulk of the training focuses on safety consciousness: how to be aware of more mundane dangers such as muggings or pickpocketing and how to avoid or cope with them. There are also lessons in first aid, information security and drugs laws, plus advice on how to handle fraud and sexual harassment.

The clients include not just Chinese students, more than 660,000 of whom went abroad last year, but also workers from the many Chinese energy, telecoms, finance and engineering companies that send employees abroad as part of China’s Belt and Road Initiative. That project, a sprawling scheme to build infrastructure and spread influence across much of the poor world, has put ever more Chinese into some of the world’s riskier places.

Many of the students are heading off to leafy college campuses in America rather than strife-torn African countries, but they are still extremely anxious. With relentless regularity, they see reports of senseless and deadly mass shootings in American cities. Mr Wang stresses that his training is about much more than avoiding crazed gunmen, but that is the main draw for many of his trainees. “I hope to go to university in America, but we always hear so much about gun violence there that I really have to take it into consideration,” says 15-year-old Cao Zhen, as his mother stands alongside nodding in agreement.

Mr Wang, who took part in relief operations in Haiti in the aftermath of a massive earthquake there in 2010, acknowledges that most of his customers will never face the dramatic situations he trains them for. The point, he says, is to develop the preparedness and presence of mind that will serve his trainees well in any dangerous situation, even after they get back home. After all, he says, although China is safer than many of the places his students venture to, anything can happen. ■

Chaguan | Totalitarian and proud

In response to a damning leak, few Chinese officials are blushing



CHINA WAS this week confronted with documentary evidence that it has built a vast and cruel police state in its far-western region of Xinjiang. In what appears to be an extraordinary leak of official Chinese papers, the *New York Times* published secret speeches by President Xi Jinping urging that Muslims infected with the “virus” of extremism undergo “a period of painful, interventionary treatment”. The leak lays bare the cold-blooded bureaucracy required as China, starting in 2017, seized hundreds of thousands of Muslims, most of them from the Uighur minority, and locked them without trial in re-education camps for even modest acts of piety, from growing long beards to praying outside state-controlled mosques. The paperwork of repression includes a script to be used on youngsters whose parents are behind bars: “Treasure this chance for free education that the party and government has provided to eradicate erroneous thinking.”

Chinese officials have offered three contradictory responses. The government of Xinjiang called the report a “complete fabrication” cooked up by anti-China forces in the West who cannot bear to see their region succeed. A spokesman for China’s foreign ministry took a more cautious line. Rather than deny the report outright, he called it a “clumsy patchwork” that distorted “so-called internal documents” in order to smear China’s successful counter-terrorism and de-radicalisation policies. The third response offered by state media and some officials is strikingly different. It skates close to an admission that Xinjiang is indeed under iron-fisted rule, and that the world should be glad of it.

Zhao Lijian is a Chinese diplomat and licensed provocateur with his own account on Twitter, a social-media platform banned inside China. Mr Zhao, who was recently brought back to a senior post in Beijing, took to Twitter on November 18th to denounce Western “preaching”. Taunting the West for being wrong about weapons of mass destruction in Iraq, he declared, “China deserves a big like for showing how to deal effectively with terrorism and extremism in Xinjiang. Toughness and prosperity are a great combination!” That tone was echoed by the *Global Times*, a tabloid owned by the *People’s Daily*, the Communist Party’s flagship newspaper. In an editorial paired with a photograph of dancing Uighurs, the tabloid credited “decisive measures” with preventing

Xinjiang from becoming another Afghanistan or Chechnya. The *Global Times* nodded to a strain of thought among nationalist intellectuals and party ideologues, who chafe at the idea that China’s 100m ethnic-minority citizens, and notably restive groups such as Uighurs or Tibetans, should enjoy special privileges as the price of peaceful co-existence with the 1.3bn-strong Han Chinese majority. They favour promoting a collective national identity.

The *Global Times* took a bluntly majoritarian line in its editorial, suggesting that when Western elites grumble about Uighurs, they underplay the rights of all Chinese. “The dispute over Xinjiang is a clash between not only two value systems, but also two interest systems. All Chinese people, including people of all ethnic groups in Xinjiang, hope for peace and prosperity in the region. Measures that help reach this goal are in line with morality and justice,” opined the Communist Party tabloid, which has been at the forefront of the more candid, defiant line on Xinjiang.

It may sound counter-intuitive, given the risks that Uighur activists, exiles and Western researchers run to bring information about Xinjiang to the outside world, but honesty may turn out to be harder for the West to handle than outrageous lies. That is because, judging by the Mr Xi seen in the leaked papers, that unapologetic worldview—China is ruthless, and needs to be—is close to his own. The leaked papers include a secret speech from 2014 in which Mr Xi tells senior officials to shrug off international criticism: “Don’t be afraid if hostile forces whine, or if hostile forces malign the image of Xinjiang.” That was in a time of murderous terrorist attacks by Uighur militants, and in the leaked cache Mr Xi distances himself from predecessors who hoped that economic growth would cure militancy. “In recent years Xinjiang has grown very quickly and the standard of living has consistently risen, but even so ethnic separatism and terrorist violence have still been on the rise,” he noted. In the leaked papers Mr Xi puts his faith in all-pervasive surveillance, strict ideological training and increased flows of Han Chinese settlers into heavily Uighur regions.

Tyranny of the majority, with Chinese characteristics

Mr Xi’s lodestar is the absolute authority of the Communist Party. But he may also be understood as a populist, centralising nationalist. And whether Mr Xi is promoting his “China Dream” of national greatness or demanding tighter controls to “Sinicise” Islam, Christianity and other religions, his ideas resonate with many citizens. Chinese public opinion is not monolithic, and the leaked papers reveal how some Han Chinese officials in Xinjiang resisted the new get-tough regime, even quietly releasing Uighur detainees. But ordinary Chinese live amid a pounding drumbeat of nationalism and constant reminders of an unspecified terrorist threat. There are security checkpoints at every airport, railway station and metro stop in China, complete with giant armoured pots like witches’ cauldrons, into which bombs may be popped. There is little evidence that such security theatre is resented. Domestic tourism to Xinjiang has flourished even as police checkpoints and surveillance cameras turned the region into a techno-authoritarian dystopia, with famous Chinese travel bloggers marvelling at how safe the region is. Anti-Muslim paranoia is rampant on the Chinese internet.

Secret brutality by Chinese authorities was hard enough for the world to deal with. Open, unblushing repression is a still greater headache. Challenging horrors in Xinjiang may involve confronting Chinese public opinion, as well as China’s rulers. It is unclear whether the world has the stomach for that fight. ■



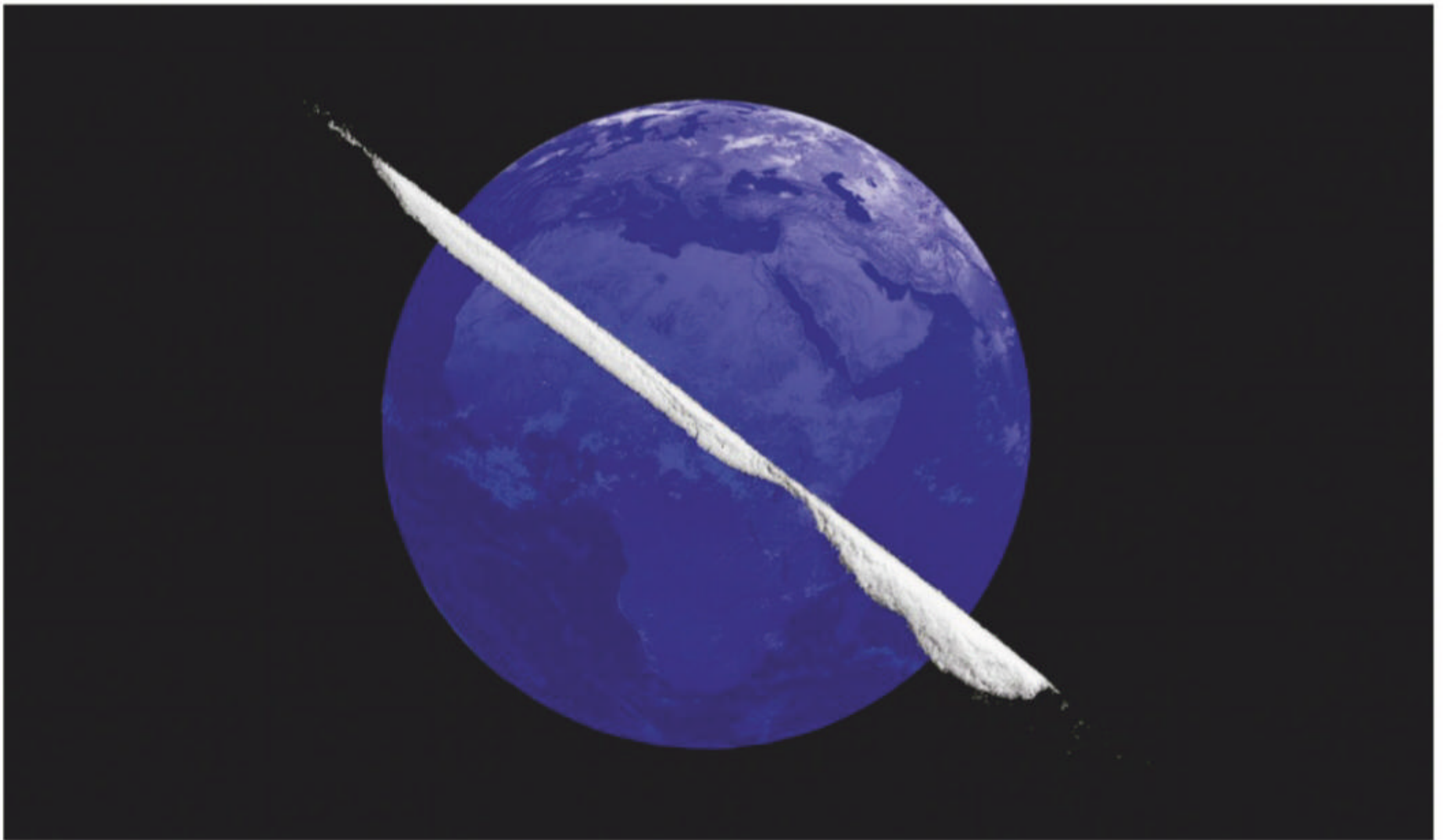
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Drug-trafficking

Changing gear

BISSAU, MEXICO CITY AND SÃO PAULO

The illegal drugs industry is booming again—and weak states are most vulnerable

ONE OF AFRICA'S biggest-ever drug seizures took place on September 1st at a modest bungalow outside the town of Canchungo in Guinea-Bissau. Hidden behind a fake wall, Bissau-Guinean judicial police found 1,660kg of cocaine—enough to cut 100m lines. At two other houses nearby, they found a further 250kg of drugs. They arrested a dozen people, including three Colombians and a Mexican, and nabbed 18 cars and a speedboat. The drugs were destined for Mali and ultimately, Europe.

The seizure was the second big one this year in Guinea-Bissau. In March police got their hands on almost 800kg. Before that, they had reported no drugs hauls to the UN Office on Drugs and Crime for over a decade. For most observers the surprise was not that a big shipment of drugs was passing through the country, but that the police stopped it. In Guinea-Bissau, a small, poor west African state of just 1.9m people, where over 90% of formal exports are cashew nuts, cocaine-smuggling has been a huge business since at least 2005. UN officials warned more than a decade ago that

the country risked becoming a “narco-state”. The drugs trade has only become more embedded since then. International officials in Bissau, the capital, guess that at least ten tonnes of cocaine pass through each year, probably more. At European street prices, that would be worth about the same as Guinea-Bissau's GDP. Across west Africa, coke is propping up kleptocratic political systems and fuelling violence.

Having fallen during the global financial crisis, production of hard drugs is now as high as it has ever been (see chart overleaf). In Colombia, since a peace deal with the FARC, a Marxist insurgency, was signed in 2016, the coca crop has increased dramatically. When the FARC disbanded, new traffickers rushed to take control of their territory. Competition between buyers has pushed up coca prices so farmers have planted more. Opium in Afghanistan has flourished since most NATO forces pulled out of the country in 2014. The Afghan state, battling the Taliban, has all but given up on trying to stop the drugs trade. Poppies bloom outside Kandahar, the second-

biggest city. And the production of synthetic drugs such as ecstasy is up everywhere.

In the rich world, too, drug use is climbing again. In Britain the share of 16- to 24-year-olds who say they have taken a class A drug (such as ecstasy or cocaine) in the past year almost doubled between 2012 and 2018, to 9%. In America cocaine use is rising and drug overdoses, mostly of opiates, continue to kill around 70,000 people a year. And in countries from eastern Europe to Asia, demand for recreational drugs is growing with incomes.

Most of these drugs have to be smuggled from places such as Afghanistan and Colombia to users, mostly in America and Europe. Traffickers are finding ever more sophisticated ways to hide their product, says Lawrence Gibbons of Britain's National Crime Agency (NCA). Some hide cocaine within the walls of shipping containers, or inside fruit. They are also exploiting new routes. Police from Britain and the Netherlands have cracked down on shipments through the Caribbean, so traffickers are moving their product through west Africa instead. That means that the violence and corruption that has long afflicted Latin America is spreading.

The increase in production of drugs “probably affects Africa more than anywhere else”, says Mark Shaw of the Global Initiative against Transnational Organised Crime, a think-tank, because many African states are fragile. Smugglers easily bypass or co-opt their institutions and officials. ▶▶

▶ Drug markets, like other forms of organised crime, thrive best in places where the governments cannot or will not resist them. Trafficking then makes weak, dirty institutions even weaker and dirtier.

Guinea-Bissau's appeal is partly geographic. The country is a mere 3,000km from Brazil—about as close as Africa and South America get—and reachable by small aircraft fitted with fuel bladders. With over 80 islands, most uninhabited, it is easy to drop off drugs undetected, or to smuggle them in from boats. In the early days of the trade, when cocaine washed up on beaches, locals did not know what it was and used it as detergent or make-up. Now they know.

Guinea-Bissau's politics are ideal for drug barons. Politicians need money and violence to gain and hold high office. Cocaine can pay for both. On November 24th voters will choose a new president. Campaigns involve hundreds of cars, huge wedges of cash and even helicopters, none of which is readily available in a poor country. "The relationship between state weakness and the emergence of the drugs trade is seen very clearly" in Guinea-Bissau, writes Hassoum Ceesay, a historian.

Colombian traffickers probably arrived in the country some time before the 2005 election, on the invitation of João Bernardo "Nino" Vieira, Guinea-Bissau's longest-serving president, who needed to raise money to fund his electioneering. Traffickers were brazen—in the military airport in Bissau sits an abandoned Lear jet flown from Venezuela full of cocaine—and the drug money quickly exacerbated Guinea-Bissau's long-standing instability.

Soldiers killed Vieira in 2009, hours after his army chief of staff died in a bomb blast. Many locals suspect that Latin American cartels set up both murders. In 2012 the then head of the army, Antonio Indjai, launched a coup d'état, possibly to try to protect his alleged cocaine-trafficking business. He is still wanted by America's Drug Enforcement Administration (DEA), which in 2013 arrested an accomplice, the former head of the shipless navy, José Américo Bubo Na Tchuto, who served four years in an American prison.

Latin American cartels probably controlled the cocaine seized in September. Elements of the National Guard and the customs authorities are said to have waved through the drugs. Powerful Bissau-Guineans protect it for a cut of the profits and less powerful ones do the grunt work. "Everybody knows what the deal is," says a former DEA agent who worked in west Africa. "Drugs are protected by big people, the top people," says one Bissau-Guinean justice-department official.

The judicial police force, which grabbed the drugs, is among the cleanest parts of the state. It gets international support. But the government starves it of the resources

it needs to investigate the drugs trade. Officers lack boats or cars; sometimes they cannot even pay for mobile-phone credit, says Fernando Jorge Barreto Costa, the force's deputy director. Judges refuse to issue arrest warrants, or order the release of suspects. According to the *Journal of Modern African Studies*, in 2007 the public prosecutor released several Colombians on bail using cash that had been seized during their arrest. When the judicial police refused to release them, Aristides Gomes, the prime minister at the time, intervened, arguing that the men should be released and the "bail money" forfeited to the state.

Guinea-Bissau is not the only place in west Africa to be afflicted by cocaine. In February nine tonnes were found in a ship in Cape Verde. In June police in Senegal seized 800kg hidden in cars on a boat from Brazil. And traffickers have political allies throughout the region. The eldest son of Lansana Conté, the late president of Guinea-Conakry, was jailed for 16 months there for his involvement in the drugs trade.

East Africa is plagued by heroin. Better enforcement in Turkey has pushed traffickers south. Their product is smuggled out of Afghanistan via Pakistan or Iran, and moved on fishing dhows around the Gulf of Arabia and down to Kenya and Mozambique. From there, it can travel to Europe and America hidden on container ships or inside passengers on commercial flights.

What are the consequences of the shift in smuggling routes? Drugs need not cause wars—if they did, the Netherlands, which produces much of the world's ecstasy, would be a hellhole. But they do give people something to fight over, and bankroll armed groups that were already fighting for other reasons. The police say the drugs seized in Guinea-Bissau this year were on their way to Mali. Tuareg and Arab rebels wrestle for control of drug routes across the Sahara desert. In July the UN imposed sanctions on a Malian, Mohamed Ben Ahmed Mahri, for funnelling gains from drug-trafficking to Al-Mourabitoun, a militant group from northern Mali. Gangs that have

built up political connections and stashes of weapons can move easily into new rackets such as kidnapping or extortion.

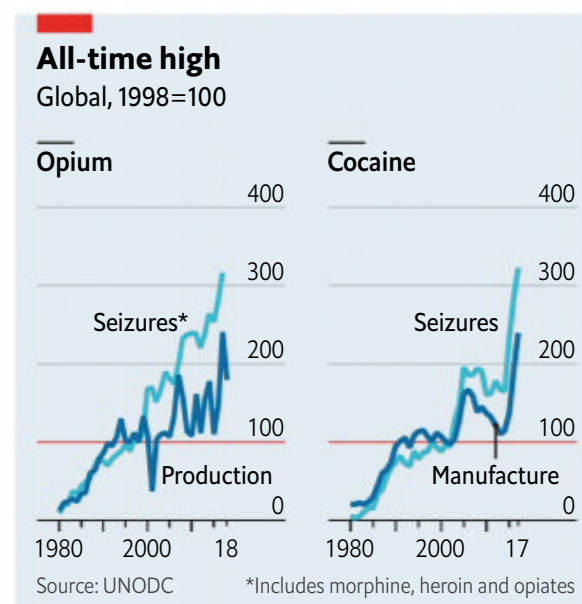
In more peaceful countries, drugs still strain weak political systems. Suspicions have been voiced in Kenya's parliament about the alleged past involvement of Mike Sonko and Hassan Joho, the governors of Nairobi and Mombasa, the two biggest cities, in drug-trafficking. Both men deny involvement. Kenya's government generally co-operates with international efforts to stop trafficking, say local diplomats—probably because the trade helps to finance the opposition. In Mozambique the dominant political party, Frelimo, mostly controls heroin-smuggling itself, says Joseph Hanlon of the London School of Economics. The revenues pay for local power-brokers to get out the vote.

Being a transit country has other downsides. Smugglers often pay their contacts in drugs to sell locally. (This is easier and cheaper than laundering money.) The world's second-biggest market for cocaine is Brazil, a major transit country. Heroin is a scourge in east Africa; crack cocaine bedevils west Africa (though it is dwarfed by the abuse of prescription opiates). At a treatment centre run by Catholic priests in Bissau, young men, most of them crack-cocaine addicts, say the drug can be bought for 2,000 west African francs (\$3.50) a gram, a tenth of the price in Europe.

