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JUNE 2ND-8TH 2018

The surveillance state



Perfect in China, a threat in the West

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Politics this week

Print edition | The world this week Jun 2nd 2018

Italy's president, Sergio Mattarella, vetoed a proposed finance minister put forward by the Five Star Movement and the Northern League, populist movements of respectively the left and the right, who are trying to form a government. After a day of consternation on the markets, alternatives were being considered, including a technocratic government that will run Italy until a fresh election is held. See [article](#).

Mariano Rajoy, **Spain's** prime minister, faced a censure motion that might trigger early elections in the country. See [article](#).

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Voters in **Ireland** backed a change to the constitution to make abortion legal, by 66% to 34% in a referendum. After Ireland's decision, the British government came under pressure to hold a referendum in Northern Ireland, where abortion remains illegal. A spokesman for Theresa May, whose majority in Parliament depends on support from Northern Ireland's anti-abortion Unionists, said it was a "devolved matter". See [article](#).

London's transport commissioner admitted that "super highways" for cyclists had expanded too rapidly, causing more congestion for cars and buses. But he also supported the safe spaces on roads, which have led to a big drop in cycling deaths in the city.

In a bizarre and opaque tale of deception and intrigue, a **Russian journalist** detested by the Kremlin faked his own murder in **Ukraine**. He later appeared at a press conference saying that the hoax had been planned to catch Russian agents. He apologised to his wife for the distress he caused.

Murdered in Mozambique

At least ten people, including several children, were beheaded in northern **Mozambique**. The attack was blamed on a group of jihadists. The group has conducted sporadic attacks in the country since 2015.

Zimbabwe will hold national elections on July 30th, the first since Robert Mugabe was deposed in a military coup last year. Members of the opposition say they have been prevented from campaigning in some areas and complain that Zimbabweans abroad, who are thought mainly to support the opposition, will not be allowed to vote.

Palestinian militants in Gaza fired dozens of mortar shells at **Israel**. Israeli aircraft struck back, hitting facilities belonging to militant groups, before a tenuous ceasefire took hold. It was the worst flare-up of cross-border fighting since 2014.

Russia's foreign minister, Sergei Lavrov, called for the withdrawal of all non-Syrian forces along **Syria's** southern border. Russia appeared to reach an agreement with Israel, which shares the border and has carried out attacks on Iranian-backed forces in Syria. See [article](#).

The leaders of **Libya's** various factions met in Paris and agreed to hold presidential and parliamentary elections in December. But they were in disagreement about big constitutional issues, such as the role of the armed forces, which they ambitiously hope to resolve by September.

The final two

Iván Duque, a conservative former senator, took 39% of the vote in the first round of **Colombia's** presidential election and will face Gustavo Petro, the left's candidate, who got 25%, in the second round on June 17th. Mr Duque is aligned with Álvaro Uribe, a former president and critic of the peace deal with FARC guerrillas. Mr Petro used to belong to a separate armed group.

A strike by lorry drivers in **Brazil** continued to affect fuel supplies across the country, bringing businesses to a standstill. The strike began as a protest against rising petrol prices, but thousands of Brazilians have supported the drivers by taking to the streets and blocking motorways to air a wide range of grievances. Brazil's president, Michel Temer, warned that the army would be used to clear the highways if necessary. See [article](#).

Venezuela released an American Mormon missionary and his wife from prison following talks with an American delegation led by Bob Corker, a senator from Tennessee. Joshua Holt was held without trial for two years for allegedly concealing weapons.

The on-off switch

Preparations continued for a summit in Singapore between Donald Trump and Kim Jong Un, **North Korea's** dictator. Mr Trump, who had called off the meeting because of the North's "hostility", tweeted that "we have put a great team together" for the talks. A senior North Korean official met Mike Pompeo, America's secretary of state, in New York. Mr Kim held a meeting with Moon Jae-in, South Korea's president. See [article](#).

The annual report on religious freedom issued by America's State Department said that **Myanmar's** bloody campaign against Rohingya Muslims still persists, and that the country's government had also launched an offensive against Christian rebels in

Kachin state. Separately, the report highlighted the treatment of hundreds of thousands of **Uighur Muslims** in China who have been sent to re-education camps, and criticised **Saudi Arabia** for its non-tolerance of religions other than Sunni Islam.

Burkina Faso became the latest country to break diplomatic ties with **Taiwan**. After a campaign by China to lure away Taiwan's allies, only a handful of countries still recognise it.

The latest effort to find the wreckage of Malaysia Airlines Flight **MH370**, which vanished from radar screens in 2014, came to an end. An American privately funded firm had deployed eight autonomous submarines scouring 86,000 square kilometres of the Indian Ocean's floor. There are no more private or official searches planned, so there may never be an answer to what happened to the doomed plane.

Stand by your man

One of Donald Trump's lawyers, Rudy Giuliani, said the president was ready to be interviewed by Robert Mueller, the **special counsel** leading the investigation into Russian influence. But stepping up criticism of the investigation, Mr Giuliani later said that before any interview was held, Team Trump would need to review documents relating to the FBI's secretive use of an operative to gather information from Trump aides.

Eric Greitens resigned as the governor of **Missouri**. He was ensnared in a corruption scandal and faced lurid allegations from a former lover. He denies claims of wrongdoing, believing himself to be the victim of a political vendetta.

Business this week

Print edition | The world this week Jun 2nd 2018

Italy's political turmoil unnerved markets. Share prices of European banks fell sharply, and American stockmarkets also quivered as the chill spread to American banks. The yield on Italian sovereign bonds rose at a pace not seen since the euro-zone debt crisis. Yields on the two-year bond surged and on the ten-year bond rose to 3%, the highest level since 2014. Ignazio Visco, the governor of the Bank of Italy, warned the quarrelling politicians about the danger of "losing the irreplaceable asset of trust". See [article](#).

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Taking back control

Facing a currency crisis, **Turkey's** central bank simplified its system of multiple interest rates. The one-week repo rate became its new benchmark, which it also doubled to 16.5%. The central bank's governor met investors to offer reassurances that monetary policy would tighten further if inflation remains stubbornly high. The lira, which has taken a battering over concerns that the central bank's independence is under threat from politicians in Turkey agitating for lower interest rates, rallied in response. See [article](#).

America's banking regulators proposed sweeping changes to the **Volcker rule**, brought in after the financial crisis and which stops big banks from making certain kinds of risky bets. One of the biggest changes would ease the burden on banks having to prove that each trade has a purpose beyond a speculative bet. The proposals are open to comment, but banks have lobbied hard for the modifications.

The Canadian government stepped in to buy the **Trans Mountain pipeline** from Kinder Morgan, the American operator of one of the main conduits of oil from Alberta's tar sands. Kinder Morgan had sought assurances about the project when the provincial government in British Columbia and environmental groups put up stiff opposition to the planned expansion of the pipeline to terminals on the Pacific coast, which will triple its capacity. The federal government says it bought Trans Mountain to protect jobs

Good cop, bad cop

Piling the pressure on China amid negotiations to avoid a **trade war**, the Trump administration said it was moving ahead with plans to impose tariffs on \$50bn-worth of Chinese imports, contradicting recent remarks by Steven Mnuchin, the treasury secretary, that the penalties had been put on hold. The White House plans to announce a formal list of goods subject to the tariffs by mid-June. See [article](#).

Bill Browder was briefly detained by Spanish police at the request of Russia. Mr Browder's Hermitage Capital Management was one of the biggest investors in Russia until he fell foul of the authorities for highlighting corruption. Mr Browder lobbied Congress to pass a class of sanctions named after Sergei Magnitsky, a lawyer who uncovered a massive fraud but was sent to prison, where he died. The Spanish police said Russia's arrest warrant was not valid.

Sberbank, Russia's big state-owned lender, reported a 27% rise in first-quarter profit compared with the same three months last year, to 212bn roubles (\$3.7bn).

America's Justice Department approved **Bayer's** takeover of **Monsanto**, clearing the way for one of the biggest hookups in the agricultural seeds and chemicals industry. The department blessed the deal after ordering the German buyer to sell \$9bn in assets in areas where it competes with Monsanto, the largest-ever divestment demanded by America for consenting to a merger.

Harvey Weinstein was charged with rape and sexual abuse in a court in New York. The two cases are the first criminal charges to be brought against the former Hollywood mogul, following a wave of sexual-misconduct allegations that surfaced last October. Mr Weinstein, who has denied claims that he forced himself on women, was bailed for \$1m. The Weinstein Company filed for bankruptcy earlier this year. A judge recently approved the sale of the film studio's assets to Lantern Capital, a private-equity firm in Dallas, for \$310m.

Indian authorities started an investigation into claims that **AirAsia** and its boss, Tony Fernandes, tried to bribe officials to change a rule that restricted its operations in India. The Malaysian airline strongly rejected the claims.

One on every corner

Pret A Manger, a rival in Britain to Starbucks, but with a wider range of food products, was sold to **JAB Holdings**, an ambitious coffee and café firm, for \$2bn. Pret was founded in London in 1986, sandwiched between office buildings on Victoria Street. It now has 530 stores, a fifth of which are in America. JAB, which counts the Panera Bread and Peet's Coffee chains among its assets, is reportedly planning to extend Pret's reach in America, especially among young urban office workers.