Diverted traffic

Mexico offers a glimpse of how drug-trafficking may further evolve. As demand in the United States has changed, due to the partial legalisation of cannabis and a surge in opioid use, traffickers have diversified. Tighter security on the border also favours heroin and fentanyl, which are less bulky. A truckload of marijuana is worth about \$10m, says Everard Meade of the University of San Diego. \$10m of cocaine would fill the boots of several cars. But \$10m of heroin can be smuggled inside two briefcases.

So long as drugs are illegal, criminals will profit from them. Whatever the police do, cartels will adapt. Mr Gibbons of the NCA says that in Britain some Colombians now run vertically integrated businesses—controlling supply at every level from production in the Amazon down to distribution in British cities. In Brazil the First Command of the Capital, a São Paulo-based drug cartel, has taken control of nearly all of the value chain by building plants to process cocaine paste in Bolivia and forging links with crime bosses in Europe. Italian traffickers have hired divers in Brazil to attach magnetic boxes filled with drugs to the bottom of ships, to be removed by a second set of divers when the ships arrive in Europe. As Allan de Abreu, a Brazilian journalist, points out: "The police are always one step behind the traffickers." ■





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American health care

Diagnosis: opaque

NEW YORK

The Trump administration wants hospitals to be more upfront about prices. They demand a second opinion

I DON'T KNOW if the hospitals are going to like me too much any more with this," quipped President Donald Trump on November 15th. He was referring to two bold initiatives unveiled earlier that day by Alex Azar, his health secretary, to rein in America's soaring health-care costs. The administration finalised a rule, to take effect in 2021, which will double down on its effort to bring price transparency to hospital care. And it put forward a new proposal, open for 60 days of public comment, that would force health-insurance firms to reveal confidential details of negotiated discounts with hospitals and doctors. It is the biggest shake-up of America's \$3.5trn health-care industry in years. And no, hospital operators are not happy.

Mr Trump's first round of hospital reform required hospitals to make public the full list of costs billable to patients or their insurers. Hospitals previously held these so-called "chargemasters" close to their

chest. Since January, when the reform came into force, they have taken to releasing convoluted spreadsheets with theoretical list prices for thousands of procedures, all couched in impenetrable medical jargon—transparent in theory but "useless" in practice, says George Nation of Lehigh University in Pennsylvania.

In need of radical surgery

The new rule goes further. It requires hospitals to disclose and update details, including gross charges, cash prices and negotiated rates, for thousands of services. They must also explain in plain English how much a basket of 300 common services (things like MRI scans or hip replacements) will cost, including any extras and hidden charges.

In setting his sights on hospitals, Mr Trump is taking on a colossus. They accounted for nearly a third of America's health-care costs in 2017, far more than the

share of much-maligned drugmakers (see chart 1 on next page). The country has over 6,000 hospitals. Only 1,300 or so are private for-profit institutions; the rest are non-profit or government-run. The lack of an overt profit motive has done little to rein in prices, however. Hospital costs have risen at an annual rate of close to 5%, compared with below 1% for drug prices. Nor has a charitable mission dampened the ambition of bosses at big hospital chains; seven-figure salaries are not unheard of at those with revenues exceeding \$500m a year. They have also been on an acquisition binge. The number of deals has jumped from around 55 a year between 2002 and 2009 to 90 or more these days. Since 2018 non-profit hospitals have been the acquirers in three-quarters of the transactions.

Early on, consolidation was fuelled by the passage in 2010 of the Affordable Care Act. Barack Obama's health reform imposed red tape, such as a switch to electronic medical records, that some smaller hospitals found onerous. Moody's, a ratings agency, thinks economies of scale and gaining leverage in negotiations with insurers are now the chief motive.

The merger wave has increased concentration and pricing power. Brent Fulton of the University of California, Berkeley, found that 90% of America's hospital markets, representing a population of over ►►

► 2000, were highly concentrated (see chart 2). Zack Cooper of Yale University, whose team looked at insurance claims covering over a quarter of Americans with employer-provided health insurance, discovered that prices at hospitals with a local monopoly were 12% higher than in markets with four or more rivals. A study by an insurance-industry body concluded that consolidation cut costs by 15-30% at acquired hospitals, but average prices for hospital services still rose by between 6% and 18%.

According to the American Hospital Association, a lobby group, operating margins in the industry rose from 4.4% in 2007 to 6.4% in 2017. But many hospitals in rural areas, which suffer from undercapacity, and in poor urban areas, which have lots of uninsured patients, barely break even or lose money. Big for-profit chains like HCA Healthcare, with around 180 hospitals, can enjoy high (if volatile) margins. Non-profit institutions often plough those gains into expansion or salaries.

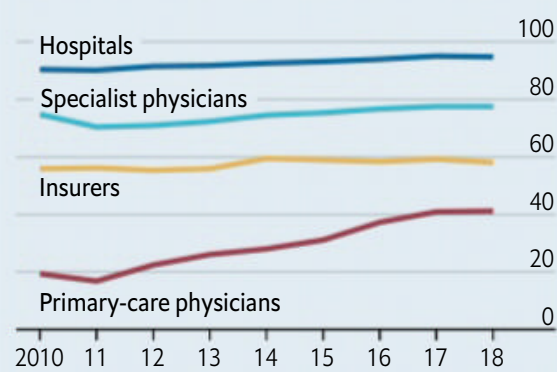
Given this concentration, many experts are sceptical that transparency alone can rein in prices. Sherry Gleid of New York University observes that patients are often not price-sensitive. They are either in need of urgent care, with no time to shop around, or have insurance, and so pay a fraction of the full cost (often nothing beyond an annual out-of-pocket limit).

Insurers, for their part, care less about prices because they now make more money by managing health plans for self-insured employers than by managing risk. They may even like to see inflation rise, since they can take a bigger cut from a bigger base. A well-intentioned Obamacare rule forces insurers to pay out at least 80% of their revenue from premiums. But by capping margins, it encourages raising revenue, not efficiency—and higher costs can be used to justify higher premiums.

Others are more hopeful. Marty Makary of Johns Hopkins University, author of “The Price We Pay”, a new book about America’s health-care system, thinks that a small number of “proxy shoppers” can

Unhealthy markets

United States, % of metropolitan areas* with highly concentrated marketplaces†



Sources: Petris Centre at University of California, Berkeley; American Hospital Association; IQVIA; Decision Resources Group

*With less than 3 million people in 2010
†Herfindahl-Hirschman index values above 2,500

bring about powerful change once prices are revealed, even if most patients remain insensitive to prices. Dr Makary points out that in elective procedures like LASIK eye surgery, cosmetic surgery or *in vitro* fertilisation, which enjoy full transparency, “prices fall and quality rises each year just like in every normal market.”

It is possible that prices may initially rise in some places as cheaper hospitals raise theirs once they realise how much peers in similar markets or pricier local rivals are earning. The Federal Trade Commission (FTC) has raised that troubling prospect—and hospitals have (self-servingly) echoed it. Hospital lobbyists report their clients are likely to sue the government over the new rules.

Larry Levitt of the Kaiser Family Foundation, a health-care think-tank, worries that many hospitals will ignore the paltry \$300 daily penalty for scofflaws as a cost of doing business. But, he says, Mr Azar’s second proposal, to force disclosure of prices insurers actually pay, may prove potent.

The cost of insurance is growing unbearable for many. Nearly 180m Americans, more than half the population, are covered by employer-provided health insurance. The average family’s premiums have shot up by 54% over the past decade, far outpacing wage growth, and employers are shifting more costs onto workers through ever higher out-of-pocket payments and deductibles. Reformers hope that by making real prices and out-of-pocket costs available upfront in simple language, patients can shop for non-emergency services. PwC, a consultancy, reckons these make up about half of all medical services by volume (though less by value).

Why should hospital and insurance prices remain taboo, asks Dr Makary, when a corner of the health industry is already subject to strict transparency regulation? The Funeral Rule, enacted by the FTC in 1985, requires undertakers to provide itemised and detailed price data. What is good for the dead is surely good for the living. ■

RWE

After Hambi

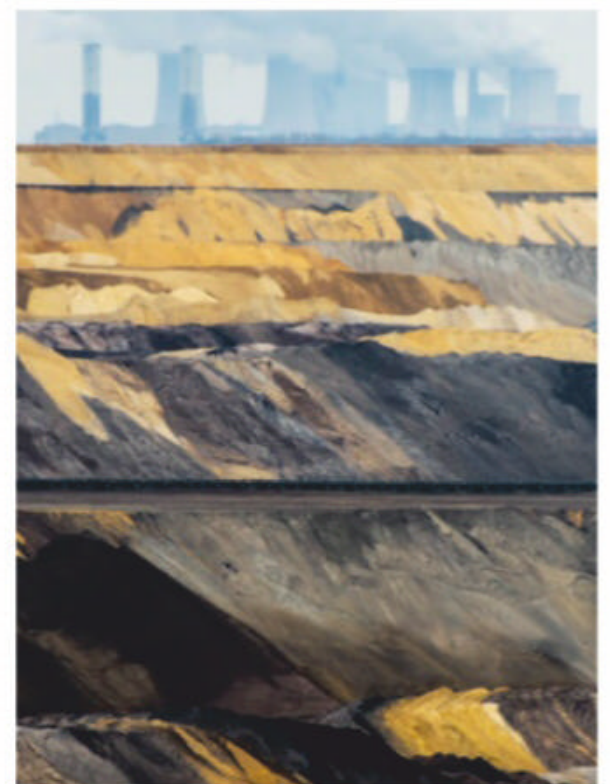
BERLIN

One of the world’s dirtiest companies tries to clean up its act

FOR 120 years RWE has been one of Europe’s biggest emitters of carbon dioxide. The German utility cleared almost all of Hambacher forest, a once-vast wood in western Germany, to mine lignite, an especially filthy fossil fuel, which it burned to generate electricity. What is left of “Hambi” has become a symbol of the anti-coal movement, occupied by activists camping in 80-odd tree houses. Greta Thunberg, a star teenage carbon critic, paid them a visit in August. RWE is under fire even where it does not operate. A Peruvian farmer has sued it in a German court for its contribution to climate change that led to the melting of an Andean glacier, which threatens to flood his home. He lost but is appealing.

RWE’s ongoing battle with environmentalists, who have pelted its workers with stones and excrement, may soon be over. Or so hopes its boss, Rolf Martin Schmitz. In September the EU agreed to a €43bn (\$47.5bn) asset swap between RWE and its rival E.ON. It turns E.ON into Europe’s largest power-grid operator by assets and RWE into the world’s second-biggest producer of offshore wind power and Europe’s third-biggest producer of renewable energy. Since then Mr Schmitz has promoted “the new RWE”. A glossy brochure proclaims a vow to become carbon neutral by 2040.

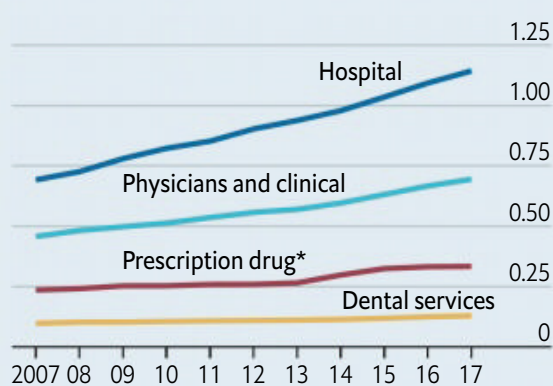
Sam Arie at UBS, a Swiss bank, sees promise in RWE Renewables, which rakes in gross operating profits of €1.5bn or so. Of ►►



Changing palette

Growth factor

United States, selected health spending
By type of service, \$trn



Source: Centres for Medicare & Medicaid Services

*Retail sales only

▶ the EU's 28 members, 18 have pledged to emit no net carbon by 2050. Germany says it will stop using coal by 2038 and stump up €40bn to ease the transition. This should increase demand for renewables. But these same policies—and German politics—are creating uncertainty for RWE, says Mr Arie.

RWE is demanding a chunk of the transition pot. It still runs three lignite mines, which directly employ 9,900 people and indirectly support another 20,000 jobs in the Rhine region. Mr Schmitz assumes most of the three gigawatts the government plans to phase out by 2023 will come

from these mines. It may cost €1.2bn-1.5bn for every gigawatt—much less, he says, than the €28bn Germany spends each year on renewable-energy subsidies. In order to make his case, he shuttles several times a week from RWE's headquarters in Essen to Berlin for talks with ministers.

Resolving the standoff at "Hambi" could be especially expensive. Last October a court ordered a halt to the clearing of its remaining 200 hectares (a thirtieth of its original extent). Mr Schmitz says the forest could be left as it is—but at a price. It may cost the company €1.5bn or so to find an al-

ternative to a planned expansion of an open-pit mine at Hambach.

Investors have remained bullish on RWE, whose share price is up by a third this year. But Mr Schmitz is not quite out of the woods. This month RWE's profit forecast for the renewables business undershot analysts' estimates. Much hinges on those frequent trips to Berlin. Insiders describe the tone of the discussions as *ruppig* (gruff) at times. RWE says agreement is "not yet imminent". It is hoping for one by the end of the year. With winter upon them, Hambach's tree-huggers must be, too. ■

Bartleby Go to work on an egg

Helping refugees into employment

MOHAMMED RAHIMEH left Damascus in December 2015, rather than be conscripted into the Syrian army. His journey to London took him through Lebanon and Greece and included 11 months in the notorious "Jungle" camp in Calais. Despite leaving Syria with no cooking qualifications or English skills, he is now in the process of setting up a food business in Britain.

History is replete with immigrants who have brought economic skills with them, from the Flemish weavers who came to England in the 14th century to the millions of Europeans who emigrated to America in the late 19th. Today's migrants also have plenty to offer, if only the authorities will let them work.

While he was waiting for his asylum claim to be processed in Britain, Mr Rahimeh wasn't allowed to take a job. But he did develop his cooking skills, focusing on a recipe involving eggs, onions, tomatoes and spices. With the help of Alexandra Simmons, a volunteer he had met in Calais, he set up Mo's Eggs, a business that offered a Syrian brunch. He was able to take advantage of a trend for pop-up restaurants, venues that only exist for a day every week or month.

The first site was a pizza restaurant in Archway, in north London, and his first event was Ms Simmons's 30th birthday party. He served around 60 people every month until the venue closed, but will soon open a new place in Tooting Broadway, in the south of the city. In the interim, he has been working at a market stall to learn more about the food trade.

This is what immigrants tend to do; they work hard so they can rebuild their lives and they spot niches in the market that others might miss. A similar path was followed by Majeda Khoury, a human-rights activist who made her way

from Damascus to Britain. She learned to cook thanks to a charity called Migrateful and prepares food associated with different Syrian cities; a favourite dish in Damascus, *harak osbao*, features lentils and pasta with tamarind, coriander, garlic and pomegranate molasses. Now she runs catering at big events for charities that want to focus on Syria.

Both Ms Khoury and Mr Rahimeh benefited from sales and marketing training by the Entrepreneurial Refugee Network (TERN), a charity. Charlie Fraser, TERN's co-founder, says the aim is to launch 1,000 refugee-led businesses in Britain by 2025.

It is very hard for refugees to start a business when they cannot leave the camps in the first place. Paul Hutchings is trying to help those people who are stuck. He used to be a market researcher, before going to Calais to help refugees in 2008. In 2016 he set up Refugee Support, another charity, which has been involved in camps in Bangladesh, Cyprus, Greece and Mexico.

The model is to promote dignity rather than dependence; instead of just handing out food and clothes, the charity set up a

shop. It created tokens so residents could buy their own things. Dina Nayeri, a former refugee, says this is very important; at one camp she attended, people had to search through piles of old clothes that were dumped on the floor. Ms Nayeri says that many refugees struggle with trauma, feelings of shame and inferiority and the expectations of other people that they should always be grateful. After she made it to America, Ms Nayeri became a writer, publishing two novels and a non-fiction book, "The Ungrateful Refugee".

Dignity also requires that refugees find work. If they stay in the camps, they qualify for grants from the EU but the risk, Mr Hutchings says, is that they become institutionalised. At first, Refugee Support tried to give microloans to let people set up small businesses. But this ran into a regulatory brick wall.

So instead, Mr Hutchings rented a building, now called the Dignity Centre, where people can learn skills. One of the projects is a sewing co-operative which has 18 machines, where refugees make bags, cushion covers and aprons. The charity provides the material, machines and electricity and sells the goods online at Refumade.org; each item comes with a message about the person who made it. The sewing workers are mostly women. For the men, the charity has set up a bicycle-sharing scheme in Cyprus to help them find work away from the camps.

The refugees Bartleby spoke to had undergone an immense struggle to reach their current position. Their determination to make something of their lives was truly striking. That is the kind of work ethic any company, and any country, ought to value.



Telecoms

Political bandwidth

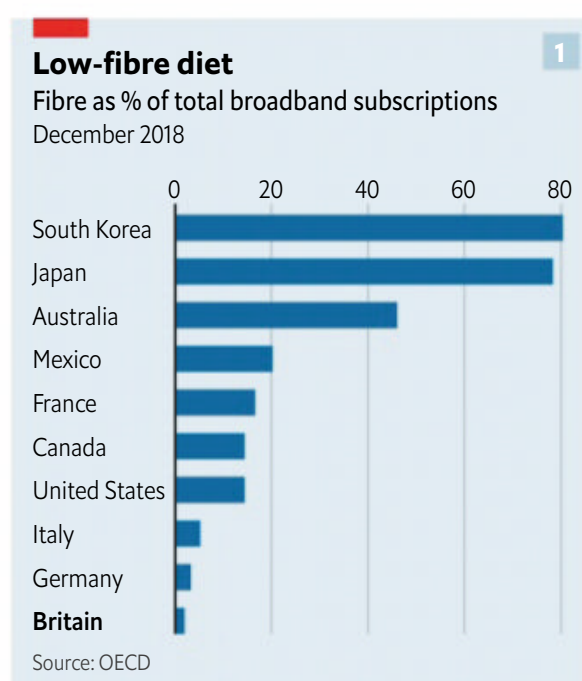
Would nationalising BT improve Britain's broadband?

IN 1990 BRITISH TELECOM (BT), a former state-owned monopoly, was in the early stages of upgrading its copper wires to fibre-optic cables. Its plans were scotched by the Conservative government of the day, worried that it would damage the competitiveness of other firms in Britain's newly liberalised telecoms markets. Three decades on, broadband is once again a hot-button election issue. The opposition Labour Party wants parts of BT to be renationalised—and a full fibre-optic upgrade to be completed. British Broadband, as the new entity would be called, could then offer free connectivity to every citizen and firm.

Labour thinks state control could lift Britain in global fibre-optic rankings. The OECD, a rich-country club, puts it 35th out of 37 countries in its use of the technology, which allows far higher speeds than copper wires (see chart 1). The government has already pencilled in £5bn (\$6.5bn) to raise fibre's share of broadband.

On top of nationalisation, Labour wants to boost this pot to £20bn and to maintain the new network via a tax on technology firms that furnish services over it. Nationalised industries are not always inefficient, Labour says. Jeremy Corbyn, its leader, has compared the project to the National Health Service, which achieves passable results while spending less per person than most other rich-country health systems.

It is true that some of the speediest nations have been more willing to spend and to prod private firms than Britain has, which for decades has relied on opening up BT's core network so that other firms can



piggyback off it as the main mechanism to improve standards. But wiring up a rich microstate like Singapore or San Marino is a doddle compared with doing the same in sparsely populated Scotland. So is hooking up flats, which are more popular in continental Europe than in Britain.

Perhaps the closest comparison would be with Australia's state-run National Broadband Network, which also promises a high-speed connection to every home (though consumers must still pay private internet-service providers to connect to it). It is late and its costs have risen from A\$30bn in 2013 (then \$29bn, and 1.9% of GDP) to A\$51bn today, which is 2.6% of GDP. Critics call it a wasteful mess. Even defenders say it has become a political football.

British broadband is not quite as awful as the fibre figures imply (see chart 2). Different comparisons of broadband speeds give different results, though most put Britain behind other rich countries. On the other hand, prices are reasonable. And though ultra-fast connections are rare by international standards, so are truly sluggish ones. Such digital equality should please the egalitarian Mr Corbyn. ■

Entertainment

Mortal kombat

Streaming has changed music, film and tv. Time for video games

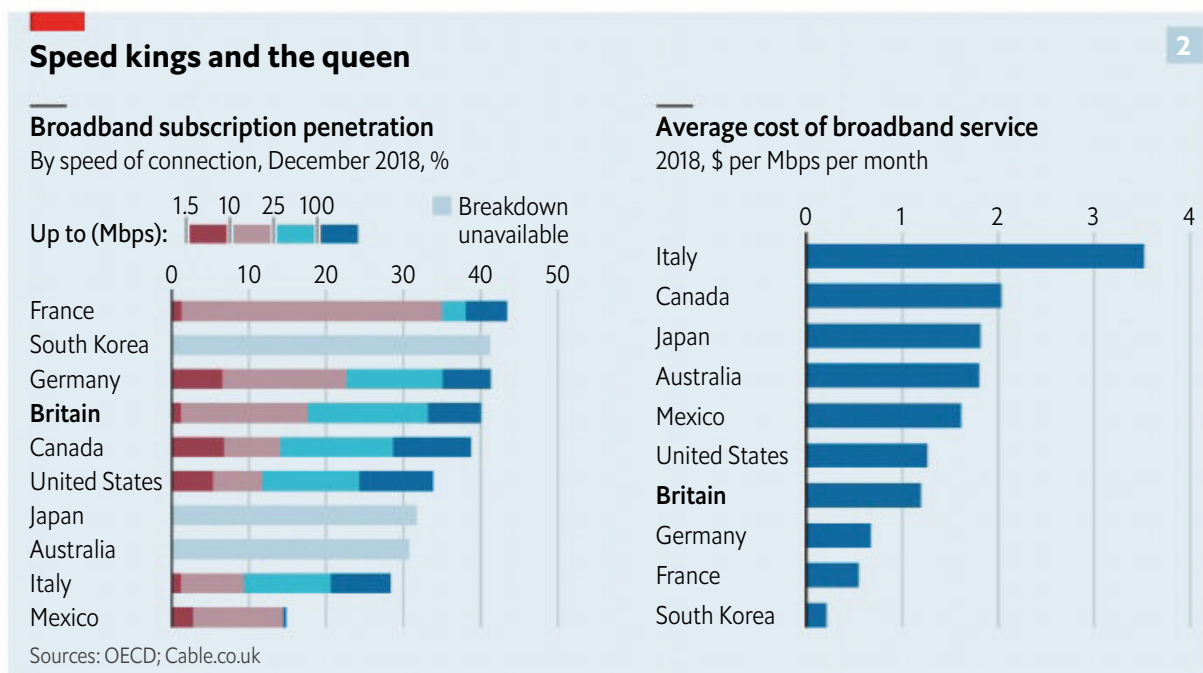
THE LAUNCH in 2018 of "Red Dead Redemption 2" was a huge event in the history of entertainment. It raked in \$725m in its first three days, behind only "Avengers: Endgame", a recent superhero flick, and "Grand Theft Auto V", a game from 2013—and that despite being available only to owners of pricey games consoles. On November 19th it became available to an even wider audience with the launch of Stadia, Google's game-streaming service.

Google is not the only tech titan to bet that streaming will prove as transformative for the \$150bn video-game industry as it has been for music, film and television. This month Microsoft announced new games for its experimental xCloud service, which is due to launch in 2020. It will work with xbox Game Pass, an existing download-based subscription service that offers more than 100 titles. Amazon is widely assumed to be working on something similar. Big Tech will be battling second-tier players, including Nvidia, a maker of gaming-focused computer chips, and Electronic Arts (EA), a games publisher. Sony, which makes consoles, already offers streaming through its PlayStation Now service.

Streaming lets anyone with an internet connection play any game by farming out the computational heavy lifting required to run gaming software to cloud servers. It will not replace consoles overnight; both Microsoft and Sony are launching new machines next year. But by offering the option to play blockbuster games like "Red Dead Redemption 2" without paying upfront for hardware, it could lure owners of comparatively feeble devices such as smartphones, tablets and tvs to cutting-edge games.

Catherine Gluckstein, one of the Microsoft executives in charge of xCloud, points out that of the 5bn people who own smartphones, about half dabble in cheap-and-cheerful mobile games. Next year xCloud tests will be expanded to India, where consoles remain a luxury but internet no longer is; more than 500m Indians enjoy access to the web, mostly on their phones. Michael Pachter of Wedbush, an investment firm, thinks streaming's worldwide expansion could triple the size of the gaming market to nearly \$500bn by 2030.

If, that is, the companies can pull it off. Streaming a film or a song is straightforward. Data can be downloaded ahead of time to smooth out connection hiccups. Not for games, which must react instantaneously. ▶▶





Google, the gameslinger

neously to players' moves and vice versa. Even with a rock-solid connection (which most mobile ones are not) commands take time to travel from the controller to the data centre and back. This can introduce annoying delays. And distributing games the old way, via physical disks or downloads, is cheap, whereas providing high-end, game-capable computing in the cloud is not, notes Piers Harding-Rolls, an analyst at IHS Markit, a research firm. A decade ago early attempts at game streaming flopped precisely because of high prices and iffy technology.

All eyes are now on Google. Like Amazon and Microsoft, it owns a worldwide network of cloud-computing data centres, which could help surmount technological niggles. But unlike Microsoft or Sony, it lacks deep roots in gaming. And in contrast to Amazon, whose 100m Prime subscribers could, Mr Patcher thinks, be offered games as part of their membership, it must build a customer base from scratch.

Stadia's debut could have gone better. Promised features have been delayed. Prices remain high: early adopters must pay \$129 for a controller and \$10 a month for a subscription, and then fork out some more for individual games. (A subscription-free option, with less fancy graphics, will launch in 2020.)

Most worrying, Google has struggled to convince publishers to sign up. Just 22 games were available at Stadia's launch. The test version of Microsoft's xCloud features over 50. Sony's PlayStation Now has over 650 games (although some are over a decade old and the service is available only on PCs and the PlayStation). For all its left elsewhere, in gaming Google continues to look like a bit player. ■

Technology listings

Group buy

SHANGHAI

China's new tech darlings defy gravity—just about

AMERICA'S TECHNOLOGY unicorns, as privately held startups worth \$1bn or more are known, seem to lose their magic as soon as they go public. The market capitalisation of Uber is down by almost half since it listed in May. Lyft has shed a bit more even than its bigger ride-hailing rival. Neither is remotely profitable. Slack, a corporate-messaging service, lost \$360m in its first quarter as a public company, over ten times more than as a private one a year earlier. Its share price has slid, too (see chart).

China also has its own tech duds. Shares in Xiaomi, a maker of smartphones and gadgets, are worth half of their offering price last July. But other Chinese unicorns have managed to retain some of their mojo.

Two in particular have been on a tear in the past six months: Meituan-Dianping, an online-services super-app that trades in Hong Kong, and Pinduoduo, a shopping app listed on New York's Nasdaq exchange. With a market capitalisation of \$72bn, Meituan is now China's third-biggest listed internet firm, behind Alibaba and Tencent. Pinduoduo's \$36bn puts it fifth, behind Baidu.

Meituan burned through cash to fuel

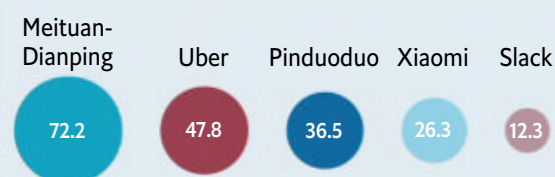
its food-delivery and bike-rental businesses. Users were delighted; investors, less so. But the strategy appears to have paid off: the company reported its first net profit, of 876m yuan (\$128m), in the second quarter. Sanford C. Bernstein, a research firm, reckons that Meituan may continue to make money, not least because its meal-toting rivals—including Alibaba—are losing their appetite to fork out much more.

Pinduoduo, for its part, has overtaken JD.com as China's second-largest e-commerce site by number of annual buyers (over 500m). It claims to be a combination of Costco (cheap) and Disneyland (thrills). Recruit friends to join you in ordering a crate of 30 kiwis, and their price falls.

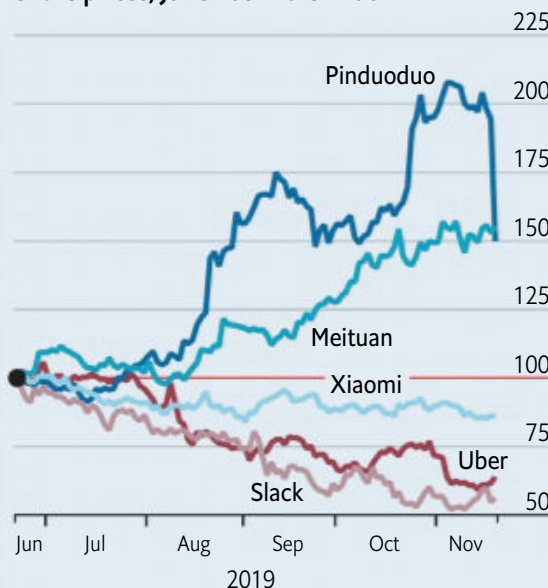
Pinduoduo boomed early on in underserved poor cities. But as it moves into richer ones it will come up against Alibaba, whose defences will be bolstered by the up to \$12.9bn it plans to raise in a secondary listing in Hong Kong on November 26th. On November 20th Pinduoduo reported a loss in the third quarter that was wider than expected. Its shares fell by 23%. No one said staying magical would be easy.

Stocks rise in the East

Market capitalisation, November 20th 2019, \$bn

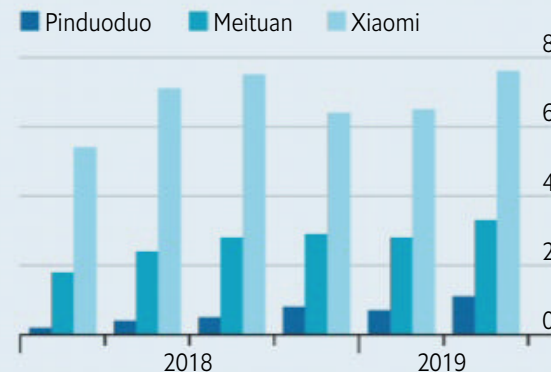


Share prices, June 20th 2019=100

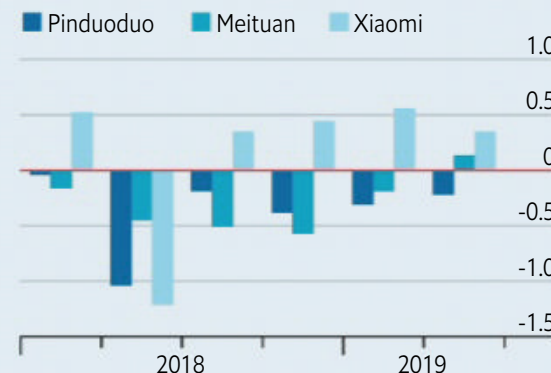


Sources: Datastream from Refinitiv; Bloomberg

Revenues, \$bn



Operating profit, \$bn



Schumpeter | Rethinking McKinsey

Disrupting the management priesthood



WHEN BUSINESSMEN talk to partners of McKinsey, the high priests of management consultancy, it is like Catholics going to confession. They reveal all. They expect confidentiality. And whether or not it changes behaviour, the act itself is good for the soul. In this era of corporate unease, over everything from the next recession to climate change, executives are lining up at the confessional. But McKinsey, too, has some soul-searching to do. Its industry, estimated to be worth \$300bn, is, like those of its clients, being transformed. And as its most revered—and hermetic—standard bearer, it is under more scrutiny than ever before.

Kevin Sneader, who took over as global managing partner last year, has lots on his plate. Recent years have been uncomfortable. Until a decade ago no McKinseyite had ever been sued for securities-law violations. In 2012 its former managing partner, Rajat Gupta, was convicted of insider-trading committed after he left the firm. Then in 2016 McKinsey was embroiled in a scandal in South Africa after it worked with Trillian, a local consulting firm owned by an associate of the controversial Gupta family (no relation to Mr Gupta). Mr Sneader has repeatedly apologised.

More recently it has faced allegations that its work on behalf of companies in bankruptcy in America represents a conflict of interest, because its \$12.7bn investment affiliate, McKinsey Investment Office (MIO), may invest in securities related to the bankruptcies. It denies the allegations, saying that MIO is a separate entity whose investments are controlled almost entirely by outside investment managers. Jay Alix, the founder of AlixPartners, a veteran of the bankruptcy business, has sought to drag McKinsey through the courts. He claims that its alleged lack of disclosure should preclude it from working on bankruptcies. Judges have so far dismissed four out of five cases on the grounds that Mr Alix lacked standing to pursue them in the first place. In August a federal judge threw out another charge from Mr Alix that McKinsey had violated racketeering laws. In one remaining case involving the bankruptcy of Westmoreland Coal, a judge in Texas has set a trial date in February to rule on the dispute.

McKinsey says Mr Alix is engaged in a vendetta that aims to stifle competition. Mr Alix, whose litigious investment firm, MarBow Value Partners, is mischievously named after Marvin Bower,

one of McKinsey's founding fathers, claims to be fighting to defend the integrity of the bankruptcy system. But the saga is a regrettable one for McKinsey, even if it is fully vindicated. The bankruptcy business is not lucrative. McKinsey says it gets involved in bankruptcies only because its clients ask it to. It has worked on barely 15 cases since it started its restructurings practice in 2001. But it is understandably loth to be strong-armed out of the business by Mr Alix. That has made this an unusually public feud for a company that stands out for its discretion.

It is possible to think of these controversies as one-offs. McKinsey may win the remaining bankruptcy judgments. The two scandals can be explained as the work of rogue operators. But they speak to bigger questions about the firm's scope and mission, which Mr Sneader must grapple with. McKinsey has grown fast. Partners now number 2,200, up from 1,250 about a decade ago and it employs 30,000 people worldwide, up from 17,000 in 2009. Many of these are different from the buttoned-down business graduates of yesteryear. It has diversified into new business lines and some of its most valuable work is now outside America. As the firm has got bigger and more complex, it has got harder to manage.

Complicating things further, management consultancy itself is changing, too. Six years ago, Clayton Christensen of Harvard Business School warned that it was an industry "on the cusp of disruption". Now that disruption is in full swing. According to Tom Rodenhauer of ALM Intelligence, which analyses the industry, clients no longer just want to hire legions of people, however brainy they are. They want consultants to provide and install products, including new technologies, that transform them from top to bottom and keep disrupters at bay. Advice on strategy, which used to be meat and potatoes for firms like McKinsey and its peers, Bain and the Boston Consulting Group (BCG), is now a side dish; it accounts for about a tenth of revenues.

Mr Sneader could keep things ticking over as they are, at least for a while. Clients have shrugged off the media attention. McKinsey's revenue has grown in recent years, to roughly \$10bn. And the firm still attracts armies of aspiring candidates—last year 800,000 applied for 8,000 jobs. But he is making changes. McKinsey says it is "addressing the changing panorama both internally and externally". Partly in response to the South Africa debacle, its standards and processes for selecting clients have been beefed up. Partners are discouraged from doing work for undemocratic governments.

McKinsey has also made advising on technology more integral to its business. It worked with 1,200 companies on digital and analytics issues last year. It creates and sells tools for companies to use in their businesses, which generates new sources of recurring revenues. And it has bought a dozen companies since 2011, including QuantumBlack, a British startup that developed advanced data analytics for Formula One. Nonetheless, industry-watchers say McKinsey is often outspent by the technology offerings of the Big Four, as well as by firms like Accenture.

Downsizing consultants

Mr Sneader should go further: that means getting leaner by ditching activities, clients and teams that bring in more headaches than cash, and investing in technology. It is here that McKinsey may have a secret weapon—its partnership, honed over 93 years. It is not a listed firm, so faces less pressure to raise short-term profits. And, with luck, the priesthood has not yet become so sprawling that it has lost a sense of its values. Whisper it in the confession box: McKinsey needs to shrink its way to further greatness. ■

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Big Tech and banking

Plug and pay

LISBON, LONDON AND SAN FRANCISCO

Tech giants with a trust problem take aim at the world's most sensitive industry

THE ANNUAL Web Summit in Lisbon each year is Woodstock for geeks. Over three days in November, 70,000 tech buffs and investors gather on grounds the size of a small town. Rock stars, like Wikipedia's boss or Huawei's chairman, parade on the main stage. Elsewhere people queue for 3D-printed jeans or watch startups pitch from a boxing ring. Money managers announce dazzling funding rounds. Panellists predict a cashless future while gazing into a huge crystal ball. A credit-card mogul dishes out company-coloured macaroons.

Yet the hype conceals rising nervousness among the fintech participants. After years of timidity Big Tech, with its billions of users and gigantic war chest, at last appears serious about crashing their party. "It's the one group everyone is most scared about," says Daniel Webber of fxc Intelligence, a data firm. Each of the so-called GAFAs quartet is making moves. Amazon introduced a credit card for underbanked shoppers in June; Apple launched its own credit card in August. Facebook announced a new payments system on November 12th (its mooted cryptocurrency, Libra, how-

ever, has lost many of its backers and will face stiff regulatory scrutiny). The next day Google said it would start offering current (checking) accounts in America in 2020.

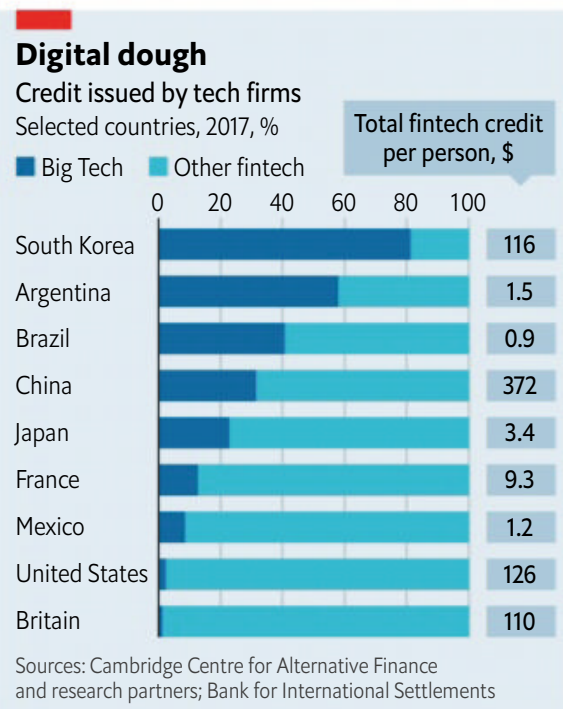
Individually, each initiative is relatively minor, says Antony Jenkins, a former boss

of Barclays, a bank, now at 10x, a fintech firm. But together they mark the acceleration of a trend that could reshape the finance industry.

The GAFAs have long had an interest in finance. Yet until recently they focused on payments, each in its own way. Apple Pay and Google Pay are digital wallets: they hold a digital version of cards but do not process transactions. Neither charges merchants a fee. They simply store everything in one place and make payments more secure by masking customer details. Google collects transaction data; Apple does not. Otherwise holding a phone over a contactless terminal is the same as tapping a card.

Facebook Pay stores card details for use on the group's various apps (Facebook, Messenger, Instagram and WhatsApp) so customers need not enter them every time. Amazon Pay does the same, and also saves card details for payments on partner websites. Uniquely, it "processes" payments, a task others leave to specialist firms. When a purchase is made through Amazon Pay, it asks the card issuer if there are sufficient funds. If the answer is yes, the shop releases the goods (the money itself generally moves at the end of the day).