KAL's cartoon

Print edition | The world this week Jun 2nd 2018

The surveillance state

Perfected in China, a threat in the West

Technology and surveillance

Does China's digital police state have echoes in the West?

The state can gather more information, more easily, than ever before. Do not underestimate the risks

Print edition | Leaders May 31st 2018

THEY'RE watching you. When you walk to work, CCTV cameras film you and, increasingly, recognise your face. Drive out of town, and number-plate-reading cameras capture your journey. The smartphone in your pocket leaves a constant digital trail. Browse the web in the privacy of your home, and your actions are logged and analysed. The resulting data can be crunched to create a minute-by-minute record of your life.

Under an authoritarian government such as China's, digital monitoring is turning a nasty police state into a terrifying, all-knowing one. Especially in the western region of Xinjiang, China is applying artificial intelligence (AI) and mass surveillance to create a 21st-century panopticon and impose total control over millions of Uighurs, a Turkic-language Muslim minority (see Briefing). In Western democracies, police and intelligence agencies are using the same surveillance tools to solve and deter crimes and prevent terrorism (see Technology Quarterly). The results are effective, yet deeply worrying.

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Between freedom and oppression stands a system to seek the consent of citizens, maintain checks and balances on governments and, when it comes to surveillance, set rules to restrain those who collect and process information. But with data so plentiful and easy to gather, these protections are being eroded. Privacy rules designed for the landline phone, postbox and filing cabinet urgently need to be strengthened for the age of the smartphone, e-mail and cloud computing.

I spy with my many eyes

When East Germany collapsed in 1989, people marvelled at the store of information the Stasi security service had garnered on them, and the vast network of informants it took to compile it. Since then the digital revolution has transformed surveillance, as it has so much else, by making it possible to collect and analyse data on an unprecedented scale. Smartphones, web browsers and sensors provide huge quantities of information that governments can hack or collect; data centres allow them to store it indefinitely; AI helps them find needles in the digital haystacks thus assembled. Technologies that once seemed a friend of freedom, allowing dissidents in dictatorships to communicate and organise more easily, now look more Orwellian, letting autocrats watch people even more closely than the Stasi did.

Xinjiang is the nightmarish extreme that the new technology makes possible: a racist police state. Fearing insurrection and separatism, China's rulers have reinforced techniques of totalitarian control—including the mass detention of Uighurs for re-education—with digital technology. In parts of the province streets have poles bristling with CCTV cameras every 100-200 metres. They record each passing driver's face and the car's numberplate. Uighurs' mobile phones must run government-issued spyware. The data associated with their ID cards include not just name, sex and occupation, but can contain relatives' details, fingerprints, blood type, DNA information, detention record and "reliability status". All this and more is fed into the Integrated Joint Operations Platform (IJOP), an AI-powered system, to generate lists of suspects for detention.

Totalitarianism on Xinjiang's scale may be hard to replicate, even across most of China. Repressing an easily identified minority is easier than ensuring absolute control over entire populations. But elements of China's model of surveillance will surely inspire other autocracies—from Russia to Rwanda to Turkey—to which the necessary hardware will happily be sold. Liberal states have an obligation to expose and chastise this export of oppression, however limited their tools of suasion.

The West must look at itself, too. These days its police forces can also have access to a Stasi's worth of data. Officers can set up bogus phone towers to track people's movements and contacts. Data from numberplate-readers can track a person's movements for years. Some American cities have predictive-policing programs akin to IJOP that analyse past crimes to predict future ones. All this allows the monitoring of possible attackers, but the potential for abuse is great. Hundreds of American police officers are known to have used confidential databases to dig dirt on journalists, ex-girlfriends and others.

Watching the detectives

How to balance freedom and safety? Start by ensuring that the digital world, like the real one, has places where law-abiding people can enjoy privacy. Citizens of liberal democracies do not expect to be frisked without good cause, or have their homes searched without a warrant. Similarly, a mobile phone in a person's pocket should be treated like a filing cabinet at home. Just as filing cabinets can be locked, encryption should not be curtailed. A second priority is to limit how long information on citizens is kept, constrain who has access to it and penalise its misuse fittingly. In 2006 the European Union issued a directive

requiring mobile-phone firms to keep customers' metadata for up to two years. That law was struck down by the European Court of Justice in 2014. Misuse of police data should be a criminal offence for which people are punished, not a "mistake" absolved by a collective apology.

A third priority is to monitor the use of AI. Predictive-policing systems are imperfect, better at finding patterns of burglary than of, say, murder. Face-recognition may produce lots of "false positive" results. AI trained with biased data—eg, patterns of arrest that feature a disproportionate number of black people—may reproduce those biases. Some sentencing algorithms are more likely to label black defendants than white ones as being at high risk of reoffending. Such algorithms must be open to scrutiny, not protected as trade secrets.

Vigilance and transparency must be the watchwords. They may enhance the technology's effectiveness: the routine wearing of bodycams by police, for instance, appears to reduce public complaints. Consultation matters, too. A bill recently proposed in California would compel police agencies to disclose what surveillance gear they have, publish data on its use and seek public input before buying any more. If that makes progress slower so be it. Police rightly watch citizens to keep them safe. Citizens must watch the police to remain free.

This article appeared in the Leaders section of the print edition under the headline "Perfected in China, a threat in the West"

America and immigrants

A cruel and unusual border policy

Separating migrant families is un-American and bound to fail

Print edition | Leaders Jun 2nd 2018

“FAMILY values do not stop at the Rio Grande,” said George W. Bush. But that may depend on which bank of the river you have in mind. Even by the standards of President Donald Trump’s administration, the way America has begun separating migrant children from their parents is horrific. The policy, part of an effort by the attorney-general Jeff Sessions to curb a seasonal rise in illegal immigration, is repugnant and self-defeating. It is a disgrace to America and should be stopped.

The Obama and Bush administrations both increased deportations of illegal migrants, yet avoided separating migrant families. Mr Trump’s, by contrast, appears to view its right to deprive migrant parents of their children, when pitching them into the criminal-justice system, as a useful deterrent against future immigration. There are reports of migrants having been deported while their children remain in the United States’ foster-care system. Some were not told where their children are or whether they would see them again—and they may not (see [article](#)).

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Apparently unnerved by the controversy, Mr Trump blamed it on a “horrible law”, which in turn he pinned on the Democrats. It is in fact based on Mr Sessions’s effort to prosecute a lot more illegal entrants. “If you don’t want your child separated, then don’t bring them across the border illegally,” he said. The policy has so far mainly been applied to immigrants charged with a crime, such as crossing illegally more than once. But Mr Sessions also wants to lock up first offenders, who can be detained for up to six months by immigration authorities. In the absence of an increase in family detention centres, that would lead to the break-up of many more families.

It would also put huge pressure on the overburdened foster-care system—which is only one of the ways Mr Sessions’s tough line is likely to be futile. There is little reason to think it will lead to a big drop in illegal immigration. Most migrants are motivated more by their miserable circumstances back home than the prospect of an easy life in America. Moreover, how countries treat migrants is an important advertisement of their character and values, which Americans underrate to their cost. America’s reputation for being fair and decent attracts highly skilled people. It is also among the reasons foreigners trust American diplomacy and admire its culture—despite the erosion of its reputation that has followed Mr Trump’s election.

It’s greater to be good

Mr Sessions’s cruelty will also widen the partisan gulf. It provides more ammunition to those on the left who accuse his party of racism. And that, paradoxically, entrenches Republican support. When accused by Democrats of racism, even moderate Republican voters are liable to defend the policy out of partisan pique. There is little danger of the conscience of the right being awakened by the scandal in the way that European attitudes to migrants from Syria were softened by images of a drowned refugee child.

A wiser government would reassure Americans that today’s levels of illegal immigration are modest by historical standards, far lower than a decade ago. But even if the goal is to cut the number of illegal migrants, there are better ways Mr Sessions might go about it. By recruiting more immigration judges, he could cut the vast backlog of cases that his draconian methods also threaten to make worse. By building more family detention centres he could uphold America’s tradition of decency as well as the law. By handling more asylum cases in Central America, where over half the immigrants originate, he might reduce the flow. Such steps would not only be more humane than terrorising migrants. They might even work.

Just say know

Festival drug-testing shows a way to reduce harm

When they discover what is in their drugs, users tend to take less of them

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AS THOUSANDS of young people danced in the sun at Britain's Mutiny Festival on Saturday, two partygoers lay dying. Another dozen or so were sent to hospital. All are thought to have reacted badly to illegal drugs—and they will not be the last such casualties of the year. The death rate in Britain from ecstasy, a popular festival drug, is at its highest-ever level. Meanwhile deaths from opioids are on the rise across the rich world, particularly in America, where overdoses now kill more people than either cars or guns.