What these systems share is their limited success. After eight years Google Pay has just 12m users in America, a market of 130m households. Only 14% of the country's households with credit cards use Apple Pay at least twice a month. In October the number of customers who used Amazon Pay was just 5% of the number who used Pay- ▶▶



Pal, says Second Measure, a data firm. This contrasts with the explosive growth of WeChat Pay and Alipay, China's "super-apps". These allow shoppers to pay for nearly anything, from tea to taxis, by scanning a QR code. Launched in 2013, they have over a billion users each. They process transactions worth a third of China's consumption spending and are now big lenders in their own right (see chart on previous page).

But the comparison is unfair. China was able to leapfrog the world because of permissive regulation and a lack of existing digital-payment methods. The rich world already had a decent credit-card system, points out Aaron Klein of Brookings, a think-tank, limiting the appetite for novel solutions. Financial red tape also binds more tightly in the West. To operate as payment institutions across America, newcomers need a licence in every state.

That makes the GAFAS' move into retail banking even more puzzling. Since the financial crisis, credit provision has become one of the world's most regulated activities. That constrains returns on capital and profits. Western lenders' valuations are a fraction of tech firms', notes Sankar Krishnan of Capgemini, a consultancy. Why would Big Tech want to be a bank?

The answer is twofold. The tech giants may not yet know exactly what they want, says Martin Threakall of Modulr, a fintech. Silicon Valley likes to place bets and see what sticks. And they probably do not actually want to be banks—as long as consumers do not notice.

At bottom, a bank is a balance-sheet, a factory that turns capital into financial products (eg, loans and mortgages) and a sales force, says Dave Birch of Consult Hyperion, a consultancy. The first two are heavily regulated, and Big Tech is uninterested. That is why the giants have turned to banks to do the tedious bits. Apple's card is issued by Goldman Sachs, and Amazon's ones by Chase, Synchrony and American Express. Google's accounts are backed by Citi and a banking union.

Rather, the tech giants covet distribution. Their smarter systems and lack of branches should enable them to strip costs out, says Tara Reeves of OMERS Ventures, the venture-capital arm of a Canadian pension fund. More important, selling banking products should lead more people to use their payment systems. Apple and Google want one more reason for consumers to "keep their phone under the pillow at night", says Lisa Ellis of MoffettNathanson, a research firm. Amazon wants payments in-house so users never leave its app.

But above all, the GAFAS want data. They are already good at inferring consumers' preferences from browsing patterns and location. But spending patterns are more useful. They could be used to assess ads' performance or promote products. An in-

vestor says tech giants could even start dispensing financial advice.

It may take them some time to get there. Current accounts are "sticky": according to Novantas, a financial consultancy, only 8% of American retail customers switch bank each year. Yet they should enjoy having more choice. Free perks and a great user experience could sway them, especially if they know that a bank is in charge of the sensitive bits.

Lenders will also welcome Big Tech—at least initially. Distribution accounts for half of operating costs at America's typical retail bank, says Gerard du Toit of Bain, a consultancy. Tying up with a GAFAS would be a neat way to access new deposits, a cheap source of funding.

Yet as Big Tech starts to own consumer relationships, banks could lose clout. They may be forced to give away more data and

fees, says Andrei Brasoveanu of Accel, a venture-capital firm. They could end up akin to utilities, providing low-margin financial plumbing. Squeezed profits could lead to a wave of mergers and closures. Digital upstarts will also feel the heat, especially if Big Tech cross-subsidises its financial offerings.

Regulators have so far seen new entrants in financial services as a welcome catalyst for the innovation banks have failed to foster. That could change if the giants charge in. At the Web Summit Margrethe Vestager, the European Union's competition commissioner and a GAFAS sceptic, mused about the risks to democracy if tech firms become too powerful to oversee and regulate. "We can reach for the potential," she told the amped-up audience in Lisbon. "But we can also do something to control the dark sides." ■

The Vatican's finances

Good intentions

VATICAN CITY

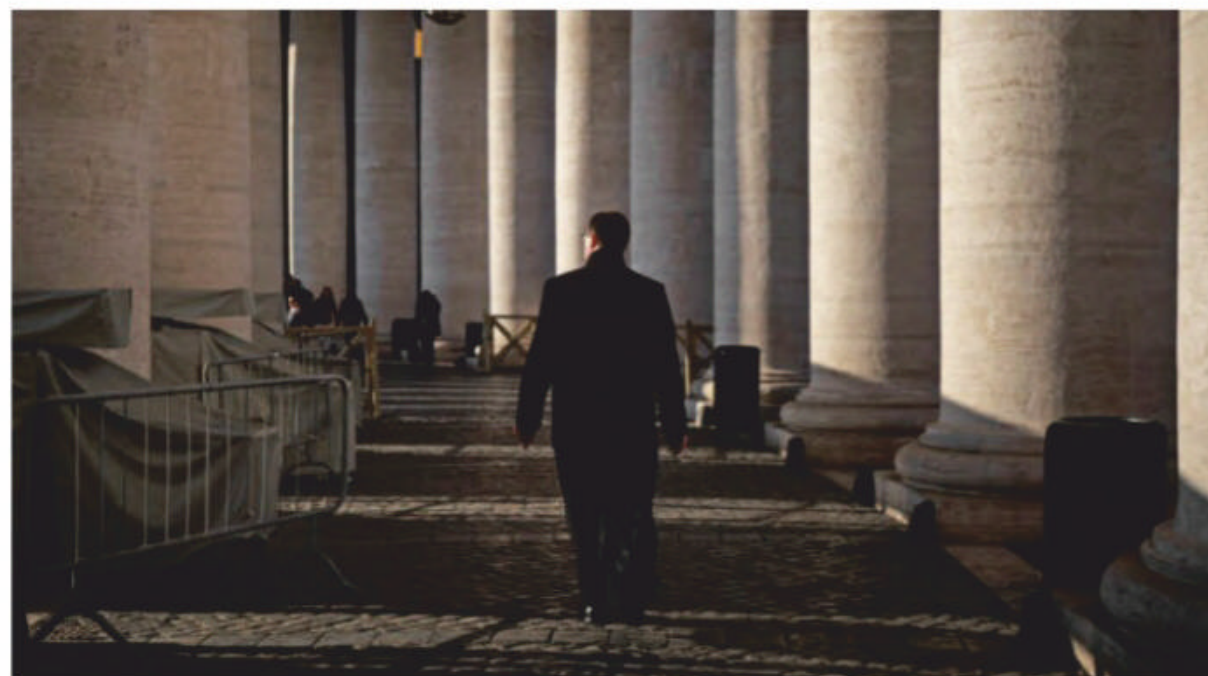
It is hard not to stray from the path of the financially righteous

AFTER A WEEK of resignations and exclusions, the Vatican faces the very real risk of being reduced once more to the status of an international financial pariah. In the coming days its officials are due to answer a detailed questionnaire for Moneyval, Europe's anti-money-laundering and anti-terrorist-financing watchdog. The picture they will have to paint could scarcely be less reassuring.

The Financial Information Authority (AIF)—the Vatican's regulatory body and the cornerstone of a nine-year campaign to dispel the Holy See's image as a refuge for

hot money and shady dealings—is no longer eligible to receive intelligence on suspected financial crime from its counterparts in other states. The AIF's president, René Brülhart, has left (the Vatican announced on November 19th that his contract would not be renewed). Half his board has since resigned. And the authority's director is suspended from duty.

Earlier this month the Egmont Group, a network of more than 160 national financial-intelligence agencies, barred the AIF from the secure communications system its members use to swap information. The ▶▶



Cleansing of the Temple

▶ decision, reported on November 20th, was not unexpected. Last month the Vatican's gendarmes raided the offices of the AIF and the Secretariat of State, the Holy See's equivalent of a foreign ministry. They were acting on a warrant that had been issued by Vatican prosecutors in connection with a controversial investment in property in London by the Secretariat of State, which had been reported by the auditor-general's office and the Vatican bank.

The AIF's director, Tommaso Di Ruzza, was among several Vatican officials who were subsequently barred from entering the walled city. But why he was targeted remains a mystery. The warrant did not level any specific accusation at him, merely stating that the AIF's role in the transaction was unclear. The raid on the AIF was all the more controversial because its statutes guarantee protection for the often highly sensitive data it gathers.

The authority has not had an inventory of the data the police impounded, and has thus been unable to provide the Egmont Group with an assurance that its information is safe. The group has evidently decided it could not run the risk of supplying further information to the AIF, which acts as both a banking supervisor and a financial-intelligence unit.

"The direct consequence is on the AIF's role as financial-intelligence unit, which is now dysfunctional," says Mr Brühlhart. "You cannot have an effective system for fighting money-laundering if you can't exchange information with your international partners." The authority's other, supervisory, role will be indirectly affected by the suspension of Mr Di Ruzza and the board resignations, he adds.

First to go, mere hours after Mr Brühlhart, was Marc Odendall, a retired Swiss-German banker, who declared there was no point in staying in an "empty shell". According to two Vatican sources another of the four board members, Juan Zarate, an American counter-terrorism expert, has since resigned.

Cock-up or conspiracy? The AIF may simply have got caught in the crossfire of an attack on the Secretariat of State by its internal enemies. But few in the Vatican believe that anything there happens by chance, and there are plenty of people within and beyond its walls who would be happy for it to return to its previous status as a refuge for tax-dodging and other financial shenanigans.

In any event, the shambles casts serious doubt on the judgment of Pope Francis, who made it a priority of his papacy to clean up the Vatican's tenebrous financial sector. Speaking to the *Wall Street Journal*, Mr Odendall said that the raids could not have happened without the pontiff's approval. "This has been completely managed by the Holy Father from A to Z." ■

Asia's economy

Glut maximus

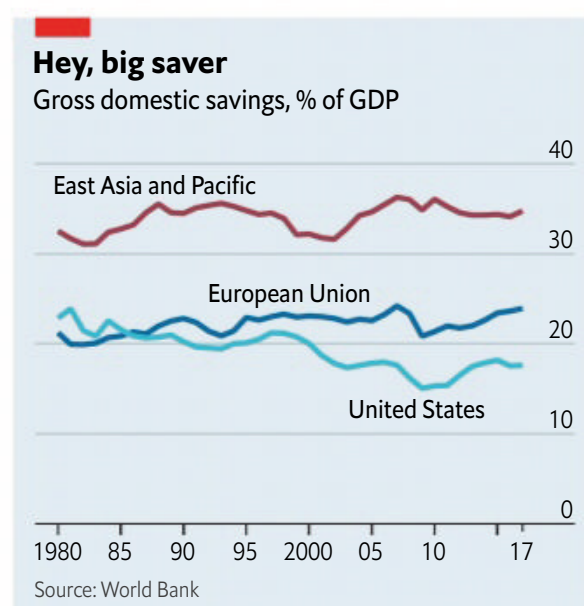
SHANGHAI

Is Asia's love affair with saving still distorting global interest rates?

IT IS NEARLY 15 years since Ben Bernanke, then the chairman of the Federal Reserve, argued that a "global saving glut" had fuelled America's giant current-account deficit. Much has changed since then. The American deficit has shrunk, oil exporters' surpluses have dwindled and central banks everywhere have dramatically expanded their balance-sheets. But another feature of the world that Mr Bernanke described in early 2005 looks strikingly familiar: Asia's stockpile of savings remains enormous, and it is getting bigger by the year.

For East Asia as a whole, each year gross domestic savings add up to 35% of GDP, and little has changed over the past three decades (see chart). This is not just an academic curiosity. Mr Bernanke's concern in the early 2000s was that Asia's excess cash was flooding into bond markets in America and beyond, depressing long-term real interest rates. When the global financial crisis erupted in 2008, some economists pointed to the Asian saving glut as an underlying cause of the housing boom and bust from Las Vegas to Dublin. With interest rates even lower now, some are again asking whether excessive saving in Asia is storing up trouble for the global economy.

There are certainly echoes with 15 years ago. High savings rates in Asia continue to translate into large current-account surpluses. Over the past five years East Asia's current-account surplus has averaged about \$525bn annually, a touch higher in cash terms than the average in the five years preceding the 2008 crisis. The distribution has shifted: China's surplus peaked a decade ago, while those of South Korea and Taiwan are bigger than they used to be.



The current-account surpluses in Asia's big economies add up to about 0.6% of global GDP, roughly the same as that of Europe's surplus economies, including Germany's, in combination.

"It is one of the main global cross-border flows impacting asset markets and pulling down yields globally," says Brad Setser, an economist with the Council on Foreign Relations in New York. In the early 2000s the focus was on Asia's currency reserves, especially China's, much of which ended up in safe assets such as American treasuries. Now a wider array of Asian investors are channelling household and corporate savings into global markets. But their impact can, in some segments, be more pronounced.

The IMF calculates that Taiwanese life insurers own 18% of all dollar debt issued by non-American banks. Japanese banks own about 15% of globally issued collateralised loan obligations, potentially risky securitisations of corporate debt. South Korea's national pension fund, the world's third-biggest, with nearly \$600bn in assets, plans to double its investments in foreign bonds over the next five years.

Nevertheless, the continued rise in Asian savings looks less harmful from other angles. Most crucially, it has not been accompanied by the same degree of intervention to hold down currencies as in the early 2000s. Then, China was the most flagrant actor. But its central bank is no longer a big buyer of dollars. If anything, its enforcement of capital controls has probably kept the yuan from falling more sharply. Across much of Asia, tolerance for stronger currencies has increased. Of the 60 economies monitored by the Bank for International Settlements, a club of central banks, only 16 have seen their real effective exchange rates rise by more than 5% since 2010; of this small group, seven are Asian.

Some countries have also taken steps to make their role in currency markets more transparent. America's Treasury has welcomed decisions by South Korea and Singapore to start publishing regular data about their interventions. That said, other countries are now intervening more heavily. Vietnam and Thailand have started accumulating foreign-exchange reserves at a rapid clip. And Mr Setser has published forensic analysis suggesting that Taiwan's currency reserves might be 40% bigger than officially declared, because the coun- ▶▶

▶ try's central bank does not report its exposure to derivatives.

A broader question is whether Asia should be faulted for its predilection for saving. Take Singapore, which lies at the extreme end with a current-account surplus of 18% of GDP. The IMF argues that the country's external position is "substantially stronger" than warranted by fundamentals. It has called for the government to spend more on infrastructure and on social security, which would help reduce its citizens' precautionary savings.

But Singapore has pushed back against

such criticisms. Before the mid-1980s it regularly ran a current-account deficit. Its surplus ballooned as it hit a demographic sweet spot, with lots of workers and few retired people. In the coming years, though, it expects its surplus to narrow as its population gets older. Households will draw down savings and the government will face mounting health-care costs. For China, South Korea and Taiwan, all of which are set to age rapidly, the dynamics are likely to be similar.

Economists also continue to question how much blame Asian savers really de-

serve for the global financial turmoil of 2008. There were plenty of other culprits. They included America's lax mortgage regulations and Europe's rash banks, which borrowed heavily and scooped up dangerous debt products. Once again, the West is doing much on its own terms that is alarming enough, from America's trade wars to Europe's inability to muster a co-ordinated fiscal response to its economic woes. Surplus savings in Asia are yet another drag on a world suffering from weak demand. But of all the things to worry about, they are not top of the list. ■

Buttonwood A river needs a dam

How machine learning is revolutionising market intelligence

THE THAMES seems to draw people who work on intelligence-gathering. The spooks of MI6 are housed in a funky-looking building overlooking the river. Two miles downstream, in a shared office space near Blackfriars Bridge, lives Arker, a firm that uses machine-learning technology to sort intelligence from newspapers, websites and other public sources for emerging-market investors. Its location is happenstance. London has the right time zone, between the Americas and Asia. It is a nice place to live. The Thames happens to run through it.

Arker's founders, Nav Gupta and Vinit Sahni, both have a background in "macro" hedge funds, the sort that like to bet on big moves in currencies and bond and stock prices ahead of predicted changes in the political climate. The firm's clients might want a steer on the political risks affecting public finances in Brazil, or to gauge the social pressures that could arise as a consequence of an austerity programme in Egypt. It applies machine learning to find market intelligence and make it usable.

For many people, the use of such technologies in finance is the stuff of dystopian science fiction, of machines running amok. But once you look at market intelligence through the eyes of computer science, it provokes disquieting thoughts of a different kind. It gives a sense of just how creaky and haphazard the old-school, analogue business of intelligence-gathering has been.

Analysts have used text data to try to predict changes in asset prices for a century or more. In 1933 Alfred Cowles, an economist whose grandfather had founded the *Chicago Tribune*, published a pioneering paper in this vein. Cowles sorted stockmarket commentary by William Peter Hamilton, a long-ruling

editor of the *Wall Street Journal*, into three buckets (bullish, bearish or doubtful) and attached an action to each (buy, sell or avoid). He concluded that investors would have done better simply to buy and hold the leading stocks in the Dow Jones index than to follow Hamilton's steer.

The application of machine-learning models to text-as-data might seem a world away from Cowles's approach. But in concept, it is similar. The relevant text is sought. Values are ascribed to it. A statistical model is applied. Its predictions are tested for robustness. Of course, with bags of computing power and suites of self-learning models, the enterprise is on a different scale from Cowles's rudimentary exercise. The endless expanse of the internet means far richer source material. The range of possible values ascribed to it will be broader than "bullish, bearish or doubtful". And self-learning algorithms can test and retest the combinations that yield the best predictions.

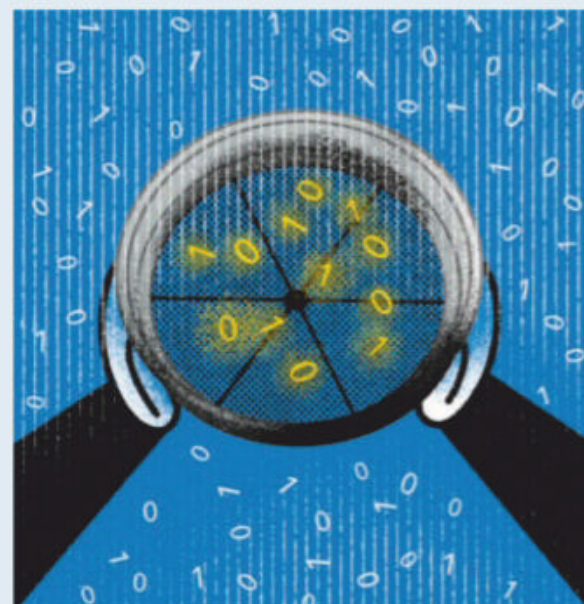
It is tempting to focus on the black-box elements of all this: the language software that "reads" the source text and the algo-

rithms that use the data to make predictions. But this is like judging a hi-fi system by its speakers. A lot of the important work comes earlier in the process. Arker, for instance, spends a lot of effort finding all the relevant text and "cleaning" it—stripping it of extraneous junk, such as captions and disclaimers. "A good signal is crucial," says Mr Gupta.

He gives Brazil's pension reform as an example. The country has 513 parliamentarians. They have social-media accounts, websites and blogs. They speak to the press—Brazil has scores of regional newspapers. All are potential sources of useful data. If you cut corners at this stage you might miss something that even the best statistical model cannot fix later. There is little point in having a cool amplifier and great speakers if the stylus on your record-player is worn out.

Any good emerging-market analyst knows this, too. If you bumped into one shortly after Brazil's elections last year, he was probably on his way to Brasília to sound out prospects for a crucial pension reform. Without it, Brazil's public debt would be certain to explode, sparking capital flight. In July a pension bill finally passed Brazil's lower house. Arker's models tracked the leanings of Brazil's politicians to get an early sense of the likely outcome. It would be hard for an analyst working unaided to mimic this reach, even if he was always on the ground and spoke perfect Portuguese.