Many of these tragedies are avoidable—as another British festival last weekend showed. At a bash in Bristol, festivalgoers queued to have their illegal drugs tested by volunteer chemists, with the consent of the police. The checks revealed ecstasy pills that were four times stronger than average, pentylone masquerading as MDMA powder, unexpected cocktails of cocaine and ketamine, and other potentially deadly surprises. Such tests, growing in popularity around the world, offer a way to introduce basic safety checks to the chaos of the unregulated illegal-drugs market. Governments must encourage them if they are to turn the rising tide of needless deaths.

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The prohibition of drugs means that people selling potentially lethal substances face fewer health-and-safety checks than people selling hot dogs. What is more, the secrecy under which the market necessarily operates inhibits the flow of information among consumers. Drug users have little chance of getting information on the quality of the mind-altering substances they are taking. Nowhere is that truer than at summer festivals, where customers buy from unfamiliar dealers who have little incentive to retain their loyalty.

The fog of war

Testing allows consumers to make a more informed choice. And it is catching on beyond the festival circuit. The Loop, the charity that carried out the Bristol tests, has begun to offer drug-checks in city centres. In America, some opioid users are being given strips to check for the presence of fentanyl, a highly potent drug responsible for many overdoses (see [article](#)). In Spain, an organisation called Energy Control analyses samples from anywhere in the world for a fee of €70 (\$80), sending the results by e-mail with no questions asked.

Police officers, tired of scooping up limp young casualties of the drug war when they could be tackling real criminals, increasingly favour testing. But some politicians still worry that by making it safer to take drugs, they may be seen to condone or even encourage such behaviour. The same case is sometimes made against other forms of “harm reduction”, such as providing clean needles to heroin users, or giving them safe places to shoot up under supervision.

This is upside-down logic. The reason for discouraging drug use is that drugs are harmful, so it is perverse to argue that they should be kept harmful in order to discourage their use. In any case, the evidence so far suggests that, far from encouraging drug-taking, testing services seem to make people think twice. The Loop reports that 10-15% of the drug users it deals with decide to ditch their stash on learning what is really in it (which has included everything from concrete to anti-malaria medicine). A further 40-50% take less than they had planned. Governments, police forces and events-organisers should take note: to help people avoid the most harmful drugs, let them check what they are taking.

This article appeared in the Leaders section of the print edition under the headline “Just say know”

Road safety**France's contentious speed-limit reduction is a model for others**

*Live fast, die fast***Print edition | Leaders** Jun 2nd 2018

WHILE Emmanuel Macron's conflict with the strikers may be the hottest topic of conversation in French cities, *la France profonde* is exercised about another aspect of presidential authority. From July 1st, the limit on single-carriageway rural roads will be reduced from 90kph (55mph) to 80kph (see [article](#)). The government maintains that this will save 300-400 lives a year. But opinion amid the *pastis* and the *boules* is solidly against the reduction.

This decision is no Jupiterian decree, imposed arbitrarily by the powers in Paris on resentful rurals. Humanity's love of speed needs to be tempered by considerations of safety and pollution. So the government set the costs of reducing the speed limit on various sorts of roads against the benefits, and found that the sums came out in favour of a lower limit. Such cost-benefit analyses may seem cold-hearted. They involve putting a price on life and balancing it against time gained. But France is right to make a decision involving such trade-offs. Would that other countries were so rational.

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Getting their kicks

Because road deaths have neither much annual variation nor a politically interesting cause, they get little attention. Yet they are still the world's eighth-biggest cause of death. Even in rich countries, where they are in long-term decline, they remain significant. That is particularly true in America, where 40,327 people died on the roads in 2016, around the same number as were killed by breast cancer. Road deaths have fallen more slowly in America than in the rest of the rich world—by less in percentage terms between 1972 and 2011 than in any of the other 25 countries studied in a paper in the *American Journal of Public Health*. Had they fallen as fast as in the top seven performers, America would have avoided 20,000 deaths a year.

That is partly because speed limits have been going up in America, offsetting the gains from safer cars. In 1974, in response to the oil crisis, the federal government took control of speed limits and set them at 55mph; the law was relaxed in 1987 and repealed in 1995, with power to set speed limits being returned to the states. Since then they have, by and large, been rising. Six states now have maximums of 80mph; in Texas, the maximum is 85mph.

No doubt America's size, self-image and love of freedom lie behind those increases, but they have also been encouraged by the way speed limits are set. The main factor which state authorities look at is how fast people drive. Speed limits are set at the 85th percentile of prevailing speeds. That has the advantage of keeping the law in line with the behaviour of the majority of drivers. But, as the National Transportation Safety Board pointed out in a report last year, it can lead to an "undesirable cycle" whereby the speed limit goes up, so people drive faster, so the speed limit is raised. A cost-benefit analysis of increases from 1987 to 1996 carried out by an academic suggests that they should not have been allowed. It seems likely that current limits on many roads are too high.

Of course, down is not always the right direction for speed limits. In the end, the only really safe speed for a car is zero, but people are prepared to take risks to get about, and speed limits need to take that into account. "Vision Zero", an initiative which started in Sweden and is spreading, envisages the abolition of road deaths, which is implausible: even self-driving cars, which are likely to be far safer than fallible (especially when drunk) humans, are sometimes going to kill people.

Countries value lives differently. Britain sets the price below the French level of €3m (\$3.5m), America's federal government above. Whatever its level, that number needs to be fed into a reckoning of the costs and benefits of speed. Only then should people be allowed to step on it.

This article appeared in the Leaders section of the print edition under the headline "Live fast, die fast"

Panic, but not yet

Italy needs to be handled with care

It can find a way out of its immediate crisis. But Italy's long-term outlook is more worrying

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DURING the worst days of the euro-zone debt crisis, the fear was that bond-market turmoil in places such as Greece and Spain would spread to Italy. The biggest debtor in Europe would be too big to bail out, so Grexit might lead to Italexit and the break-up of the euro. Now the attention is focused directly on Italy itself.

In March half of Italian voters plumped for two populist parties that until recently favoured leaving the euro: the maverick Five Star Movement, which triumphed in the poorer south; and the xenophobic Northern League, which scored well in the richer north. Neither had fought the election campaign on a promise to leave the euro (the opposite, in fact). And as the two tried to form an all-populist cabinet, investors hoped that the sobering prospect of power, together with EU deficit rules and the behind-the-scenes influence of the Italian president, would allow Italy to keep muddling along.

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Such hopes took a nasty jolt on May 27th. The populists named as finance minister Paolo Savona, an economist who does indeed think that Italy should quit the euro. President Sergio Mattarella vetoed Mr Savona (see [article](#)). The populists threatened for a moment to impeach him and even hinted at a march on Rome—an allusion to Benito Mussolini's blackshirts in 1922. Amid talk of a political, constitutional and economic crisis, bond yields spiked and global stockmarkets shuddered (see [article](#)).

In the short term such fears are overblown. Italy is less vulnerable to panicky investors than many realise. Its economy, let alone its democracy, is nowhere near collapse. But deep-rooted weaknesses are worsening and becoming harder to fix. To avoid an eventual explosion, Italy needs careful handling and a change in mindset—of its and Europe's politicians alike. The worry is that neither seems likely.

Panic, but not yet

Whatever the outcome of closed-door scheming in Rome this week, Italy is likely to get its first all-populist government—if not now, then soon, after another election. That could lead to spendthrift policies. The populists' plans include a flat tax that would lower revenues and a universal basic income that would raise expenditure; both parties want to wind back previous pension reforms. This could cost as much as 6% of GDP annually—largesse that Italy cannot afford with its public debt at 132% of GDP, the highest in the world after Japan and Greece.

Yet Italy is not Greece. In 2017 the government ran a budget surplus before interest payments of 1.7% of GDP. The average maturity of its debt is about seven years. Given that much of its borrowing is from its own residents, and that the current account is in surplus, Italy is not particularly vulnerable to a run on its bonds by foreign investors. The ECB is still buying its bonds under the quantitative-easing programme, albeit at a reduced rate. Short of a large and prolonged risk premium on its bonds, Italy's debts are serviceable.

Italy's real problem is the debilitating combination of chronically low growth and high public debt. Low growth means living standards are stagnant and Italy cannot work off its debt easily; high debt means it cannot use fiscal stimulus to boost the economy, especially if there is another downturn. Even with the global upswing of recent years, Italy remains one of Europe's worst-performing economies.

Though populists rail against austerity, years of budgetary restraint give them a bit of room to introduce their policies. But doing so at any scale requires them to shift the burden of taxes and expenditure, not add to it. Italy already spends more on cash transfers, 20% of GDP, than any other rich country. If it wants to introduce a universal basic income, it needs to cut pensions, not increase them. Its tax wedge, the gap between what employers pay and what employees take home, is one of the highest in the OECD. This contributes to joblessness. Just 69% of Italian 25- to 54-year-olds are in work, compared with 74% in Spain and 81% in France. Cutting taxes on income and labour, though, will require Italy to raise them elsewhere, ideally on property and consumption.

Quitaly

A bigger problem is that the populists have little idea how to deal with the myriad causes of Italy's stagnant productivity: a rigid, dual labour market; uncompetitive product markets; the proliferation of family-owned firms that do not grow; a banking system hobbled by bad loans; an underperforming education system; and, more recently, a brain-drain. London is now a sizeable Italian city.

Fixing all this requires years of difficult structural reforms, now all the more difficult after successive governments have wasted the time and opportunity provided by the global recovery and the ECB's ultra-low interest rates.

The same is true of the euro zone as a whole. Its "banking union" is incomplete; its capital markets are underdeveloped. And all ideas for a substantial budget to help countries in the straitjacket of the euro adjust to shocks have been rejected.

Creditor countries, led by Germany, have said that they will not accept greater risk-sharing without greater risk-reduction. Italian populists' call to do away with budgetary restraint only deepens Germany's belief that Italy cannot be trusted.

A founder of the EU, Italy was long one of the most Europhile members; it is now among the most Eurosceptic. But the populists know that most Italians, even those who voted for them, do not want to see their savings slashed and their jobs destroyed by leaving the single currency. That is why they have toned down their anti-euro rhetoric. But they do not understand that living in a single currency requires a flexible economy. Similarly, Germany has yet to accept that, if it is to thrive, the euro zone must have more risk-sharing.

Inadequate reform and incompatible visions of the euro's future are a poisonous and unsustainable combination. If the turmoil in Italy and the markets' fright have served as a reminder of such dangers, and spur reform both in Rome and Brussels, then some good may come of the mess. The risk is that it will make any reform harder, if not impossible.

This article appeared in the Leaders section of the print edition under the headline "Handle with care"

On plasma donations, languages, unemployment, offshore finance, education, men

Letters to the editor

Letters

Letters to the editor

On plasma donations, languages, unemployment, offshore finance, education, men

Print edition | Letters Jun 2nd 2018

Letters are welcome and should be addressed to the Editor at letters@economist.com

Obtaining plasma

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You are right that something needs to be done about the global dependency on American blood plasma, but you are wrong to claim that the issue can be resolved by paying blood donors ("Blood money", May 12th). You cite Belgium as a big importer of plasma, but actually we mostly collect our own and without having to pay donors. We will be self-sufficient by 2026 (the Dutch are doing even better).

The free-donor base for plasma cannot be readily switched on or off. This is why a long-term perspective towards plasma is essential. Paid donations will probably lead to a dependence for life-saving drugs on international firms in terms of supply and pricing. Where payment for plasma is introduced, the pool of people willing to donate freely evaporates fast. Even the Red Cross ends up paying its plasma donors. This is a one-way street. Once people regard plasma donation as an economic transaction rather than a civic duty, they are no longer willing to donate without being paid. The question is whether this crowding-out effect also spills over into other donations, such as blood. In Hungary, for instance, the government had to force plasma donors to also become blood donors because of shortages.

Besides the ethics of using poorer people as donors, collecting more frequent high-volume donations for payment is not without risks. Plasma donation is in essence a protein (and not a water donation). It takes time to replenish protein stores. The effect of very frequent donations on donor safety has not been studied thoroughly. With regards to patient safety, it should be noted that America still does not accept European plasma because of the perceived risk of mad-cow disease.

American plasma is considered a "strategic" resource and can be prioritised for domestic use by the president. Europe needs to take back control of its plasma supply by correcting the unintended consequences of its "blood directive", which created an open market for blood products in 2003 but allows some plasma firms to sue national governments.

PHILIPPE VANDEKERCKHOVE

Chief executive

Belgian Red Cross-Flanders

Mechelen, Belgium

* In your series of articles advocating for payments to plasma donors, you stress the positive supply effects that payments may have. Appeals to increased efficiency, however important, are unlikely to persuade politicians and the public when the opposition to payments resides in deep-rooted ethical concerns. Starting with the seminal work of Nobel laureate Alvin Roth, economists have begun to seriously consider how to design effective market mechanisms while respecting moral beliefs, in order to reach a virtuous balance in the trade-offs between morality and efficiency.

Based also on our own research on ethically contentious transactions, we would suggest that policymakers collect two types of evidence before adopting extreme policies such as outright bans. First, pilot projects would help assessing the impact of various policy options. Second, policymakers should inform the public about this evidence, and take into account the ensuing prevailing opinions and ethical concerns in the population, instead of being based on pressures (in one direction or the other) from vocal but often scarcely representative groups.

NICOLA LACETERA

University of Toronto

MARIO MACIS

Johns Hopkins University

Baltimore, Maryland

Parlez vous?

Johnson's [column](#) on the importance of teaching foreign languages to young people was spot-on (May 12th). In the 16th century, Michel de Montaigne advocated learning a language while young. Otherwise, those languages "most differing from our own, and that which, if it not formed betimes, the tongue will grow too stiff to bend." A lifetime of teaching experience corroborates that observation.

DAVID STEINBERG
Professor emeritus at
Georgetown University
Bethesda, Maryland

On the job

Regarding a workable method for abolishing long-term unemployment (“[Make work, can’t work](#)”, May 12th), Sir Nicholas Soames and I are drafting a bill which would bestow upon the British government a duty to guarantee six months’ paid work in either the private, voluntary or public sector, for people who either have joined, or are at risk of joining, the ranks of the long-term unemployed.

People who are enrolled would regain self-confidence while they simultaneously maintain good habits, make new connections and contribute to their local community. Crucially they would also be earning a wage to spend in that community. Employers signing up for the scheme would be required to show that the jobs being created are additional roles, rather than substitutes. Taxpayers, meanwhile, would see their money spent on jobs, not benefits.

FRANK FIELD, MP
House of Commons
London

Public registers are wrong

Public registers of company owners in offshore financial centres are not the answer to problems surrounding tax evasion and the lack of financial transparency (“[The Salisbury effect](#)”, May 5th). Such registers are the brainchild of a group of unelected NGOs and lobbyists. There is no evidence to show that registers are effective, which is hardly surprising. Criminals intent on laundering money through a company are unlikely to add their true identity and address to a public register.

There is a better way of ensuring that global standards of transparency are upheld and criminals rooted out. In Jersey, we ensure that licensed service providers verify ownership of the companies they administer. These regulated providers, who must follow tried and tested know-your-customer procedures, have an incentive to make sure records are accurate, because false records may lead to a loss of their licence. Ownership data is freely available to the people that need it, the regulators and law enforcement officials, and is now automatically exchanged under the common reporting standard.

There is also a wider issue about the right to privacy. The exposure to cyber-risk, identity theft and misuse of data have been forgotten in the clamour for public registers. Moreover, there are many, perfectly legitimate individuals residing in unstable countries who, reasonably, may not want the details of the companies they own to be publicly available to everyone, including corrupt governments and various unscrupulous people.

GEOFF COOK
Chief executive
Jersey Finance
St Helier, Jersey

* Effective regulation, a reputable legal system and specialist expertise lie at the core of the British Virgin Islands’ financial-services industry. These qualities have helped cement our position as a leading facilitator of global business over the past 35 years and will doubtless continue to do so going forward.

The amendment included within Britain’s Sanctions and Anti-Money Laundering Bill by the House of Commons that purports to mandate the adoption of publicly accessible company registers by the British Overseas Territories, including the BVI, is unsatisfactory and ill-founded. A provision to this effect is unnecessary and its proponents are based on ill-informed opinion.

The BVI sits at the intersection of global activity to combat transborder financial crime through our commitment to developing innovative regulatory and technical initiatives, including the launch of our Beneficial Ownership Secure Search system (BOSSs) last year. This provides a mechanism by which authorities and law enforcement can access beneficial ownership information relating to BVI companies for the purpose of combating illicit financial activity.

There is no requirement in the eradication of transborder financial crime for registers of beneficial ownership to be publicly accessible. They do not equate to verified, accurate information on the ownership details of businesses unlike the systems currently in place in the BVI. Furthermore, there is no requirement for public accessibility in relation to tax compliance: the BVI already exchanges tax information in accordance with the Common Reporting Standards developed by the OECD.

Public registers are not a silver bullet solution to eradicate illicit financial activity. A public register flies in the face of privacy rights and the principles relating to personal data protection.

A requirement for public registers and the manner by which they can be imposed in fact raises fundamental constitutional questions given the BVI’s status as an Overseas Territory with exclusive competence in respect of such matters.

There is no global standard relating to publicly accessible registers and such a measure is not required by international regulatory bodies. The BVI is willing to adopt appropriate global standards, being committed to the eradication of illicit financial activity, but there must be a level playing field for all.

The BVI cannot accept attempts to force disproportionate measures on it without regard to its constitutional status.

D. ORLANDO SMITH
Premier and finance minister
Road Town, British Virgin Islands

Girls only

The notion that single-sex schools are “struggling” (“[Sex change](#)”, April 28th) sits at odds with the 30% increase in applications to girls’ day schools, such as my own. Overwhelmingly it is fathers who question the value of a single-sex education, citing the need to function in “the real world”. They miss the point. The highly sexualised online environment that teens are growing up in today is relentless and far removed from parents’ own school experiences. Our children inhabit a radically different world. Single-sex establishments provide space and time for girls in particular to hold on to their childhood a little longer, to find their voice and be comfortable in their own skin. So when they leave school at 18, they will be ready not only to hold their place in the world but to shake it up.