Intelligence-gathering is a labour-intensive business. It is thus ripe for automation. That this is happening in finance is also natural. There is a well-defined objective (to make money). There is a well-defined end-point (buy, sell or avoid). Without such clarity of purpose, intelligence is an endless river. It is one undammed thing after another.



Europe's banking disunion

Architectural problem

Can Europe really make banks safer and sovereign debt riskier—at the same time?

ACCORDING TO AN analogy popular in Brussels, the euro zone is a house that needs fixing. Everyone frets about its ability to withstand a gale. But the builders are nowhere in sight. The owners cannot agree on the repairs that are needed, much less on how to do them. When Olaf Scholz, Germany's finance minister, cautiously accepted the idea of a common deposit-insurance scheme on November 5th, that removed one point of contention. But as one row is resolved, another—on the regulatory treatment of banks' holdings of sovereign debt—has reopened.

An infamous feature of the sovereign-debt crisis in 2009-15 was the “doom loop”, through which weak banks and sovereigns dragged each other down. In 2012 members agreed that the doom loop needed to be broken, and the monetary union backed by a banking union. A common supervision and resolution framework for large banks has since been set up. But barely any progress has been made on common deposit insurance, because northerners are terrified that their taxpayers would be liable for risky loans made by southern banks, to their home governments among others. Now Mr Scholz seems amenable—provided other reforms happen. The most contentious would penalise banks for holding heaps of their home countries' sovereign debt—long a non-starter for Italy and other heavily indebted states.

Supporters of such regulatory penalties say they would lead banks to scale back home exposures, and perhaps to diversify into other members' sovereign debt. Critics worry about the effect on bond markets of losing banks' captive demand. Regulations on liquidity and capital encourage banks to hold sovereign debt. Banking sectors in Europe typically hold 15-30% of their home country's debt stock.

New rules could take two forms. Banks could be forced to increase their capital buffers if their holdings of any particular security exceed a certain threshold—a “concentration charge”. Or they could be forced to back their holdings of risky sovereign debt with extra capital by increasing the risk score—known as the risk weight—attached to some sovereign bonds, which all regulators now treat as risk-free.

Risk weighting is more contentious because it is more potentially destabilising. In the worst case, it could mean that a downgrade by a credit-rating agency leads

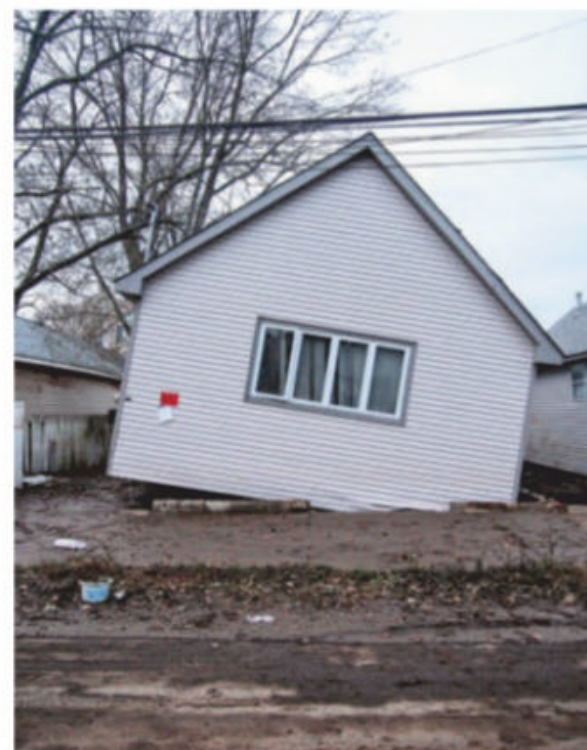
banks to dump some holdings, bringing about the very turmoil the reform was supposed to prevent. Germany's finance ministry seems to prefer a hybrid approach, setting a concentration threshold above which holdings would be subject to a charge based on both concentration and credit risk.

This would have significant effects on banks—and not just in Italy. Nicolas Véron of Bruegel, a think-tank, points out that Germany has some of the most concentrated exposures to government debt: the public-sector Landesbanks are big creditors of local governments.

As important as the choice of end-point will be the path to it. Mr Véron estimated in 2017 that if the concentration threshold were set at 33% of Tier 1 capital, large French and German banks would each be deemed to have excess home exposures of around €250bn (\$280bn), and big Italian lenders would be deemed to have €145bn. Predicting whether and how banks would diversify—into other, similarly rated euro-zone bonds, or into foreign debt—is difficult. It would depend on how much extra capital banks were asked to set aside, and their willingness to take liquidity and exchange-rate risk. Banks wanting to sell off southern, lower-graded bonds might struggle to find buyers. (A common safe asset, proposed by the commission, would ease the transition. But French and German leaders put the idea on ice last year.)

As Mr Véron puts it, “subgroups of working groups of groups” have been beaver- ing away on technical fixes. But the decision to go ahead rests with politicians. Opponents of sovereign-exposure regulation would need first to accept the need for it in principle, and then spot a trade they are willing to make that is acceptable to the others—say, by conceding ground on sovereign exposures in return for a deposit-insurance scheme that offers more risk-sharing. Reports suggest that Italy's government might seek instead to trade reforms to the euro zone's bailout fund for common deposit insurance.

Officials in Brussels want to prepare a “roadmap” for reform that leaders can rubber-stamp when they meet in mid-December. But the bar is low. Even concluding negotiations on whether or not to begin negotiating on reforms could be considered a victory. If fixing the house up were easy, it would have been done by now. ■



Climate-data analytics

Sunny days

Firms that analyse climate risks are the latest hot property

SOON AFTER Hurricane Sandy battered Manhattan in 2012, Emilie Mazzacurati founded a firm in California to analyse the risks posed by climate change to business. She called it Four Twenty Seven, after the state's target of lowering annual greenhouse-gas emissions to the equivalent of 427m tonnes of carbon dioxide by 2020. That reference quickly became outdated. The target was adjusted for technical reasons two years later, and rendered moot in 2018 by the announcement of a net-zero goal. Ms Mazzacurati is still happy with the name, though. “That is the risk of doing business in an uncertain climate,” she says.

Such uncertainty has sent financial firms scrambling to buy climate-service providers, as such firms are known. In July Moody's, a credit-rating agency, bought a majority stake in Four Twenty Seven. In September MSCI, an equity-index maker, snapped up Carbon Delta, a climate-service startup. Wells Fargo invested in Climate Service. In March CO-Firm, based in Hamburg, was bought by PwC, a consultancy. In a funding round earlier this year Jupiter Intelligence, another climate-data outfit, added three insurance firms to its backers.

Most climate-service firms are small startups led by scientists. They use public climate data, usually couched in meteorological terms—that a certain land mass, say, will become on average 1°C hotter over the next ten years. That is fed into economic models, which the firms use to put a dollar value on the risks climate change ►►

poses to properties and businesses, usually over the coming five or ten years.

On such a timescale the range of estimates for the impact of global warming should be quite narrow, says James McMahon of Climate Service. To handle unpredictable inputs, such as whether a city will decide to build sea walls, climate-service firms offer a range of scenarios.

One reason for the buying spree is that acquirers want to apply climate analysis to their own books. Four Twenty Seven recently found that about a fifth of all local-government debt rated by Moody's in America is exposed to high heat stress. Borrowers' creditworthiness will be affected by climate-related costs such as air conditioning, lower labour productivity and lower agricultural output.

Another factor in the spree is a coming surge of new clients for climate services. Policymakers are gearing up to make financial institutions disclose the climate risks they face. At a UN summit in September Mark Carney, the governor of the Bank of England, argued for mandatory disclosure of such risks to investors and regulators. France already has such a law. Britain, Canada and the EU may follow soon.

Many companies are unprepared. A recent survey by HSBC found that about two-fifths of companies were disclosing climate-related risks in line with the expected rules. A poll of signatories to the Principles for Responsible Investing, a UN-supported group of investors with \$90trn under management, found similar gaps.

Rather than buying climate intelligence, some companies are training their own staff. Earlier this year AllianceBernstein, an American fund manager, sent 35 portfolio managers on a course on climate risk at Columbia University. Columbia has trained analysts from pension funds and major banks, says Satyajit Bose, who teaches part of the course. Last year Wellington, an asset manager, announced a tie-up with Woods Hole Research Centre, a think-tank, aimed at improving its climate analysis.

One problem for the nascent industry is that many climate-service startups come from Silicon Valley, where experimentation is prized. "It's one thing to have a disruptive app, but it's a problem when that app is inaccurately predicting climate risk," says Jesse Keenan of Harvard University. In August the *New York Times* reported problems at One Concern, an earthquake and climate-analytics firm. Software updates changed estimates for the cost of disasters; its platform gave inaccurate data on buildings' structural integrity. Company leaders said that product iteration was common in Silicon Valley and helped customers. But more such stories and the industry's credibility could suffer, slowing a shift towards data-driven preparation for climate change that is already overdue. ■

Euro-dollar volatility

Safe haven

Why currency traders are serene even as Western politics gets messy

TRADE WARS; talk of impeachment; the spread of populist politicians and hung parliaments across Europe. It is hardly surprising that an index from Policy Uncertainty, a geopolitical think-tank, puts global economic uncertainty at its highest since the gauge was created in 1997. By contrast, implied euro-dollar volatility is trading at its lowest since the single currency was born in 1999 (see chart).

Derivative contracts indicate that investors think the currency pair, the most traded asset on financial markets, at \$400trn annually, will move less than 6% next year. On November 14th the volatility implied by the cost of "call" and "put" options (contracts that grant the right to buy or sell at a pre-agreed price at some future date) fell below the levels of the serene days before the financial crisis in 2007.

Why the disconnect? One explanation is monetary policy on both sides of the Atlantic. The Federal Reserve started to tighten in 2013, tapering its quantitative-easing programme and, from 2015, raising interest rates. In July its first rate cut since 2008 marked a policy U-turn. Its chairman, Jerome Powell, cited global uncertainty as the main reason. In September the Euro-

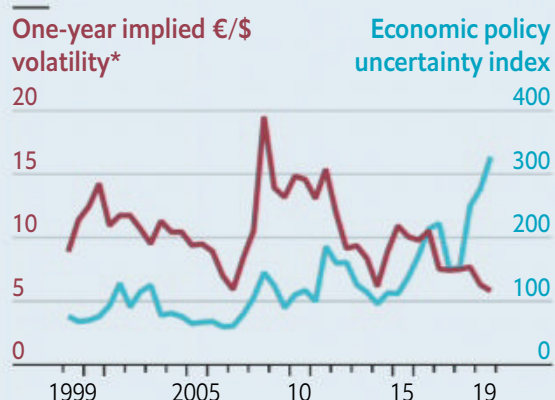
pean Central Bank (ECB) cut rates for the fifth time over the same period, to -0.5%.

The two central banks' differing monetary-policy trajectories sent the dollar up—and the euro down. As a result, a greenback buys 22% more euros than in 2014. Now, however, the two currencies have stopped being dragged in opposite directions. Markets forecast no policy change from the ECB in the next two years, and just one rate cut from the Fed.

A second explanation is that no matter how rocky geopolitics has become, the turbulence pales into insignificance compared with fears during Europe's sovereign-debt crisis that the single currency would break up. The various debt woes of Cyprus, Greece, Ireland, Italy, Portugal and Spain meant currency traders priced in such risk. A survey by Sentix, a consultancy, asking investors to provide an estimate of the probability that a euro-zone member would leave within 12 months exceeded 70% in July 2012. The potential of an ensuing collapse in the euro caused implied volatility to soar. More recently fears of contagion from Brexit, and the possibility that France would elect a populist president, Marine Le Pen, did the same.

That nerves have been calmed can be seen in the yield on Italy's ten-year government bonds. In 2011 it went above 7%; now it sits around 1%. And despite electoral shocks and deadlocks, a break-up of the euro is not on the agenda. The Sentix survey reading is now 6%. But traders should keep their guard up. As in the financial crisis, even when markets seem calm, volatility may come roaring back. ■

Port in a storm



Expected change in policy rate in two years' time



Sources: Bloomberg; Economic Policy Uncertainty; Datastream from Refinitiv



Euro break-up index†, %



*Implied percentage change in €/ \$ in one year's time †Percentage of investors surveyed by Sentix who believe at least one country will leave the euro within a year

Free exchange | Works in progress

The Nobel prize for economics prompts soul-searching about the profession's poverty of ambition



NOBEL PRIZES are usually given in recognition of ideas that are already more or less guaranteed a legacy. But occasionally they prompt as much debate as admiration. This year's economics award, given to Abhijit Banerjee, Esther Duflo and Michael Kremer, was unusual both for the recency of the contributions it recognised and the relative youth of the recipients. (For a review of "Good Economics for Hard Times", by Mr Banerjee and Ms Duflo, see Books and arts section.) Intentionally or not, it has inflamed arguments about the direction of the profession.

The prize, awarded in early October, recognised the laureates' efforts to use randomised controlled trials (RCTs) to answer social-science questions. In an RCT, researchers assess the effect of a policy intervention by dividing participants into groups, only some of which are treated with the policy. This year's winners used RCTs to study the effectiveness of anti-poverty programmes in developing economies. To take one example, Mr Kremer suspected that poor health might depress learning by reducing school attendance. By using randomisation to set the schedule by which different schools' pupils would be treated for intestinal worms, Mr Kremer and his co-author, Edward Miguel, learned that deworming improved health and attendance—but not test scores. Their work has been highly acclaimed, before the Nobel and after. But strikingly, given its practical success, it has also faced sustained criticism.

RCT evangelists sometimes argue that their technique is the "gold standard", better able than other analytical approaches to establish what causes what. Not so, say some other economists. Angus Deaton, himself a Nobel prizewinner, published an essay in October arguing that RCTs deserve no special status, but should be used only when the context demands it. Martin Ravallion, formerly of the World Bank, has pointed out that insistence on RCTs will skew the direction of research, since not all economic questions can be suitably framed. Results are contextually dependent in ways that are hard to discern; a finding from a study in Kenya might not reveal much about policy in Guatemala.

Then there are ethical quandaries. In a medical context, RCTs were once criticised for denying some participants access to potentially beneficial interventions. Those concerns have largely dissipated as RCTs proved effective at sorting treatments wrongly

thought to improve health from those that actually do. Such worries are harder to dispatch in economics. An RCT might test the economic effect of a treatment that is clearly welfare-improving (like deworming medicine), meaning some participants are deprived of that welfare-improving intervention, for a time at least. Power imbalances are also a problem. Participants in rich-world medical trials are typically rich-world citizens themselves, who have, moreover, given informed consent. But Mr Deaton notes that, in development economics, experimenters tend to be well-off, well-educated and "paler" than their subjects. And informing participants in social-science RCTs of the nature of an experiment can change behaviour and bias results. William Easterly, a development economist, has warned against the "technocratic illusion": the idea that clever people in rich countries can fix poor countries with technical solutions that sidestep the messiness of political action and social reform.

It takes nothing away from this year's Nobelists to say that RCTs are a valuable tool when used carefully. Other criticisms are more fundamental. No one questions that policies which reduce illness and improve education in poorer countries are welcome. But some economists suspect that such interventions are merely palliative, rather than steps along a path to sustained development. Advanced economies grew rich as a result of a broad transformation that affected everything from the aspirations of working people to the functioning of the state, not by making a series of small, technocratic changes, no matter how well-supported by evidence. The dramatic decline in global poverty in the past two decades owes more to shifts in global trade, and radical reform in China, than to tweaks to education. As Mr Easterly has argued, RCTs cannot be used to answer the biggest of questions: how do such massive shifts occur? Economists cannot randomly assign one set of institutions to one country and a different set to another.

Trials and error

Indeed, some economists have a sneaking suspicion that the rise of RCTs represents a pivot not just to smaller questions but also to smaller ambitions. Over the past two decades, economics has unquestionably become more empirical. Stars of the profession today build their reputations on discovering new facts about the economy; giants of the past made their names parachuting into a corner of the economy and summing up its workings in a few neat equations (wrongly, often enough). Researchers are still guided by theory, which shapes the empirical questions that get asked and whether results are interpreted as capturing some deeper aspect of an economy's nature. But a world in which economists are mostly policy-tweakers—or "plumbers", in Ms Duflo's phrase—is very different from the one to which many economists once aspired.

Paul Krugman, another Nobel laureate, hoped through economics to become like a hero from Isaac Asimov's "Foundation" science-fiction series, which portrayed a universe in which the mathematical understanding of society was so complete that crises could be predicted with certainty millennia into the future. By comparison, this year's laureates' achievements are modest indeed. What critics do not seem to acknowledge is that something bolder might not be possible. The Nobelists' work could be done only because economists, despite their considerable efforts, do not know how to transform poor countries into rich ones. If they did, there would be no poor villages to experiment on. Some criticisms of RCTs are valid. Others seem little more than an expression of fear: that this is in fact the best that economics can be. ■

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Virtual reality

Lost in cyberspace

VR continues to make people sick—and women more so than men

THE WHOLE history of fiction shows that alternative realities are an attractive and profitable idea. So back in the 1990s, when electronics had arrived at a point where people could build headsets that blocked off actual reality and replaced it with a virtual version created inside a computer, it looked as if something world-changing might have arrived. Games companies were particularly excited, and Nintendo, Sega and Virtuality duly piled in.

The world, however, stubbornly refused to be changed. It might have put up with the low-resolution images, the choppy scene transitions and the poor controls, for these would surely have got better. It might also have put up with the price (the headsets in question could cost up to \$70,000), for that would surely have come down. It could not, though, accommodate the dizziness, nausea, eye strain, vomiting, headaches, sweating and disorientation that many of the technology's users (more than 60%, according to one study) complained of—a set of symptoms that, collectively, have come to be called “cyber-sickness”. Though not fatal to people, cyber-sickness

certainly helped damage the industry, which more or less vanished.

Two decades later, however, virtual reality (VR) returned from the dead, with better images, smoother transitions and more precise controls. There were also applications beyond games. The upgraded technology has found use in social media, interior design, job training and even pain management. Moreover, a new set of companies, Oculus (now part of Facebook), HTC and Sony, have come up with products that do not require a second mortgage to afford.

Despite these improvements, though, VR has not lived up to expectations. It has done respectably, with sales in 2018 of \$3.6bn, according to SuperData Research, a market research firm. But that is only 2.4%

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of the global market for games. Many people—and not just the usual hypesters—thought that this time around VR would become a blockbuster technology. It has not happened. Part of the reason is that cyber-sickness has not gone away. One study suggests between 25% and 40% of users still experience it.

Dealing with this is difficult, not least because there is an argument about what triggers it in the first place. Two theories dominate. One is that users experience sensory conflict—a mismatch between what they see and what their other senses and their real-world knowledge tell them they should be experiencing. The other is that the underlying cause is individuals' inability to control their bodies and maintain proper posture when moving around in virtual environments. To complicate matters, both hypotheses could be true.

Feeling woozy

Sensory conflict there certainly is. For example, when users move their heads they expect what they see to change immediately in response. But time-lags and poor graphics mean their visual input often fails to meet the brain's expectations. Dealing with this means increasing the “frame rate” at which the virtual world is presented to a user, improving the resolution of the images and reducing the latency of response to a user's movements. All of these require clever processing by the computer responsible for creating the illusion.

Improvements in tracking what a user ▶▶

▶ is doing also help. “Room scale” VR systems let people move around in the real world while perceiving similar movement in the virtual one. Following a user’s movement can be done in one of two ways. Outside-in tracking relies on external cameras observing beacons of various sorts scattered around a user’s body. Inside-out tracking is the opposite: the beacons are scattered around the room and detectors on a user’s body employ them as reference points.

On top of all this, there is the design of the lenses that sit inside a headset in front of a user’s eyes to adjust optically for the fact that what is actually a nearby image is supposed to be some distance away. Since the shape of these lenses is fixed and the amount of adjustment required varies with what is being looked at, distortion is inevitable. But distortions are particularly noticeable when users move their eyes, says Paul MacNeilage of the University of Nevada, Reno. Some headsets therefore now track a user’s gaze and move the lenses within the headset in response.

Make the input too credible, though, and you run into a different problem—the contrast between what a user’s eyes are seeing and what the motion-sensors in his inner ear are detecting. To deal with that, some designers program in a “virtual nose”, just visible to the user, to serve as a point of reference.

These tactics help. But they do not get rid of cyber-sickness entirely. That is where the second hypothesis, unstable posture, comes in. And it is one that has the virtue of offering an explanation of a mystery about the condition—why women are more likely to be affected than men.

Thomas Stoffregen of the University of Minnesota, who has studied the matter and found women four times as susceptible as men, cites the example of driving a car to explain the unstable-posture hypothesis. When turning the steering wheel, he observes, drivers need to keep their heads oriented to the road. They need to stabilise their bodies, particularly when the car is changing direction and pushing the body in different ways. “When you spend a lot of time in cars, you get used to doing that,” he says. “It’s a skill.” But in virtual environments, where there are no forces to act as signals, people have not learned to adjust their bodies properly. They lean when the virtual car turns, but in fact they are leaning away from stability. He finds this particularly affects women, who have lower centres of gravity than men. That may cause them to sway more. And increased swaying, he has found, correlates with higher rates of cyber-sickness.

It is a neat idea. But Bas Rokers of the University of Wisconsin-Madison believes there is a simpler explanation for women’s experience of cyber-sickness, which is that headsets are not designed for them. For VR

to work properly, sets need to be adjusted to the distance between the pupils of a user’s eyes. In one popular brand, however, Dr Rokers found that 90% of women have an interpupillary distance less than the default headset setting, and 27% of women’s eyes do not fit the headset at all.

If Dr Rokers is correct, a big part of the problem of cyber-sickness might be dealt with by a small change to helmet design. If women’s rates of the complaint could be reduced to the level experienced by men, then a lot more people could enjoy VR rather than enduring it. And then, perhaps, it really might achieve its potential. ■

Animal husbandry

Turning the worm

Nematode parasites kill a lot of sheep. Breeding better sheep might stop this

CROWD ANIMALS together and one likely outcome is parasitic infestation. This has been a problem since the beginning of animal husbandry. Many scholars, for instance, suspect that the origins of religious dietary laws forbidding the consumption of pig meat lie in pigs’ susceptibility to worms that are harmful to human beings. But they are also harmful to animals. They are, for example, the largest cause of natural death among the world’s sheep.

Nowadays, at least where farmers have access to modern veterinary facilities, the usual approach to infestation is to administer vermifugal drugs (see picture). These often work. But, as with any such approach to parasites and pathogens, extensive use has encouraged the evolution of resistance. Many worms have become immune



Take that, nematodes

to at least one of the commonly used vermifuges. Some are immune to all three.

What has not been tried until recently is to apply the principles of selective breeding that are employed to improve meat, milk, wool and hide production to the question of parasite control. That has changed with work done in Britain by Hannah Vineer at the University of Bristol and Eric Morgan at Queen’s University Belfast. As they report in the *International Journal for Parasitology*, selective breeding of sheep for resistance to nematode-worm infestation works. And, crucially, it works without detriment to the desirable characteristics of lamb weight, ewe weight and milk yield.

That worms like nematodes are, to human sensibilities, revolting creatures with revolting lives is surely the result of millions of years of co-evolution that has favoured avoiding any contact with them. Infestation starts when a host accidentally consumes a nematode’s eggs. The parasites then hatch, grow and mature in the host’s stomach or intestines, where they consume nutrients which that host would otherwise absorb. Once mature, they release eggs that are broadcast into the world in the host’s faeces, and the cycle starts again.

Dr Vineer and Dr Morgan knew from earlier work that the number of eggs so broadcast varies a lot from animal to animal. This led them to wonder if selectively mating together individuals that passed few eggs in their faeces, and so seemed resistant to infestation, might result in strains that were parasite-free.

To find out, they teamed up with two farmers in south-west England who had already been experimenting informally with such breeding programmes. Following up on a decade of this informal work, farmers and academics spent a further four years systematising and recording in detail what was happening. They discovered that the approach worked. On one farm the faecal nematode-egg count per animal dropped by a quarter. On the other it fell by a third. In neither case were desirable characteristics of body weight or milk yield harmed.

Falls in infestation of a quarter to a third are not as dramatic as those caused by vermifuges. However, the hostile physiological environment that has brought about such falls is likely to have many dimensions, making it harder to evolve around than the toxic effect of a single drug molecule—or even three of them. So, though this is a small pilot study, it certainly looks worth following up. If larger investigations confirm Dr Vineer’s and Dr Morgan’s findings, then explicitly breeding sheep, and possibly other livestock, for parasite resistance would seem a good idea. Animals would start out healthier and would need less worming-by-drug. And that would make resistance to those drugs less likely to evolve in the first place. ■

Diagnostic nuclear-imaging

Moly-coddling

New ways to make a crucial medical isotope

ONE FEAR raised by those who oppose Britain's leaving the European Union without a deal is that the import of radioactive isotopes for medicine would be at risk. These short-lived substances might, people worry, encounter bureaucratic obstacles that slowed down their delivery and thus increased the fraction lost to radioactive decay.

Particular concern surrounds molybdenum-99 (^{99}Mo), the workhorse of diagnostic nuclear-imaging. ^{99}Mo , which has a half-life of just 66 hours, decays into a substance called technetium-99m ($^{99\text{m}}\text{Tc}$) that has a half-life of six hours. $^{99\text{m}}\text{Tc}$ emits gamma rays, so its location in the body is easy to see using appropriate cameras. And it can be incorporated into a variety of chemicals, called radiopharmaceuticals, that accumulate preferentially in different bodily organs. This lets doctors observe what is going on in those organs. About 80% of diagnostic nuclear-imaging of this kind involves $^{99\text{m}}\text{Tc}$, so without a continuous supply of ^{99}Mo to make it from, this whole branch of medicine would grind to a halt.

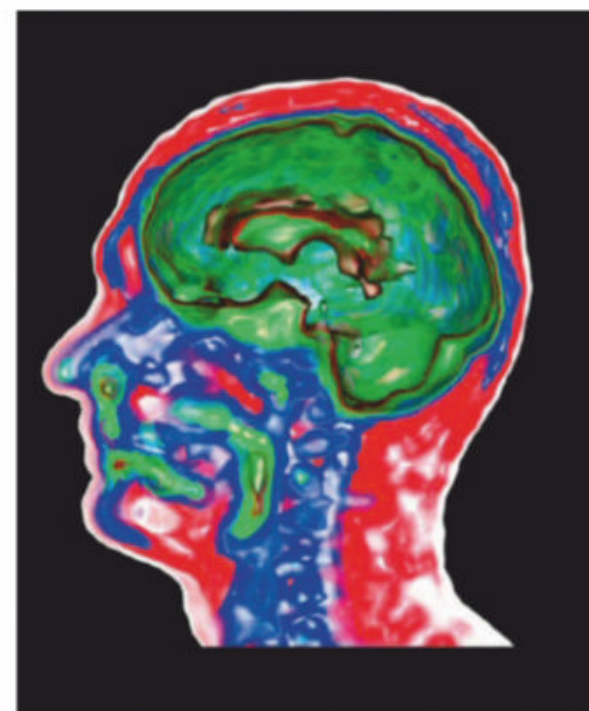
For American doctors, who carry out 40,000 scans a day involving $^{99\text{m}}\text{Tc}$, the threat is not hypothetical. In 2009 America's clinics and hospitals were cut off for several weeks from their main supplier, Canadian Nuclear Laboratories, by a leak

that caused the shutdown of the reactor used to make the isotope. Last year the cut-off became permanent when the reactor was closed. There are other manufacturers, but they are in Europe, South Africa and Australia. So the American government is encouraging new ones to step in—and is sponsoring new ways to make the stuff.

The current process bombards uranium enriched in a fissile isotope, ^{235}U , with high-velocity neutrons from a reactor. Absorbing a neutron causes an atom of ^{235}U to split in two (the same process lies at the heart of nuclear power stations and uranium atom bombs). ^{99}Mo is a common product of this fission, and can be separated chemically from the bombarded uranium with reasonable ease.

Some people, however, think they have better ways to make ^{99}Mo —ways that do not involve a reactor. Niowave, a firm in Lansing, Michigan, is one such. Instead of neutrons, its researchers are firing high-velocity electrons at enriched uranium. They speed the electrons up to something approaching that of light using a machine called a linear accelerator, then launch them into a uranium target, splitting its ^{235}U atoms, after which ^{99}Mo can be extracted from the target in the normal way.

Niowave's accelerator employs superconductivity to generate the powerful elec-



Painted by technetium

tric currents needed to achieve all this. That requires a suitable material, niobium, to carry the current, and a suitable temperature, that of liquid helium, to make the niobium superconducting.

Mike Zamiara, Niowave's boss, says the firm has already made test batches of ^{99}Mo . The company plans to pump up the volume over the next few years. The aim is to reach commercial levels in 2025. By 2026, Mr Zamiara says, Niowave should be able to supply 40% of American demand.

Phoenix, a firm in Monona, Wisconsin, plans to make ^{99}Mo more conventionally—by neutron bombardment. The unconventional part of its approach is the neutrons' source. Instead of a fission reactor, Phoenix employs a small-scale version of a process that some hope will one day lead to fusion reactors (and which already lies at the heart of hydrogen bombs). Like Niowave's, this method starts with a particle accelerator. The particles accelerated, though, are not electrons but deuterons.

A deuteron is the atomic nucleus of a type of heavy hydrogen called deuterium, and consists of a proton and a neutron. Phoenix's neutron generators fire deuterons into chambers full of tritium, an even heavier form of hydrogen that has a proton and two neutrons as its nucleus. A high-speed collision between a deuteron and a tritium nucleus causes the two to fuse, creating helium (two protons and two neutrons) and spitting out a neutron. Properly tweaked, such a neutron generator can produce 46 trillion of the particles a second.

Evan Sengbusch, Phoenix's president, says the company is supplying eight accelerators for a new isotope factory to be run by its collaborator, SHINE Medical of Janesville, also in Wisconsin. SHINE's boss, Greg Piefer, says the facility will be finished in 2021, with the first production shortly thereafter. By 2023, he hopes, SHINE will be the biggest supplier of ^{99}Mo in the world. ■

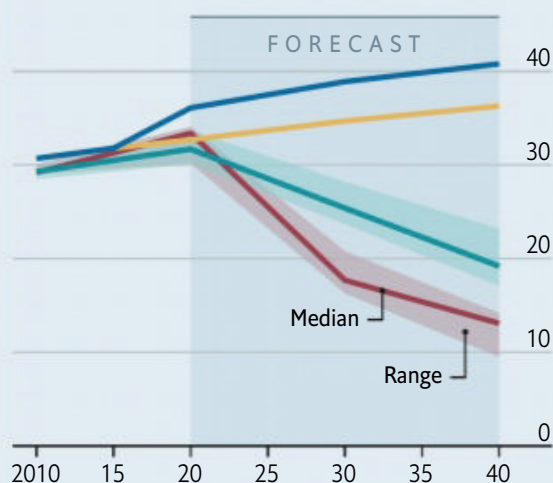
Shortfall

At a summit in Paris in 2015, 188 countries pledged to curb their greenhouse-gas emissions. Collectively, these pledges, known as "nationally determined contributions" or NDCs, fall well short of what is needed to achieve another part of the Paris agreement, which is to avoid more than 2°C of warming above pre-industrial temperature levels. A report by the United Nations Environment Programme finds, however, that even these unambitious targets will probably be missed. Researchers studied policy documents from big fossil-fuel-producing countries to calculate how much coal, oil and natural gas is likely to be extracted over the next 20 years. According to these documents, global CO₂ emissions from fossil fuels will reach 41 gigatonnes by 2040. That is higher than the 36 gigatonnes implied by the NDCs—and well above the 19 gigatonnes needed to keep warming below 2°C.

Flying into the atmosphere

Forecast global CO₂ emissions from fossil fuels
Gigatonnes

- Implied by countries' fossil-fuel production plans
- Implied by emissions-reduction pledges
- Needed to limit global warming to 2°C
- Needed to limit global warming to 1.5°C



Source: "The Production Gap" by SEI, IISD, ODI, Climate Analytics, CICERO and UNEP, 2019

Solar-powered trains

Light railways

Trackside solar panels can help power locomotives

COMMUTERS MAY not have paid them much attention, but a small array of solar panels next to the railway line at Aldershot, a town 50km (30 miles) south-west of London, could herald a greener future for train travel. The site is an experiment to supply electricity generated from sunlight directly to a railway line. It is the “directly” bit that is novel. In Britain, as in many places, solar power is already fed into the grid, and it is the grid which train operators plug into. So, in a sense, many electric trains already use some solar power. But by connecting the panels to the line itself, trains can be powered more efficiently.

Admittedly, it is not at present a lot of power. At around 37 kilowatts the site could easily top up the battery of a Tesla electric car, but it might not move an electric train very far. That does not matter at this stage, because it is there to test a concept rather than run a railway. And the concept is working, says Stuart Kistruck, director of engineering for the southern region of Network Rail, the government-owned operator of railway infrastructure in Britain.

Network Rail is working on the project in collaboration with Imperial College, London, and Riding Sunbeams, a not-for-profit company set up by climate activists to promote locally owned renewable-energy projects. The plan now is to scale up the idea and roll it out elsewhere.

Connecting up the Aldershot site was made easier by a quirk of history. When the electrification of Britain’s railways began in the late 19th century, two systems were

used. In much of the country overhead lines were installed, but in crowded south-east England a “third rail” was used instead. This consists of a conductor rail placed alongside the track on insulated brackets. A pickup shoe near the wheels of the train draws power from this rail.

Third-rail systems tend to be employed in urban railways because they are easier and cheaper than making tunnels and bridges large enough to accommodate overhead cables—and the railway lines of southern Britain have plenty of low bridges and tunnels. For safety and other reasons, third-rail systems typically operate at 750 volts DC, a much lower voltage than overhead lines, which in Britain run at 25 kilovolts AC. As it happens, solar arrays typically put out DC current at 600-800 volts, which reduces the complexity and cost of connecting them to the railway line. Another convenience is that, to reduce transmission losses, third-rail networks have more closely spaced substations. These provide handy feed-in points for lineside solar power.

Plug’n’play

One problem facing groups like Riding Sunbeams is that electricity grids are rarely designed to accept power from small and varied sources, so feed-in arrangements can be hard to set up. A passing railway line, however, provides an alternative, says Leo Murray, the company’s director. Along with Network Rail, Riding Sunbeams has drawn up a list of other sites that might be

suitable for larger installations.

Apart from green PR, what does Network Rail get out of this? First, there is a lot of unused land next to railway lines, where solar panels could be placed. Those panels would also shade vegetation, reducing its growth and the amount of cutting-back required. The “leaves on the line” excuse for late-running trains is a bit of a joke in Britain, but the slippery conditions leaves cause for train wheels are a big problem.

Second, it is a good deal. Lineside solar electricity will be cheaper than that from the grid, Mr Kistruck calculates. Overall, he reckons, 10% of the southern region’s power needs might be met this way. Such savings are not to be sniffed at. With around 40% of the country’s rail system electrified, Network Rail is Britain’s biggest single user of electricity. It has an annual bill of around £300m (\$390m) just for traction.

The idea could also be employed elsewhere, and not just on urban lines. With additional work it might be adapted for overhead-powered systems as well. It looks particularly promising in countries beyond cloudy Britain. India, for instance, is keen on using solar power to electrify its rail system. Indian Railways has been fitting solar panels onto the roofs of some train carriages. They are still pulled by dirty diesel-powered locomotives, but the panels run the lights, fans and information displays, which saves some fuel.

The limited space available for solar panels on train roofs means that not enough power could be produced to propel an entire train. However, the Byron Bay Train, a heritage railway near Brisbane, Australia, comes close. It is a two-car unit that runs entirely on energy from solar panels on its roof and on the roof of its shed. The converted train, originally dating from 1949, can carry 96 passengers on a route just 3km long—but in a part of the world blessed with plenty of sunshine. London’s commuters have no such luck. ■



Furnish'd and burnish'd by Aldershot sun



Secret worlds

Spies like them

As paranoia about Chinese espionage spreads, understanding the true nature of the threat is vital

Chinese Communist Espionage: An Intelligence Primer. By Peter Mattis and Matthew Brazil. *Naval Institute Press*; 384 pages; \$45

Chinese Spies: From Chairman Mao to Xi Jinping. By Roger Faligot. *Hurst*; 568 pages; \$34.95 and £30

THE CHILLING scene seems drawn from a thriller, but was horrifyingly real. One day in 2011 employees of a government ministry in Beijing were forced to watch the execution of a colleague who had been caught spying for the CIA. He was one of around 20 people rounded up as China eviscerated a network of informers. In their new book, Peter Mattis and Matthew Brazil note that the man's pregnant wife was killed with him. The point of the shocking story is not just to illustrate a catastrophic failure of American intelligence. It captures the grave stakes of a clandestine game played, or fought, by China and the West.

The rise of China under Xi Jinping has reinvigorated talk about great-power rivalry. In the imagination of many Westerners,

the Communist Party of China has taken the place of its Soviet counterpart; China's Belt and Road projects and overseas students, and Huawei's telecoms networks, recall cold-war scares. Often, though, the fevered discussion of China's reach and influence lacks a clear understanding of the tools at its disposal, and of what the modern Communist Party really wants. This fuzziness is especially evident in the realm of espionage. To some, every Chinese traveller is a potential spy; others dismiss fears of rampant Chinese spooks as paranoia.

As Mr Mattis, a former CIA analyst, and Mr Brazil, a former American army officer and diplomat, point out, China has been playing spy games for decades. Western counter-intelligence agencies have been

sounding warnings about them for just as long—if more quietly than today. For much of the cold war, however, the United States and China shared a common adversary in the Soviet Union. Deng Xiaoping even agreed to let America establish listening posts, or “big ears”, in the Xinjiang region of China's far west to monitor the Soviets. On a visit to Beijing in 1980, Stansfield Turner, then director of the CIA, supposedly wore a fake moustache to evade the KGB. China itself was a much smaller worry.

Today the scale and intensity of the Sino-Western duel are greater, as are the geopolitical stakes. Chinese espionage is routinely identified by Western security agencies as one of the most serious foreign-intelligence threats. China probably has more intelligence personnel than any other country. Hackers from the People's Liberation Army and the Ministry of State Security have cracked open sensitive computer networks around the world. These days, China is implicated in the vast majority of commercial-espionage cases prosecuted by federal authorities in America.

If Western countries have recruited agents in Beijing, meanwhile, the Chinese have reciprocated. In December 2017 two former French intelligence officials were charged with treason after allegedly spying for China. This April a former CIA agent pleaded guilty to conspiring with Chinese operatives, in a case that American officials suspected was linked to the deadly collapse of the agency's network in China.

For years America's spies and their al- ▶▶

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lies took on their Chinese counterparts on the quiet, preferring not to disrupt diplomacy. In any case, this was a slippery adversary to grapple with. In “Chinese Spies: From Chairman Mao to Xi Jinping”, Roger Faligot, a French author, relates the verdict of an FBI spy-hunter: the trouble with the job is that most targets don’t look or act like spies. They are not cloak-and-dagger types with handlers, cut-outs and dead drops; rather, they tend to be “academics, students, businessmen or journalists”.