JANE LUNNON

Head

Wimbledon High School

London

Fashion for the over-50s

I was amazed at [Buttonwood](#)’s disparaging of men over 50, who can “go shirtless on sunny days or wear flip-flops. But that does not mean it is wise for them to do so” (April 28th). Many of your readers are men over 50. Are we to button down and boot up? There is an editorial penchant for shirtless male leaders in your pages. Maybe your male readers also dream of being shirtless and powerful. As for flip-flops, why not liberate stuffy self-importance with a little beach look? Flip-flop fetish forlorn.

JEAN-PIERRE BRIND’AMOUR

Calgary, Canada

* Letters appear online only

Inside Xinjiang

Apartheid with Chinese characteristics

Apartheid with Chinese characteristics

China has turned Xinjiang into a police state like no other

Totalitarian determination and modern technology have produced a massive abuse of human rights

Print edition | Briefing May 31st 2018

“THE prophet Sulayman approached his son and said to him, ‘I have received a message from God. I want you to circle the Earth and see if there are more people who are alive in spirit or more people who are dead in spirit.’ After a period the son returned and said, ‘Father I went to many places and everywhere I went I saw more people who were dead than those who were alive.’”

Hasan shared that message on a WeChat social-messaging group in 2015, when he was 23. Born in Yarkand, a town in southern Xinjiang, Hasan had moved to the provincial capital, Urumqi, to sell jade and shoes and to learn more about Islam. He described himself to Darren Byler, an anthropologist from the University of Washington, as a Sufi wanderer, a pious man with a wife and small daughter, who prayed five times a day and disapproved of dancing and immodesty.

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But in January 2015 the provincial government was demanding that everyone in Urumqi return to their native home to get a new identity card. “I am being forced to go back,” Hasan complained to Mr Byler. “The Yarkand police are calling me every day. They are making my parents call me and tell me the same thing.” Eventually, he and his family boarded a bus for the 20-hour journey home. It was hit by a truck. Hasan’s wife and daughter were killed. He was hospitalised. “It was the will of Allah,” he said.

Hasan hoped the authorities would allow him to return to Urumqi because of his injuries. No chance. Having lost wife, child and livelihood, Hasan lost his liberty, too. A fortnight after his accident, he was sent to a re-education camp for an indefinite period. There, for all his relatives know, he remains.

Hasan is one of hundreds of thousands of Uighurs, a Turkic-language people, who have disappeared in Xinjiang, China’s north-western province. It is an empty, far-flung place; Hasan’s home town of Yarkand is as close to Baghdad as it is to Beijing. It is also a crucial one. The region is China’s biggest domestic producer of oil and gas, and much of the fuel imported from Central Asia and Russia passes through on its way to the industries of the east coast. It is now a vital link in the Belt and Road Initiative, a foreign policy which aims to bind the Middle East and Europe to China with ties of infrastructure, investment and trade.

But on top of that it is the home of the Uighurs, the largest Muslim group in the country, and ethnically quite distinct from the Han Chinese. A recent history of Uighur unrest—in particular bloody inter-ethnic violence in Urumqi in 2009 that followed the murder of Uighurs elsewhere in China—and subsequent terrorism have sent the government’s repressive tendencies into overdrive. Under a new party boss, Chen Quanguo, appointed in 2016, the provincial government has vastly increased the money and effort it puts into controlling the activities and patrolling the beliefs of the Uighur population. Its regime is racist, uncaring and totalitarian, in the sense of aiming to affect every aspect of people’s lives. It has created a fully-fledged police state. And it is committing some of the most extensive, and neglected, human-rights violations in the world.

The not-quite-Gulag archipelago

The government is building hundreds or thousands of unacknowledged re-education camps to which Uighurs can be sent for any reason or for none. In some of them day-to-day conditions do not appear to be physically abusive as much as creepy. One released prisoner has said he was not permitted to eat until he had thanked Xi Jinping, the Chinese president, and the Communist Party. But there have been reports of torture at others. In January, 82-year-old Muhammad Salih Hajim, a respected religious scholar, died in detention in Urumqi.

Kashgar, the largest Uighur city, has four camps, of which the largest is in Number 5 Middle School. A local security chief said in 2017 that “approximately 120,000” people were being held in the city. In Korla, in the middle of the province, a security official recently said the camps are so full that officials in them are begging the police to stop bringing people.

As a result, more and more camps are being built: the re-education archipelago is adding islands even faster than the South China Sea. Adrian Zenz of the European School of Culture and Theology in Kortal, Germany, has looked at procurement contracts for 73 re-education camps. He found their total cost to have been 682m yuan (\$108m), almost all spent since April 2017. Records from Akto, a county near the border with Kyrgyzstan, say it spent 9.6% of its budget on security (including camps) in 2017. In 2016 spending on security in the province was five times what it had been in 2007. By the end of 2017 it was ten times that: 59bn yuan.

For all this activity, the government has not officially confirmed that the camps exist. They are not governed by any judicial process; detentions are on the orders of the police or party officials, not the verdict of a court. A woman working as an undertaker was imprisoned for washing bodies according to Islamic custom. Thirty residents of Ili, a town near the Kazakh border, were detained “because they were suspected of wanting to travel abroad,” according to the local security chief. Other offences have included holding strong religious views, allowing others to preach religion, asking where one’s relatives are and failing to recite the national anthem in Chinese.

A significant chunk of the total Uighur population is interned in this way. If the rate of detention in Kashgar applied to the province as a whole, 5% of the Uighur population of 10m would be detained. Other evidence suggests that this is quite possible. In February Radio Free Asia (RFA), a broadcaster financed by an independent agency of the American government, cold-called 11 families at random in Araltobe, in the north of the province, far from the Uighurs’ heartland. Six said family members had been sent to camps. In a village later visited by Agence France Presse in Qaraqash county, near Hotan, a fifth of adults had been detained over four months.

Maya Wang of Human Rights Watch, an advocacy group, reckons the overall number detained may be 800,000. Timothy Grose, a professor at Rose-Hulman University in Indiana, puts the total between 500,000 and 1m, which would imply that something like a sixth to a third of young and middle-aged Uighur men are being detained, or have been at some point in the past year.

The Chinese government argues that harsh measures are needed to prevent violence associated with Uighur separatism. In 2013 a Uighur suicide-driver crashed his car into pedestrians in Tiananmen Square in Beijing. In 2014 a knife-wielding Uighur gang slaughtered 31 travellers at a train station in Kunming, Yunnan province, an incident some in China compared to the September 11th 2001 attacks on America. Unrest in Yarkand later that year led to a hundred deaths; an attack at a coal mine in Aksu killed 50 people. Kyrgyzstani authorities blamed Uighur terrorists for an attempt to blow up the Chinese embassy in Bishkek; Uighurs have been blamed for a bombing which killed 20 at a shrine in Bangkok popular with Chinese tourists.

There are worrying links, as the Chinese authorities are keen to point out, between Uighur separatism and global *ji*had, especially in the Uighur diaspora, which is based in Turkey. Chinese and Syrian officials say 1,500 Uighurs have fought with Islamic State (IS) or Jabhat al-Nusra (part of al-Qaeda) in Syria. A group called the Turkestan Islamic Party, which demands independence for Xinjiang, is banned under anti-terrorist laws in America and Europe. In 2016 a defector from IS provided a list of foreign recruits; 114 came from Xinjiang.

In the grid

But the system of repression in the province goes far beyond anything that would be justified by such proclivities and affiliations. In Hotan there is a new police station every 300 metres or so. They are called “convenience police stations”, as if they were shops—and in fact they do offer some consumer services, such as bottled water and phone recharging. The windowless stations, gunmetal grey, with forbidding grilles on their doors, are part of a “grid-management system” like that which Mr Chen pioneered when he was party boss in Tibet from 2011 to 2016. The authorities divide each city into squares, with about 500 people. Every square has a police station that keeps tabs on the inhabitants. So, in rural areas, does every village.

At a large checkpoint on the edge of Hotan a policeman orders everyone off a bus. The passengers (all Uighur) take turns in a booth. Their identity cards are scanned, photographs and fingerprints of them are taken, newly installed iris-recognition technology peers into their eyes. Women must take off their headscarves. Three young Uighurs are told to turn on their smartphones and punch in the passwords. They give the phones to a policeman who puts the devices into a cradle that downloads their contents for later analysis. One woman shouts at a policeman that he is Uighur, why is he looking at her phone?

There can be four or five checkpoints every kilometre. Uighurs go through them many times a day. Shops and restaurants in Hotan have panic buttons with which to summon the police. The response time is one minute. Apparently because of the Kunming knife attack, knives and scissors are as hard to buy as a gun in Japan. In butchers and restaurants all over Xinjiang you will see kitchen knives chained to the wall, lest they be snatched up and used as weapons. In Aksu QR codes containing the owner’s identity-card information have to be engraved on every blade.