Poison-tipped umbrellas are no longer the tools of the espionage trade. Instead it relies on employees at American or European technology and defence firms taking home extra files—or photographing a computer screen on their smartphone, as in a recent case involving technology for a self-driving car in which the FBI arrested an engineer at Apple. China also acquires know-how by funding scientists at American institutions; some set up “shadow labs” in China that mirror their work in America.

Invoking a Chinese term, Mr Faligot describes this multipronged approach to intelligence collection as the “sea-lamprey strategy”. This “slippery, greenish fish blends with the seascape”, then latches on to its prey, “siphoning off its blood through its multiple orifices”, Mr Faligot writes evocatively. Too evocatively, perhaps. Readers of his engrossing book might be prone to find Chinese spies everywhere, lurking like “deep-water fish” in Chinese communities from Vancouver to Sydney.

Under President Donald Trump, America’s authorities have sometimes seemed inclined to do just that. Given China’s strident authoritarianism, the fear is understandable. But the amorphous nature of the threat demands a cool assessment. In their book, Mr Mattis and Mr Brazil provide a useful field guide to Chinese intelligence services, from the distrust and purges that weakened them under Mao to their more professional incarnations today. They also supply an eye-opening compendium of confirmed cases of Chinese skulduggery. Even so, charting the Chinese threat remains a work in progress.

In many instances it is hard to discern how much damage has really been done by Chinese agents to other national interests, whether in America or elsewhere. Sometimes it is not clear that a Chinese agent is really a “spy”, as opposed to a businessman or student caught up in machinations larger than they appreciate. As the spy games become more complex and sophisticated, blunt crackdowns and blanket suspicions may be as damaging to Western societies—and the rights of innocent people—as naivety is to national security. The shadowy nature of espionage calls for democracies to be extra-vigilant, not only about spies but, just as important, about those responsible for hunting them. ■

Problem-solving

Boots on the ground

The meaning of two Nobel-prizewinning economists’ work lies in their method

Good Economics for Hard Times. By Abhijit Banerjee and Esther Duflo. *PublicAffairs*; 432 pages; \$30. Allen Lane; £25

WHEN THE authors of this excellent book were awarded the Nobel prize for economics last month, French media crowed that a Frenchwoman had won it; Indian media that an Indian-born economist and his wife had done so. Most reports eventually mentioned that their national champion was not the sole laureate. But the parochialism of the headlines bears out one of the book’s central observations.

The world is messier than conventional economic models assume. People respond not only to material incentives but also to the pull of tribe and custom. They are not only rational but also emotional, superstitious and attached to the familiar. All economists know that their models oversimplify—that is what models are for. But few have grappled as energetically with the complexity of real life as Esther Duflo and Abhijit Banerjee, or got their boots as dirty in the process.

The couple are best known, along with their fellow Nobel laureate Michael Kremer, for pioneering the use of randomised controlled trials to answer economic questions. An earlier book, “Poor Economics”, is full of powerful examples. To see whether small loans improve the

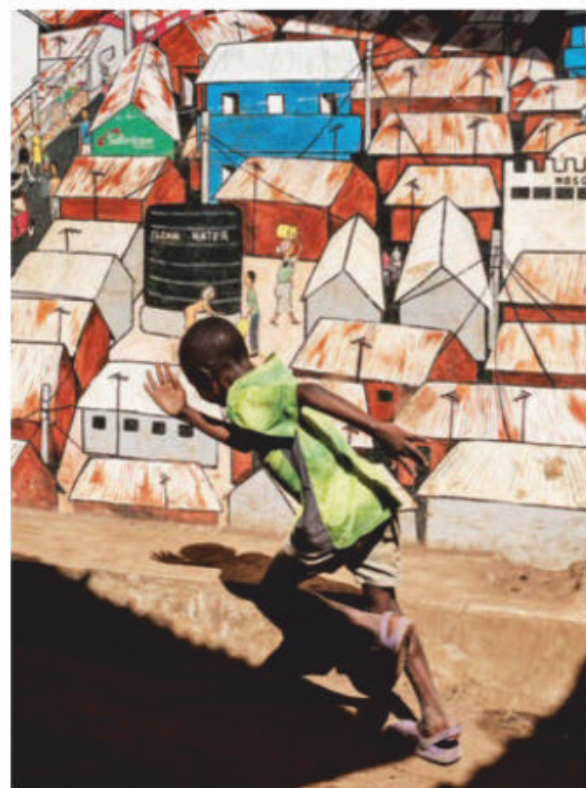
lives of the poor, the team persuaded a microlender in Hyderabad to expand into some randomly selected districts but not others. (They found that microcredit works, but not as well as its boosters claim.) In another trial, they found that Indian teachers were more likely to show up to work if they were made to take date-stamped photos of themselves, and their pay was docked if they missed classes.

“Good Economics for Hard Times” is more wide-ranging. It reviews the evidence for what works and what doesn’t in tackling some of the world’s biggest problems, from climate change to trade. The authors admit that their knowledge is imperfect and their proposals will need refining. They don’t claim to understand what causes rapid economic growth, for instance. They would far rather you absorbed their evidence-based, trial-and-error method than any specific policy.

The result is a treasure trove of insight. They describe how caste politics fosters corruption, how potential migrants can overcome their fear of the unknown, and how, when government posts are excessively well-paid, as they are in several poor countries, fresh graduates remain jobless for years rather than settle for a private-sector position.

The authors are fascinated by what motivates people, and how this varies by social context. In an experiment involving coin-flipping for cash rewards, Swiss bankers are more likely to cheat if reminded beforehand that they are bankers, less so if they are asked to talk about what they do in their leisure time. In “banker” mode, it seems, people are more ruthlessly acquisitive than when in “volunteer football coach” mode. In a similar experiment, students in India cheated more when reminded that they hoped one day to work for the government; for students in Denmark, the opposite was true. A government’s reputation for corruption or cleanliness “affects the honesty of those who want to work for it”, suggest the authors.

Thinking about inequality, they are sceptical about the fashionable idea that rich countries should offer every citizen a “universal basic income”. The real crisis in such places is not material deprivation but that “many people who used to think of themselves as middle class have lost the sense of self-worth that they used to derive from their jobs.” In poor countries, by con- ▶▶



The pursuit of reason

Georgian fiction

Magic mountains

The Eighth Life (For Brilka). By Nino Haratischvili. Translated by Charlotte Collins and Ruth Martin. *Scribe*; 944 pages; £20. To be published in America in April; \$40

NINO HARATISCHVILI'S elegant epic recounts the fortunes of a Georgian family and the turbulent history of their country, from the beginning of the 20th century to the 2000s, through revolution, the fall of empires and world wars. It is a triumph of both authorship and painstaking translation (from the original German) by Charlotte Collins and Ruth Martin. Each of the seven sections focuses on one life, the saga stretching from link to fascinating link as if they were jewels on a charm bracelet.

In the prologue Niza Jashi, a disaffected 32-year-old professor who has left Georgia for Berlin to escape her family's terrible history, is suddenly forced to reckon with it. Brilka, her 12-year-old niece, has absconded from a dance troupe touring Amsterdam; her mother, Niza's older sister Daria, is dead. Dedicating the narrative to the girl, Niza enjoins her to transcend their clan's misfortune. In the book's chain of stories, Brilka's will be the "eighth life"—"because they say the number eight represents infinity...I am giving my eight to you."

The chapters that follow place Ms Haratischvili's characters at the centre of the "red century", combining magical realism with the more prosaic, social kind. Niza and Brilka are descendants of what once seemed set to be a dynasty of chocolatiers. Niza's great-great grandfather had trained in patisserie-making all over Europe; back in Tbilisi he created mouthwatering confections and built a successful business. His most coveted recipe was for a chocolate elixir, the exact ingredients of which he guarded, fearing



Heroes of their times

its dangerously addictive effects—a metaphor, in the novel, for the allure of extreme ideologies.

The first biography related by Niza is that of Stasia, the patriarch's middle daughter, a spirited young woman who yearns to train as a ballet dancer in Paris. Instead, in 1917 she marries a lieutenant in Russia's White Guard, suffering isolation and disillusionment when she travels to Petrograd to find him. Crucially, her father has trusted only her with the secret chocolate recipe.

Her tale is followed by those of her spoilt half-sister Christine, Stasia's son Kostya and daughter Kitty, a singer, Kostya's daughter Elene, and Elene's daughters, Daria and Niza themselves. Ms Haratischvili's writing is lyrical, but she does not gloss over the compromises people make to survive. Above all, "The Eighth Life" is an unforgettable love letter to Georgia and the Caucasus, to lives led and to come, and to writing itself, a frontier where, Niza says, "legend ends and facts begin".

▶ trast, material deprivation is a huge problem and an "ultra-basic" handout of a dollar or two a day could release people from penury and hunger.

India could largely pay for this by abolishing wasteful subsidies for petrol, food and fertiliser. Universal cash payments are simple—a big plus when the government is incapable of administering complex social programmes. The authors do not imagine, however, that their logical arguments settle the matter. Mr Banerjee is running a randomised trial of ultra-basic cash payments

in Kenya; he expects results next year.

All readers will find something to disagree with in this book. It is too harsh on Margaret Thatcher and too kind to Europe's farm subsidies. But they will be captivated by the authors' curiosity, ferocious intellects and attractive modesty. "The only recourse we have against bad ideas", they argue, is to "resist the seduction of the 'obvious', be sceptical of promised miracles, question the evidence, be patient with complexity and honest about what we know and what we can know." Amen. ■

American memoir

Fairy-tale ending

In the Dream House. By Carmen Maria Machado. *Graywolf Press*; 272 pages; \$26. To be published in Britain by *Serpent's Tail* in January; £14.99

CARMEN MACHADO burst onto the American literary scene in 2017 with "Her Body and Other Parties", a surreal and raunchy collection of stories. Two years later comes an unorthodox memoir that recounts her emotional abuse by a girlfriend over several years. But "In the Dream House" is also a hall of mirrors, "a book about a house that was not a house and a dream that was no dream at all".

As a student in the writing programme at the University of Iowa, Ms Machado fell in love with a woman whose reservoirs of cruelty made her "ill with fear". The experience cleft her in two, she writes, and her memoir is duly divided into two points of view: the "I" of her recollections and the "you" of the powerless, captive—and captivated—victim of domestic abuse.

The book is composed of scores of short sections, like shards, in which Ms Machado deploys every literary trick and trope in the canon. Some examine her trauma using these devices (the Unreliable Narrator, the *Bildungsroman*); others employ themes from folklore; still others are comprised of philosophical propositions and analytical essays. Now at the University of Pennsylvania, Ms Machado is a scholar of narrative structure, and students of literature will find this approach provocative and rich; others may consider it too clever by half. Throughout, though, her writing is bracing, as full of humour and whimsy, sex and creepiness as in her offbeat stories.

She seems intent on smashing boundaries between genres, and between reality and imagination. Footnotes show how pervasive violent abuse has been through all times and tales. She offers trenchant commentary on the legend of Bluebeard and an episode of "Star Trek". Later, she powerfully re-stages the airless trap of the abusive relationship, in which no answer placates a controlling partner, by creating a "Choose Your Own Adventure" that circles and circles on itself. Her lover delivers a steady torrent of hate and denigration, followed by denials that it has occurred at all, an escalating form of gaslighting from which Ms Machado cannot tear herself away.

Presenting personal pain as a thriller might seem exploitative. Yet her story is inherently filled with suspense. As in a horror film, the reader is pulled onward to find ▶

▶ out how the heroine will escape. The eventual denouement comes with a tricky, if somewhat superficial, “Surprise Ending” and a “Plot Twist”. How exactly did she manage to put this experience behind her? The question is only partly answered in a vignette entitled “Dream House as Schrödinger’s Cat”, in which Ms Machado slyly tosses out many possible reasons for her choices, which may or may not be relevant.

Perhaps most important, her book is a bid to break the silence surrounding abuse in the queer community. In any marginalised group there is a fear of airing dirty linen, she notes. “The desire to save face, to present a narrative of uniform morality, can defeat every other interest.” Yet anyone can be an abuser; women sometimes harm women. She imagines telling younger lesbians this truth: “The world is full of hurt people who hurt people.” As her folkloric references suggest, the cycle of abuse is a kind of poisonous enchantment in which victims can be enthralled. Ms Machado’s memoir casts a powerful counter-spell. ■

Congolese art

His dark materials

KINSHASA

A sculptor finds inspiration in his country’s turbulent history

“FOR ME, KINSHASA is a beautiful woman who walks barefoot,” says Freddy Tsimba, a sculptor, in his studio in Matongé, one of the city’s most chaotic districts. The capital of the Democratic Republic of Congo (DRC) is home to some 12m people. Battered cars choke its highways; its unpaved backstreets are clogged with stinking black mud. Once known as “Kin la belle”, its residents—fed up with the festering rubbish and open gutters—re-christened the place “Kin la poubelle”, or “Kin the dustbin”. But the barefoot woman also has charm. She dances to the fuzzy rumba beats that blast out of almost every bar; her noisy thoroughfares are full of hopeful, chattering people. Mr Tsimba gets some of his best ideas from watching them.

“The streets are like a school to me and they’re always changing,” he says, now sipping a beer at his favourite roadside bar while sketching with a Biro. Passing street-hawkers pause at the tables to offer everything from fried plantain to cigarettes, chewing gum, roasted caterpillars and plywood chess boards. In the narrow road, motorbikes swerve round groups of gossiping schoolchildren and women carrying bowls of bananas on their heads.

Yet as well as responding to the city, Mr Tsimba also wants the city to respond to his

art. In 2014 he took a house he had built from 999 machetes to one of Kinshasa’s busiest markets. He stood silently beside it and listened as people argued about what it meant. “The reaction was intense,” he says. “People here are still traumatised by the Kulunas,” a group of machete-wielding youths who rob and kill. Eventually, Mr Tsimba told the crowd he wanted to show that the machete was not just an instrument of death. It was invented for farmers to cut weeds and crops. It could become whatever you made of it—even a house.

Turning old materials—often those associated with death—into sculpture is Mr Tsimba’s speciality. He has built pieces from bullet casings, mousetraps, keys, mobile phones and bottle tops. Last year he sold a sculpture of a man with outstretched arms at Bonhams, an auction house in London, for £12,500 (\$16,150). It was almost three metres tall and made entirely from spoons. Art collectors in the DRC “talk about Freddy as a real game-changer,” says Eliza Sawyer, a specialist in African contemporary art at Bonhams. “He’s on the cards for the next Venice Biennale.”

Much of Mr Tsimba’s work has a message of revival. Transmuting bullets into art shows that new life can emerge from destruction. In the same way, he hopes Congo itself will be able to regenerate after its bitter, bloody past. Militias have terrorised its eastern provinces for over two decades; in the war that lasted from 1998 to 2003 between 1m and 5m people were killed. In 1997, during an earlier war, rebels marched on Kinshasa in old gumboots; child soldiers shot Kalashnikovs at fleeing government troops and took the capital. Mr Tsimba turned up in a city along their route to collect material for his sculptures.

“I started picking up bullets. Some people watching thought I was mad,” he recalls. “Then two soldiers appeared in front of me.” Mr Tsimba was arrested and tossed

into a makeshift prison cell. When, after four days of drinking dirty water, a senior commander came to question him, Mr Tsimba—in an effort to prove he was sane—claimed that he was collecting the bullets to make kitchen pots. “Then the commander said: ‘OK, tomorrow you will show me how you do it,’” he remembers.

With the help of two other prisoners, a small fire and an old bicycle (pedalled to fan the flames), Mr Tsimba made a pot. “The commander was happy. He told me: ‘As you work, I’ll find clients to buy the pots. We will make money.’” The artist begged to go home, but his captor insisted he must first make 300 pots. For more than three months Mr Tsimba laboured over the fire. When he had finally delivered his quota, the officer kept his word and freed him. “He gave me ten sacks of bullets to take home,” says Mr Tsimba. “I hid them inside bags of *foufou* [pounded cassava roots], and transported them back on a boat.”

Some of these bullets are now in Paris, a few hundred metres from the Eiffel Tower. They have been transformed into a pregnant woman, holding a book sculpted out of 2,000 keys. “The idea is that through knowledge and culture, our country can be renewed,” says Mr Tsimba. The piece, called “Carrier of Lives”, is 4.25 metres tall and stands in the Palais de Chaillot. It was unveiled in December 2018 to celebrate the 70th anniversary of the Universal Declaration of Human Rights.

Even though Mr Tsimba travels all over the world, exhibiting his work and rubbing shoulders with collectors, he says he will never leave Matongé—his birthplace, as well as where his studio sits. Walking through one of its litter-strewn back-alleys in a beret and overalls, he stops to greet friends and wave at shopkeepers. “I could never leave Kinshasa, [the city] is stronger than me,” he says. “The noise, the calls from people...It would be impossible.” ■



The alchemy of Freddy Tsimba

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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 latest	quarter*	2019†	% change on year ago latest	2019†	%		% of GDP, 2019†	% of GDP, 2019†	10-yr gov't bonds latest,%	change on year ago, bp	per \$	% change Nov 20th on year ago			
United States	2.0	Q3	1.9	2.2	1.8	Oct	1.8	3.6	Oct	-2.4		1.8	-132	-		
China	6.0	Q3	6.1	6.2	3.8	Oct	2.7	3.6	Q3 [§]	1.5		3.0	§§	-16.0	7.04	-1.4
Japan	1.3	Q3	0.2	1.0	0.2	Sep	0.9	2.4	Sep	3.2		-0.1		-27.0	109	3.7
Britain	1.0	Q3	1.2	1.2	1.5	Oct	1.8	3.8	Aug ^{††}	-4.2		0.8		-64.0	0.77	1.3
Canada	1.6	Q2	3.7	1.6	1.9	Oct	2.0	5.5	Oct	-2.3		1.4		-92.0	1.33	-0.8
Euro area	1.2	Q3	0.9	1.2	0.7	Oct	1.2	7.5	Sep	2.9		-0.4		-71.0	0.90	-2.2
Austria	1.5	Q2	-1.4	1.5	1.1	Oct	1.5	4.5	Sep	1.7		-0.1		-72.0	0.90	-2.2
Belgium	1.6	Q3	1.6	1.2	0.5	Oct	1.8	5.6	Sep	0.1		-0.1		-91.0	0.90	-2.2
France	1.3	Q3	1.0	1.3	0.8	Oct	1.3	8.4	Sep	-0.7		nil		-81.0	0.90	-2.2
Germany	0.5	Q3	0.3	0.5	1.1	Oct	1.3	3.1	Sep	6.6		-0.4		-71.0	0.90	-2.2
Greece	1.9	Q2	3.4	1.9	-0.7	Oct	0.6	16.7	Aug	-2.5		1.5		-323	0.90	-2.2
Italy	0.3	Q3	0.3	0.1	0.2	Oct	0.7	9.9	Sep	2.0		1.3		-230	0.90	-2.2
Netherlands	1.9	Q3	1.8	1.7	2.7	Oct	2.7	4.4	Sep	9.6		-0.2		-72.0	0.90	-2.2
Spain	2.0	Q3	1.7	2.1	0.1	Oct	0.9	14.2	Sep	0.8		0.4		-121	0.90	-2.2
Czech Republic	2.5	Q2	1.2	2.6	2.7	Oct	2.8	2.1	Sep [‡]	0.5		1.5		-60.0	23.1	-1.1
Denmark	2.2	Q2	1.2	2.2	0.6	Oct	0.8	3.7	Sep	7.8		-0.3		-65.0	6.75	-3.1
Norway	1.3	Q3	0.1	1.4	1.8	Oct	2.2	3.7	Aug ^{††}	5.4		1.4		-53.0	9.14	-6.6
Poland	4.2	Q2	5.3	4.0	2.5	Oct	2.2	5.1	Oct [§]	-0.6		2.1		-114	3.88	-2.6
Russia	1.7	Q3	na	1.1	3.8	Oct	4.5	4.6	Oct [§]	6.5		6.5		-234	63.9	3.3
Sweden	1.0	Q2	0.5	1.3	1.6	Oct	1.8	6.0	Oct [§]	3.7		nil		-60.0	9.63	-6.0
Switzerland	0.2	Q2	1.1	0.8	-0.3	Oct	0.4	2.3	Oct	9.2		-0.5		-58.0	0.99	nil
Turkey	-1.5	Q2	na	-0.3	8.6	Oct	14.8	14.0	Aug [§]	-0.2		11.9		-536	5.69	-5.1
Australia	1.4	Q2	1.9	1.7	1.7	Q3	1.6	5.3	Oct	0.1		1.1		-162	1.47	-6.1
Hong Kong	-2.9	Q3	-12.1	0.2	3.3	Sep	3.0	3.1	Oct ^{††}	4.8		1.6		-71.0	7.83	nil
India	5.0	Q2	2.9	5.2	4.6	Oct	3.4	8.5	Oct	-1.7		6.5		-133	71.8	-0.5
Indonesia	5.0	Q3	na	5.1	3.1	Oct	3.1	5.3	Q3 [§]	-2.2		7.0		-112	14,095	3.5
Malaysia	4.4	Q3	na	4.4	1.1	Oct	0.8	3.3	Sep [§]	4.5		3.4		-74.0	4.17	0.5
Pakistan	3.3	2019**	na	3.3	11.0	Oct	9.8	5.8	2018	-3.5		11.3	†††	-90.0	155	-13.8
Philippines	6.2	Q3	6.6	5.7	0.8	Oct	2.3	5.4	Q3 [§]	-1.1		4.7		-268	50.9	3.0
Singapore	0.5	Q3	2.1	0.5	0.5	Sep	0.6	2.3	Q3	14.3		1.7		-72.0	1.36	0.7
South Korea	2.0	Q3	1.6	1.8	nil	Oct	0.4	3.0	Oct [§]	3.0		1.7		-54.0	1,170	-3.8
Taiwan	2.9	Q3	4.5	2.4	0.4	Oct	0.5	3.7	Sep	12.0		0.7		-22.0	30.5	1.4
Thailand	2.4	Q3	0.4	2.4	0.1	Oct	0.7	1.0	Sep [§]	6.0		1.5		-99.0	30.2	9.2
Argentina	0.6	Q2	-1.3	-3.3	50.5	Oct [‡]	53.7	10.6	Q2 [§]	-1.4		11.3		562	59.7	-39.2
Brazil	1.0	Q2	1.8	0.8	2.5	Oct	3.6	11.8	Sep [§]	-1.9		4.4		-358	4.20	-10.5
Chile	3.3	Q3	3.0	2.6	2.5	Oct	2.3	7.0	Sep ^{§††}	-2.6		3.3		-116	795	-15.6
Colombia	3.3	Q3	2.3	3.1	3.9	Oct	3.5	10.2	Sep [§]	-4.4		6.1		-103	3,439	-7.2
Mexico	-0.4	Q3	0.4	0.3	3.0	Oct	3.6	3.5	Sep	-1.1		7.0		-206	19.4	5.0
Peru	1.2	Q2	4.1	2.6	1.9	Oct	2.2	6.1	Sep [§]	-2.1		5.6		64.0	3.39	-0.3
Egypt	5.6	Q3	na	5.6	3.1	Oct	8.1	7.8	Q3 [§]	-0.9		na		nil	16.1	11.2
Israel	4.1	Q3	4.1	3.2	0.4	Oct	0.9	3.7	Sep	2.4		0.9		-142	3.47	7.5
Saudi Arabia	2.4	2018	na	1.0	-0.3	Oct	-1.2	5.6	Q2	1.4		na		nil	3.75	nil
South Africa	0.9	Q2	3.1	0.6	3.7	Oct	4.4	29.1	Q3 [§]	-4.0		8.3		-80.0	14.8	-4.7

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:	
		Nov 20th	Dec 31st 2018
United States S&P 500	3,108.5	0.5	24.0
United States NAScomp	8,526.7	0.5	28.5
China Shanghai Comp	2,911.1	0.2	16.7
China Shenzhen Comp	1,635.2	1.3	29.0
Japan Nikkei 225	23,148.6	-0.7	15.7
Japan Topix	1,691.1	-0.5	13.2
Britain FTSE 100	7,262.5	-1.2	7.9
Canada S&P TSX	17,005.8	0.3	18.7
Euro area EURO STOXX 50	3,683.9	-0.4	22.7
France CAC 40	5,894.0	-0.2	24.6
Germany DAX*	13,158.1	-0.5	24.6
Italy FTSE/MIB	23,351.8	-1.0	27.4
Netherlands AEX	594.2	-0.6	21.8
Spain IBEX 35	9,225.4	0.3	8.0
Poland WIG	58,026.7	-1.3	0.6
Russia RTS, \$ terms	1,448.4	0.7	35.9
Switzerland SMI	10,385.7	0.8	23.2
Turkey BIST	106,785.1	1.9	17.0
Australia All Ord.	6,828.3	0.3	19.6
Hong Kong Hang Seng	26,889.6	1.2	4.0
India BSE	40,651.6	1.3	12.7
Indonesia IDX	6,155.1	0.2	-0.6
Malaysia KLSE	1,601.1	0.2	-5.3

	index	% change on:	
		Nov 20th	Dec 31st 2018
Pakistan KSE	38,037.7	2.3	2.6
Singapore STI	3,229.8	-0.3	5.2
South Korea KOSPI	2,125.3	0.1	4.1
Taiwan TWI	11,631.2	1.4	19.6
Thailand SET	1,596.8	-1.1	2.1
Argentina MERV	33,421.1	3.3	10.3
Brazil BVSP	105,864.1	-0.2	20.5
Mexico IPC	43,604.7	1.2	4.7
Egypt EGX 30	14,224.4	-2.6	9.1
Israel TA-125	1,592.9	1.4	19.5
Saudi Arabia Tadawul	8,054.1	1.5	2.9
South Africa JSE AS	57,313.4	1.7	8.7
World, dev'd MSCI	2,274.9	0.3	20.8
Emerging markets MSCI	1,052.0	0.8	8.9

US corporate bonds, spread over Treasuries

	Dec 31st	
Basis points	latest	2018
Investment grade	154	190
High-yield	501	571

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

Commodities

The Economist commodity-price index

2015=100	% change on			
	Nov 12th	Nov 19th*	month	year
Dollar Index				
All Items	109.0	109.9	0.8	4.4
Food	97.9	97.6	2.5	7.7
Industrials				
All	119.3	121.4	-0.4	2.1
Non-food agriculturals	96.8	98.4	3.3	-11.0
Metals	126.0	128.3	-1.2	5.6
Sterling Index				
All items	129.6	129.7	0.6	3.6
Euro Index				
All items	109.8	110.0	1.3	7.5
Gold				
\$ per oz	1,451.3	1,472.9	-0.8	20.3
Brent				
\$ per barrel	62.5	60.9	1.2	-4.2

Sources: Bloomberg; CME Group; Cotlook; Datastream from Refinitiv; Fastmarkets; FT; ICCO; ICO; ISO; Live Rice Index; LME; NZ Wool Services; Thompson Lloyd & Ewart; Urner Barry; WSJ. *Provisional.

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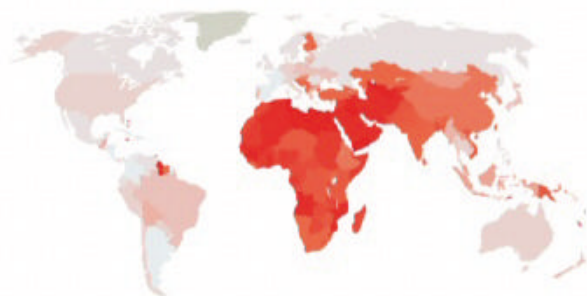
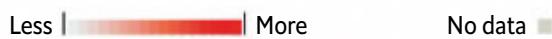
Populations originating in areas that spent longer under medieval Catholicism are more trusting and less conformist

Centuries of Christian influence, 500-1500AD

Taking in subsequent population migrations



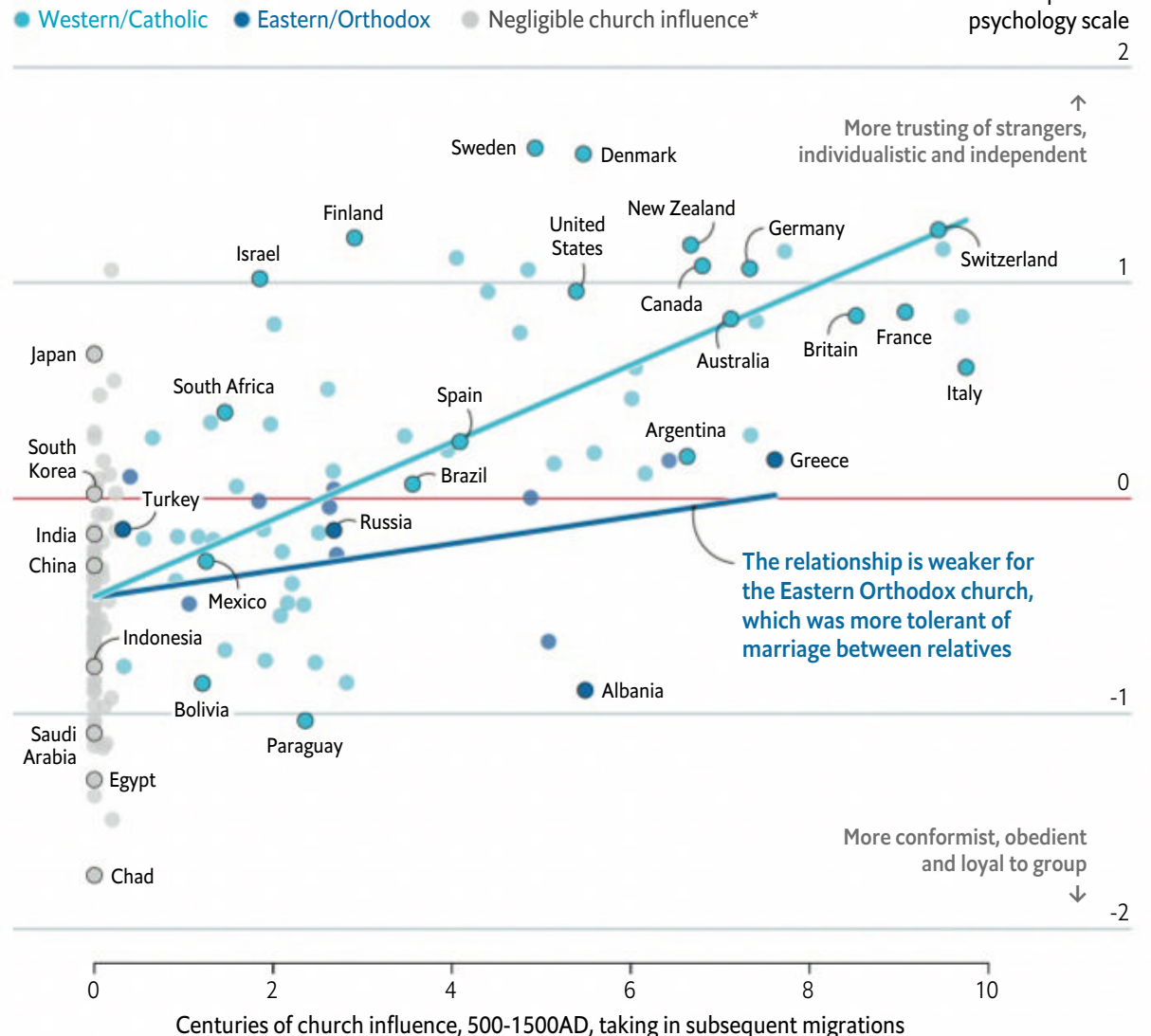
Kinship intensity index, including cousin marriage, extended families cohabiting, polygamy, marrying within the community



Source: "The Church, intensive kinship and psychological variation", by Jonathan Schulz and Joseph Heinrich et al., *Science*, November 2019
*0-30 years

Time under Christianity in the Middle Ages v social attitudes

By primary church exposure



God and Mammon

Medieval Catholicism nudged Europe towards democracy and development

WHY SOME COUNTRIES are rich and others are poor is an enduring debate in economics. Natural resources and friendly climates help only a bit. In contrast, robust political institutions and a steady rule of law seem essential. But why did these precursors evolve in just a few dozen states?

One oft-cited theory, advanced by Robert Putnam of Harvard University, is that the crucial ingredient is "social capital", the affinity people feel for members of their society whom they do not know. Proxies for this sentiment, such as blood-donation rates or propensity to return a stranger's lost wallet, closely track GDP per person.

Social capital can take centuries to amass. Mr Putnam has shown that parts of Italy that were ruled by a feudal monarchy around 1300AD have low levels of social trust and are relatively poor today. In contrast, the Italian regions that formed city-

states in that era, where citizens banded together for commerce and self-defence, are now unusually rich and well-run.

A recent study by Jonathan Schulz, Joseph Henrich and two other scholars proposes an explanation that delves even further back in time. They focus on family structure. Until recent human history, people lived in small groups and often married relatives. These habits reinforced family ties, but made people wary of outsiders.

In Europe this started to change around 500AD, when the Catholic church began banning polygamy and marriages between cousins, or between widows or widowers and their dead spouses' siblings. These edicts forced unmarried men to venture out and meet women from different social groups. The paper says that this reduced Christians' "conformity and in-group loyalty", and made them trust strangers more. By expanding the community beyond clans, it helped create the broad solidarity on which development may depend.

To show that Christian dogma caused this shift, the authors match historical data on the spread of religion with modern indicators. In places where Catholicism was generally the leading religion from 500-1500AD, people score highly on measures

of independence, impartiality and trust—such as agreeing to testify against a friend whose reckless driving killed a pedestrian. The same pattern occurs in countries settled mostly by Christian migrants, such as America. In contrast, social trust is lower and marriage between cousins is relatively common in areas whose populations do not descend from medieval Catholics.

This effect distinguishes Catholicism from other strands of medieval Christianity. Years spent before 1500AD under Eastern Orthodoxy, which the authors say did less to police marriage within families, was a weaker predictor of "pro-social" survey responses than exposure to Catholicism was. Moreover, the trend holds up both between and within countries. Among Italian regions, those with high social capital (as measured by data like using cheques over cash) were influenced by Catholicism for longer than those lacking it were.

The study's subject limits the strength of its findings. Barring an experiment to assign religions to countries at random and monitor them for 1,500 years, no one can prove whether incest bans built social trust or merely coincided with it. Nonetheless, the paper bolsters the case for studying ancient history to understand the present. ■



Catching the moment

Terry O'Neill, photographer of the most famous faces of the 20th century, died on November 16th, aged 81

WHEN BRIGITTE BARDOT was on the set of “The Legend of Frenchie King”, with a crowd of photographers snapping her, Terry O'Neill was waiting. Not, like the others, for the moment she would turn her gorgeous self towards them and strike a stunning pose with her leather trousers and cigar. Instead he was praying for the wind to blow her long hair over her face, just once more. When it did, he had that frame. He called it his picture in a million.

Over a career of 60 years, from hustling cub reportage for the *Daily Sketch* to gentle portraits of Nelson Mandela at 90, he always had an idea for how to get to the character, and usually, with a dose of luck, it worked. He encouraged Michael Caine to cradle rifles, framed Mick Jagger in a frosty fur hood, turned Dustin Hofmann into a pleading panhandler, and shot Elton John in his sequinned get-up against a huge audience that also sparkled. He let David Bowie, his crazily unpredictable favourite subject, bring in a Great Dane for the album-cover shoot of “Diamond Dogs”; the dog reared up and howled when the strobe went off, while Bowie, zoned out as usual, stayed still, weird and perfect. He convinced Faye Dunaway that if she won an Oscar in 1977 she should bring it to the Beverley Hills Hotel and pose beside the pool in her peach satin robe, with her Oscar on the breakfast table and newspapers scattered round her. His idea was to capture the morning after, when stardom had descended whether she wanted it or not. The shot became an image of jaded celebrity that thousands of people saw.

Stars had been his subject since 1962, when he was sent to pho-

tograph a new band at the Abbey Road Studios. The older blokes at the *Sketch* scorned that kind of work, but the young were clearly on the rise, and he was by far the youngest photographer in Fleet Street at the time. At the studios, to get a better light, he took the group outside to snap them holding their guitars a bit defensively: John, Paul, George and Ringo. Next day's *Sketch* was sold out, and he suddenly found himself with the run of London and all the coming bands, free to be as creative as he liked. A working-class kid from Romford whose prospects had been either the priesthood or a job in the Dagenham car plant, like his dad, had the world at his feet. He wouldn't have had a prayer, he thought, in any other era.

And obviously it couldn't last. In a couple of years he would find a proper job, as both the Beatles and the Stones told him they were going to. For it was hardly serious work to point your Leica at someone and go snap, snap. It was only when he went to Hollywood in the mid-1960s, to shoot on movie sets, that he realised how definitively things had changed. The vast new market for album covers, pop magazines, film posters and colour supplements could keep him in work, and in the money, for life. He began to hang on to his pictures then, as he went on to do freelance for *Vogue* and *Rolling Stone* and *Rave* and the *Sunday Times*, until eventually his archive had 4000 negatives in it. There would have been far more if, by the 2000s, modern celebrities hadn't ceased to interest him. Amy Winehouse was the last one he wanted to photograph.

What didn't change was the nature of the work: catching that moment, being ready. He had scarcely graduated from a Box Brownie in 1959, totally self-taught, when he was sent to the Heathrow VIP lounge to photograph people arriving and departing. He snapped a gent in a bowler hat and suit asleep on a bench with African chieftains in full regalia round him, and it turned out to be the home secretary: a famous man suddenly unguarded.

That picture earned him 25 quid. More to the point, it suggested a good way of approaching the stars. He would look for their human, vulnerable side, set things up, unobtrusively if he had to (his presence, like his voice, was always soft), and then start shooting. As he did, a dove settled by the bare white shoulder of Audrey Hepburn. Paul McCartney, playing the piano in a bar, suddenly raised his eyes to heaven as if amazed by the sound. Steve McQueen let his features relax as he took a phone call from a friend. Stars lounged and drowsed: Muhammad Ali with a newspaper, Peter Cook in his old mac on a lilo in a Hollywood pool. Best of all was to be allowed to tag along with a star for days, a fly on the wall, until they forgot that a photographer was there. He got such access with Frank Sinatra, who simply told his mafiosi minders, “The kid's with me,” and whom he snapped strolling on the boardwalk in Miami Beach, still with his guard up but with all his swagger plain.

It was easy enough for him to blend in as he worked, for he was short, good-looking and carefully cheeky. His Romford accent thrilled grouchy Lee Marvin, and his horse-racing jokes disarmed the queen into a smile of genuine happiness. Women regularly fell for his china-blue eyes, and he ended up in bed with many of them, including Ava Gardner, the most beautiful woman he ever saw, and Ms Dunaway, to whom he was married for a while. He would probably have bedded Marilyn Monroe, too, since she slept with all her photographers, but he never got the chance. Perhaps that was as well, for when he was with Faye he hated the whole circus. The last thing he wanted was to become a star himself. He was happy just eating fish and chips, listening to jazz, and taking pictures.

At heart he was ever the industrious Essex lad, working every day of the week. He didn't like holidays. He also loathed digital photography, which was junk and a joke, and any sort of touching-up, which made him feel sullied. To the end, he clung to film cameras and to black-and-white as the best there was. Even so, there was always something about the finished print that dissatisfied him. If he had only stayed longer on that day, at that shoot, if he had just...he might have got something better. The wind might have blown a little bit closer to the idea he had in his head. ■

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