Remarkably, all shops and restaurants in Hotan must have a part-time policeman on duty. Thousands of shop assistants and waiters have been enrolled in the police to this end. Each is issued with a helmet, flak jacket and three-foot baton. They train in the afternoon. In the textile market these police officers sit in every booth and stall, selling things; their helmets and flak jackets, which are uncomfortable, are often doffed. A squad of full-time police walks through the market making sure security cameras are working and ordering shop assistants to put their helmets back on. Asked why they wear them, the assistants reply tersely “security”.

At the city’s railway station, travellers go through three rounds of bag checks before buying a ticket. On board, police walk up and down ordering Uighurs to open their luggage again. As the train pulls into Kashgar, it passes metal goods wagons. A toddler points at them shouting excitedly “Armoured car! Armoured car!” Paramilitary vehicles are more familiar to him than rolling stock.

Uniformed shop assistants, knife controls and “convenience police stations” are only the most visible elements of the police state. The province has an equally extensive if less visible regime that uses yet more manpower and a great deal of technology to create total surveillance.

Improving lives, winning hearts

Under a system called *fanghuiju*, teams of half a dozen—composed of policemen or local officials and always including one Uighur speaker, which almost always means a Uighur—go from house to house compiling dossiers of personal information. *Fanghuiju* is short for “researching people’s conditions, improving people’s lives, winning people’s hearts”. But the party refers

to the work as “eradicating tumours”. The teams—over 10,000 in rural areas in 2017—report on “extremist” behaviour such as not drinking alcohol, fasting during Ramadan and sporting long beards. They report back on the presence of “undesirable” items, such as Korans, or attitudes—such as an “ideological situation” that is not in wholehearted support of the party.

Since the spring of 2017, the information has been used to rank citizens’ “trustworthiness” using various criteria. People are deemed trustworthy, average or untrustworthy depending on how they fit into the following categories: 15 to 55 years old (ie, of military age); Uighur (the catalogue is explicitly racist: people are suspected merely on account of their ethnicity); unemployed; have religious knowledge; pray five times a day (freedom of worship is guaranteed by China’s constitution); have a passport; have visited one of 26 countries; have ever overstayed a visa; have family members in a foreign country (there are at least 10,000 Uighurs in Turkey); and home school their children. Being labelled “untrustworthy” can lead to a camp.

To complete the panorama of human surveillance, the government has a programme called “becoming kin” in which local families (mostly Uighur) “adopt” officials (mostly Han). The official visits his or her adoptive family regularly, lives with it for short periods, gives the children presents and teaches the household Mandarin. He also verifies information collected by *fanghuiju* teams. The programme appears to be immense. According to an official report in 2018, 1.1m officials have been paired with 1.6m families. That means roughly half of Uighur households have had a Han-Chinese spy/indoctrinator assigned to them.

Such efforts map the province’s ideological territory family by family; technology maps the population’s activities street by street and phone by phone. In Hotan and Kashgar there are poles bearing perhaps eight or ten video cameras at intervals of 100-200 metres along every street; a far finer-grained surveillance net than in most Chinese cities. As well as watching pedestrians the cameras can read car number plates and correlate them with the face of the person driving. Only registered owners may drive cars; anyone else will be arrested, according to a public security official who accompanied this correspondent in Hotan. The cameras are equipped to work at night as well as by day.

Because the government sees what it calls “web cleansing” as necessary to prevent access to terrorist information, everyone in Xinjiang is supposed to have a spyware app on their mobile phone. Failing to install the app, which can identify people called, track online activity and record social-media use, is an offence. “Wi-Fi sniffers” in public places keep an eye, or nose, on all networked devices in range.

Next, the records associated with identity cards can contain biometric data including fingerprints, blood type and DNA information as well as the subject’s detention record and “reliability status”. The government collects a lot of this biometric material by stealth, under the guise of a public-health programme called “Physicals for All”, which requires people to give blood samples. Local officials “demanded [we] participate in the physicals,” one resident of Kashgar told Human Rights Watch, an NGO. “Not participating would have been seen as a problem...”

A system called the Integrated Joint Operations Platform (IJOP), first revealed by Human Rights Watch, uses machine-learning systems, information from cameras, smartphones, financial and family-planning records and even unusual electricity use to generate lists of suspects for detention. One official WeChat report said that verifying IJOP’s lists was one of the main responsibilities of the local security committee. Even without high-tech surveillance, Xinjiang’s police state is formidable. With it, it becomes terrifying.

In theory, the security system in Xinjiang applies to everyone equally. In practice it is as race-based as apartheid in South Africa was. The security apparatus is deployed in greatest force in the south-west, where around 80% of Uighurs live (see map). In a city like Shihezi, which is 95% Han, there are far fewer street checkpoints, if any, and a normal level of policing. Where there are checkpoints, Han Chinese are routinely waved through. Uighurs are always stopped.

The minarets torn down

Islam is a special target. In Hotan, the neighbourhood mosques have been closed, leaving a handful of large places of worship. Worshippers must register with the police before attending. At the entrance to the largest mosque in Kashgar, the Idh Kha—a famous place of pilgrimage—two policemen sit underneath a banner saying “Love the party, love the country”. Inside, a member of the mosque’s staff holds classes for local traders on how to be a good communist. In Urumqi the remaining mosques have had their minarets knocked down and their Islamic crescents torn off.

Some 29 Islamic names may no longer be given to children. In schools, Uighur-language instruction is vanishing—another of the trends which have markedly accelerated under Mr Chen. Dancing after prayers and specific Uighur wedding ceremonies and funerary rites are prohibited.

Unlike those of South Africa, the two main racial groups are well matched in size. According to the 2010 census, Uighurs account for 46% of the province’s population and Han Chinese 40% (the rest are smaller minorities such as Kazakhs and Kirgiz). But they live apart and see the land in distinct ways. Uighurs regard Xinjiang as theirs because they have lived in it for thousands of years. The Han Chinese regard it as theirs because they have built a modern economy in its deserts and mountains. They talk of bringing “modern culture” and “modern lifestyle” to the locals—by which they mean the culture and lifestyle of modern Han China.

So how have the Han and Uighur reacted to the imposition of a police state? Yang Jiehun and Xiao Junduo are Han Chinese veterans of the trade in Hotan jade (which the Chinese hold to be the best in the world, notably in its very pale “mutton-fat” form). Asked about security, they give big smiles, a thumbs-up and say the past year’s crackdown has been “really well received”. “In terms of public security, Urumqi is the safest it has ever been,” says Mr Xiao, whose family came to the province in the 1950s, when the People’s Liberation Army and state-owned enterprises were reinforcing the border with the Soviet Union. “The Uighurs are being helped out of poverty,” he avers. “They understand and support the policy.”

Not all Han Chinese in Xinjiang are quite as enthusiastic. Tens of thousands came to the province fairly recently, mostly in the 1990s, to seek their fortunes as independent traders and business people, rather than being transferred there by state-

owned companies or the army. They approve of better security but dislike the damage being done to the economy—for example, the way movement controls make it harder to employ Uighurs. So far, this ambivalence is not seriously weakening the support among the Han and, for the government in Beijing, that is all that matters. It sees Xinjiang mainly as a frontier. The Han are the principal guarantors of border security. If they are happy, so is the government.

The Uighur reaction is harder to judge; open criticism or talking to outsiders can land you in jail. The crackdown has been effective inasmuch as there have been no (known) Uighur protests or attacks since early 2017. It seems likely that many people are bowing before the storm. As Sultan, a student in Kashgar, says with a shrug: “There’s nothing we can do about it.”

But there are reasons for thinking resentment is building up below the surface. According to anthropological work by Mr Byler and Joanne Smith Finley of Newcastle University in Britain, a religious revival had been under way before the imposition of today’s harsh control. Mosques were becoming more crowded, religious schools attracting more pupils. Now the schools and mosques are largely empty, even for Friday prayers. It is hard to believe that religious feeling has vanished. More likely a fair bit has gone underground.

And the position of Uighurs who co-operate with the Han authorities is becoming untenable. The provincial government needs the Uighur elite because its members have good relations with both sides. The expansion of the police state has added to the number of Uighurs it needs to co-opt. According to Mr Zenz and James Leibold of La Trobe University in Melbourne, 90% of the security jobs advertised in 2017 were “third tier” jobs for low-level police assistants: cheap, informal contracts which mainly go to Uighurs (see chart). But at the same time as needing more Uighurs, the authorities have made it clear that they do not trust them. Part of the repression has been aimed at “two-faced officials” who (the party says) are publicly supporting the security system while secretly helping victims. Simultaneously recruiting more Uighurs and distrusting them more creates an ever larger pool that might one day turn against the system from within.

A Han businessman who travels frequently between Urumqi and Kashgar says he used to feel welcome in the south. “Now it has all changed. They are not afraid. But they are resentful. They look at me as if they are wondering what I am doing in their country.” One of the few detainees released from the camps, Omurbek Eli, told RFA that the authorities “are planting the seeds of hatred and turning [detainees] into enemies. This is not just my view—the majority of people in the camp feel the same way.”

Hasan’s warning

China’s Communist rulers believe their police state limits separatism and reduces violence. But by separating the Uighur and Han further, and by imposing huge costs on one side that the other side, for the most part, blithely ignores, they are ratcheting up tension. The result is that both groups are drifting towards violence.

Before he disappeared, Hasan, the self-styled Sufi wanderer, expressed Xinjiang’s plight. “To be Uighur is hard,” he wrote on WeChat in 2015. “I don’t even know what I am accused of, but I must accept their judgment. I have no choice. Where there is no freedom, there is tension. Where there is tension there are incidents. Where there are incidents there are police. Where there are police there is no freedom.”

This article appeared in the Briefing section of the print edition under the headline “Apartheid with Chinese characteristics”

Running San Francisco

Reach for the sky

Reach for the sky

Can a new mayor fix San Francisco's housing and homelessness problems?

A special election forces a hard look at twin crises in one of America's richest cities

Print edition | United States May 31st 2018

THE cliché of luxury penthouses and Gucci stores cheek-by-jowl with filth and poverty is usually reserved for poor-world entrepôts. But the contrasts in San Francisco—the richest city in America by median household income—could in places rival those in Mumbai. Fresh human excrement and discarded needles lie scattered on the streets of the Tenderloin district just a few blocks from the five-star hotels of Union Square in the city's downtown. Complaints about shit in the street more than tripled, to 21,000, in the eight years to 2017; for needles the number shot up from 290 in 2009 to nearly 6,400 in 2017. The city's sanitation department spends half its \$60m street-cleaning budget on the stuff. Meanwhile, a typical one-bedroom flat now rents for \$3,440 per month, according to Zumper, a rental website—the highest figure in the country. The median house price has nearly doubled in the past five years, to \$1.6m.

On June 5th San Franciscans will elect a new mayor. The special election, called after the previous mayor died suddenly of a heart attack, has been defined by the twin topics of housing and homelessness. There are three leading candidates, all liberal: London Breed, Jane Kim and Mark Leno. Each would represent a first as mayor of the city. Ms Breed would be the first black woman, Ms Kim the first Asian woman and Mr Leno the first openly gay man. On housing, though, they take different stances. Whereas Ms Breed has pledged to liberalise the city's housing regulations to rein in the city's runaway rents, Ms Kim and Mr Leno have taken a cooler approach.

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San Francisco is an extreme example of a national trend among big cities: demand for housing far exceeds supply. Since 2010 new jobs in San Francisco have outpaced additional homes by a ratio of eight to one. Critics tend to blame the most visible side of the equation. Anti-gentrification activists have shot at tech-workers' commuter buses with pellet guns and vandalised the whizzy electric scooters dotting the pavements. But they pay too little attention to the supply side.

The city's zoning laws are among the most restrictive in the country. They limit the height and density of new buildings and give local residents, often property owners, the ability to severely delay new development. Most of the city's land area, particularly the posh western bits, is zoned for single-family homes, which now comprise one-third of its housing stock. Almost all the city's land faces height limits of 40 feet, or about three storeys. The result is a city where rents are sky-high but buildings are not.

The planning process is a bureaucratic quagmire, made worse by NIMBYism and nonsensical neighbour complaints. A 75-unit complex in the Mission district is being held up by an investigation into whether a laundromat qualifies as a historic site. A 150-unit housing project for pensioners, with 20% of flats set aside for the formerly homeless, was nixed after fierce opposition from locals in the prosperous Forest Hill neighbourhood. City councillors use the process as a negotiating tactic to extract fees and taxes from developers. "There's regulatory capture and artificial scarcity all across the city," says Laura Clark of YIMBY Action, a local pressure group.

Flood the zone

Changing the system will be difficult. One bill, called SB 827, put forward in the California state legislature this year, died in committee but may be resuscitated. It proposed overriding local zoning restrictions to spur building in areas near public transport. It would have applied to 96% of San Francisco's plots of land. But the proposal has had a frosty reception from the mayoral candidates. Mr Leno does not believe that "one-size-fits-all state zoning laws" work. Ms Kim sees SB 827 as too generous to developers: "If I'm going to give you ten additional storeys, I'm going to want you to increase your middle-income housing programme," she says.

Ms Breed, who supported SB 827, is more realistic. "At the end of the day people lose," she says. "Housing still isn't built because of these obstructionists." She would also like to cut bureaucratic delays and slash building times in half. Though she grew up in public housing and until recently lived with a flatmate, Ms Breed has come under attack for being too cosy with developers (or "real-estate speculators" as leftish critics vilify them)—and with the right. When her campaign wooed Republican voters by circulating an endorsement letter from George Shultz, a former secretary of state under Ronald Reagan, many left-wing activists were outraged.

A further constraint on the city's housing supply is its wide-ranging rent-control scheme, which now applies to around 45% of units. All three leading candidates, including Ms Breed, would like to see it expanded. "Housing is one of those goods that

the market can never take care of all people for,” says Ms Kim. Nor is housing affordability “merely a market problem that can be solved by the market”, according to Mr Leno. For residents, it is an appealing solution in a city increasingly populated by the obscenely well-paid. Yet rent-control policies make housing shortages worse. A recent paper by Rebecca Diamond, Tim McQuade and Frank Qian, all of Stanford University, found that such policies had driven up rents by 5% citywide because they restricted supply. Awkwardly, other west-coast cities, like Portland, Oregon, are increasingly considering San Francisco’s rental restrictions as a solution to their own woes.

The candidates must also deal with homelessness. Here they have fewer differences than over housing, although Mr Leno has pledged, rather unrealistically, to eliminate street sleeping by 2020. At the last count, in 2017, San Francisco had a homeless population of 7,500, 58% of whom live on the streets or without formal shelter. Despite the uptick in complaints about street cleanliness (see map), those numbers have barely budged since 2013. That compares favourably with the rest of the state, which saw a 14% increase in homelessness from 2016 to 2017. In Oakland, across the bay from downtown San Francisco, the homeless population surged 25% from 2015 to 2017. In one large homeless encampment in Oakland, hidden under the interstate, makeshift tents cluster together beneath flimsily tied tarps. San Francisco, on the other hand, has nearly eliminated such encampments in recent years.

San Francisco’s programmes, which cost \$250m per year, are praised by many campaigners against homelessness. Still, the city could spend its money more efficiently. About two-thirds of its homelessness budget goes on rent subsidies and “permanent supportive housing”. Early intervention is often much cheaper. Jeff Kositsky, the city’s director of homelessness services, cites the example of a driver for Lyft, a ride-hailing service, who nearly fell into homelessness after his car was damaged. The city kept him off the streets by simply paying off the cost of his car.

To voters, though, the problem seems to be getting worse. This is because rates of mental illness and addiction among the homeless have increased. Use of more potent mind-bending drugs, like fentanyl and methamphetamine, has risen, too. Nearly 70% of psychiatric emergency-room visits by the homeless are the result of methamphetamine-induced psychosis. “There’s not more homelessness than before. It’s just a lot more visible,” says Mr Kositsky. All the candidates favour additional spending to house the homeless, funded by levying a tax on large corporations or by issuing bonds.

The mayoralty of San Francisco has proved a launching pad for ambitious politicians, boosting Dianne Feinstein to the Senate and Gavin Newsom to favourite in the governor’s race. But the new mayor will have little over a year to show progress on the city’s housing and homelessness before the next election rolls round. Given the stubborn persistence of these problems, the winner’s tenancy in the mayor’s office may be rather short-term.

This article appeared in the United States section of the print edition under the headline “Reach for the sky”

A fine balance

California considers taking custody of some street people

A bill before the state legislature must weigh legal rights against well-being

Print edition | United States May 31st 2018

IN 1967 Ronald Reagan, then governor of California, signed into law the Lanterman-Petris-Short Act, an ambitious reform of the state's mental-health laws. It was part of a wave of changes that closed asylums in the state and around the country. Half a century later, the state legislature is reviewing those decisions.

In February Scott Wiener, a state senator who represents San Francisco, introduced Senate Bill 1045. The bill aims to make it easier for his home city, as well as Los Angeles, to oblige chronically homeless people who suffer from mental illness or addiction to accept the appointment by a judge of a person or institution to look after them (a concept called "conservatorship"). London Breed, who is running for mayor of San Francisco, has backed the proposal.

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The bill would affect between 40 and 60 homeless people in San Francisco, reckons Barbara Garcia of the city's Public Health Department. That is less than 1% of its official homeless population. Along with a number of similar bills aimed at loosening the legislation of 1967—including two that would expand the "gravely disabled" standard for involuntary treatment—it represents a shift in ideas about how to care for addicted or mentally ill homeless people. But it raises the knotty problem of balancing an individual's mental health against their civil liberties.

Current law in California allows authorities to confine those who are gravely disabled or present a danger to themselves for, at first, 72 hours, then an additional 14 days and then a further 30 days. But if patients show a minimal degree of competence—finding food and clothing, for example—at the end of any of those periods, they must be released. Many relapse, and some end up in the arms of the law. "Mentally ill people are still being institutionalised," says Dominic Sisti of the University of Pennsylvania and the lead author of a paper arguing for the return of asylums. "They are just in jails."

The fate of the bill may eventually be determined by public opinion. California's homeless population has become both more visible and, with the presence of drugs like fentanyl, more violently unpredictable. That may be moving legislators to embrace what Mr Sisti terms a "parentalist" mode of care: Mr Wiener's bill passed its first three committees by 6-1, 7-0 and 5-2 votes.

This article appeared in the United States section of the print edition under the headline "A fine balance"

Counting Puerto Rico's dead

Eight months after Hurricane Maria, the human toll is still unclear

One thing is clear: a lot more were killed than the official count of 64

Print edition | United States May 31st 2018

MARIA was a brief visitor to Puerto Rico. The category-4 hurricane made landfall at 6am on September 20th last year and 11 hours later she was gone. She left a trail of destruction. Some 300,000 people were displaced; and the death toll? No one knows for sure.

The official estimate of 64 deaths seemed measly by contrast. That number includes only those directly killed by the hurricane, from flying debris and the like. Importantly, it excludes indirect deaths: disruptions to medical care or hurricane-induced suicides, for example. A back-of-the-envelope calculation by *The Economist* of excess mortality above that expected by deaths in previous years puts the toll at about 1,200.

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A paper published this week in the *New England Journal of Medicine* provides perhaps the best estimate to date, albeit an uncertain one. Using clever sampling techniques of some 3,000 Puerto Rican households, on a door-by-door basis, the researchers attribute some 26 deaths to Maria in 2017. Applying that number to the population as a whole gives an estimate of 793 to 8,498 deaths. (The confidence intervals are large to account for the tiny number of actual deaths reported.) That range, however, is likely to be an underestimate: single-occupancy households that were interviewed, by definition, survived the hurricane. De-biasing those households for implicit survivorship provides a final estimate of some 1,506 to 9,889 deaths.

That is a large range indeed. But counting deaths in the wake of disasters is not a problem unique to Puerto Rico. The death toll from Hurricane Katrina in 2005 is still disputed.

This article appeared in the United States section of the print edition under the headline "Counting Puerto Rico's dead"

Seeking the perfect prescription

Some good news from the fight against opioids

But some bad news too

Print edition | United States May 31st 2018

SOME 382,000 Americans have overdosed on opioids—a group of drugs that includes prescription painkillers, heroin and synthetics—since the year 2000. That is greater than the number of American combat deaths in the second world war and the Korean and Vietnam wars combined. Despite this epic toll, there are early signs that at least one battle may be ending.

The Centres for Disease Control and Prevention (CDC) provide the best data for tracking the opioid epidemic. Its latest data, which cover the 12 months to the end of October 2017, show that opioids were responsible for some 46,041 deaths (see chart) in that period. While provisional and subject to revision, that number was at least not dissimilar to the previous month's figure of 46,202.

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Two trends emerge from the numbers. The first gives cause for cheer: deaths from heroin and prescription opioids are falling. Combined, the two drugs were responsible for 29,600 deaths in the 12 months to October 2017, 4% below their peak in figures released five months earlier. The second trend provides less reason for optimism. Deaths from synthetic opioids such as fentanyl—a drug up to 50 times stronger than heroin—rose 12% between May and October last year, to 26,760. Assuming the two trends have continued, deaths from synthetic opioids probably surpassed those from heroin and prescription drugs in February this year.

The precise workings of the epidemic in recent months are not well understood, but a few elements stand out. The first is that deaths from prescription medication are likely to have been pushed down by lower availability of those drugs. Official data from the CDC show that prescription rates were nearly 20% lower in 2016 than at their 2012 peak. IQVIA, a health consultancy, reckons that prescriptions fell by another 10% in 2017. Donald Burke, dean of the University of Pittsburgh's graduate school of public health, thinks there is “almost certainly cause and effect” between prescription rates and deaths.

But there may be unintended consequences if alternatives to painkillers are not made available to addicts. One study assessed the impact of reformulating OxyContin, a prescription opioid, to prevent it being crushed and snorted to extract its potent active ingredient. It found that the reformulation simply led to a one-for-one replacement of deaths by heroin.

The increased use of naloxone, a drug which reverses the effects of an overdose, appears to have helped reduce death rates. Emergency-room visits caused by drug overdoses rose 30% in the 12 months to September 2017, while deaths rose by a more modest 17%. The drug is becoming “as important as having a defibrillator” says Michael Barnett, a professor of health policy at Harvard University.

The emergence of new synthetic drugs, such as carfentanil, which is 100 times stronger than fentanyl, shows how hard it is to get ahead of the epidemic. Forewarning users before they take deadly doses will help. Fentanyl testing strips, which cost just \$1, allow addicts to test for the presence of deadly opioids before they take them. In time, such kits might save the lives of other drug users too. Deaths from a mix of cocaine and synthetic opioids—which suggests that the two were unexpectedly and mistakenly laced together—more than doubled to 4,500 in 2016.

Experts agree that the most effective way to fight addiction is with medication-based treatment, such as methadone. But just one-third of Americans live in counties with treatment centres providing these kinds of drugs. For real progress it is necessary to look north. Vancouver has pioneered the use of safe-injection sites. Seattle and other progressive enclaves of America would like to follow their lead but they face stern opposition. America's attorney-general, Jeff Sessions, has threatened to prosecute such sites under the “crack house statute”. Such sites, claims the Department of Justice, will only “encourage and normalise heroin use”.

This article appeared in the United States section of the print edition under the headline “Seeking the right prescription”

Suffer the children

American border officials are separating migrant families

It is unprecedented in American history or international practice

Print edition | United States May 31st 2018

MIRIAN and her 18-month-old son fled Honduras after soldiers threw tear gas into their home. They requested asylum at the American border with Mexico five weeks later. Mirian surrendered her Honduran ID card and her son's birth certificate, which listed her as his mother, whereupon immigration officers took her son. "My son was crying as I put him in the seat," Mirian told a court. "I did not even have the chance to comfort my son, because the officers slammed the door shut as soon as he was in his seat. I was crying too. I cry even now when I think about that moment."

Since October, hundreds of children have been taken from their parents at the border and put in separate facilities. In March 2017, John Kelly, then secretary of homeland security, suggested his department would do that "to deter more movement along this terribly dangerous network". The administration has since backed away from the rationale of deterrence.

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But this April Jeff Sessions, the attorney-general, announced a "zero tolerance" policy towards illegal immigration, vowing to prosecute unlawful border crossings and to separate parents and children "as required by law". Entering America illegally is a criminal misdemeanour, punishable by up to six months in jail.

America is not just imprisoning people who are in the country illegally. According to the American Civil Liberties Union (ACLU), they are imprisoning asylum-seekers who present themselves at the border—in violation of international law, the Homeland Security Department's stated policies and the Fifth Amendment's due-process guarantee. And once they release border-crossers, the government appears to make little effort to reunite them with their children. Lee Gelernt, the lead lawyer in the ACLU's case against the Trump administration over the separations, calls it "the worst thing I've seen in 25-plus years of doing this work".

Separations also happened under previous administrations, but generally they were inadvertent. Under the Obama administration, says John Sandweg, a former acting director of America's immigration police, "the overarching goal was family unity...even if we were enforcing the law against them." Families were detained together while the government adjudicated their status.

One near-parallel to America's current immigration practices came in 2005, when George W. Bush's administration ramped up criminal prosecutions for border crossing, rather than just sending people back voluntarily or removing them through the civil immigration system. As a result, federal courts along the border found their resources strained. Prosecutions for people- and drug-smuggling declined as those for petty immigration violations rose.

Amnesty International, an advocacy group, has urged America to end the practice of separating asylum-seeking families—something done by few if any other rich countries. In the Netherlands, asylum-seeking families are detained together, and the children can attend school. Even Australia, which detains asylum-seekers arriving by boat in miserable conditions in Nauru and Papua New Guinea, does not take children from their parents.

This article appeared in the United States section of the print edition under the headline "Suffer the children"

Self-immolation

Racist tweets from Roseanne spur ABC to cancel "Roseanne"

*The creator and star of a hit show is hoist by her own petard***Print edition | United States** May 31st 2018

ONE of the defining features of life under Donald Trump is that even as his presidency reassures Islamophobes, xenophobes, misogynists, bigots and racists, it simultaneously stiffens the resolve of Americans who value tolerance and inclusion. Take the reaction to a tweet by Roseanne Barr, the eponymous star of the smash-hit reboot of a 20-year-old sitcom. On May 29th Ms Barr tweeted, in response to a thread discussing a loony conspiracy theory about the CIA spying on French presidential candidates in Barack Obama's time, that "Muslim brotherhood & planet of the apes had a baby=vj". She was referring to Valerie Jarrett. Ms Jarrett, who was born in Iran but is not Muslim, is the daughter of a distinguished black pathologist and served as an aide to Mr Obama.

Ms Barr later deleted her tweets and apologised to Ms Jarrett. The response was nonetheless swift. Within hours of the tweet, ABC, the television network that airs "Roseanne", cancelled a planned second season. "Roseanne's Twitter statement is abhorrent, repugnant and inconsistent with our values, and we have decided to cancel her show," Channing Dungey, head of ABC entertainment, said in a statement on May 29th. Bob Iger, the boss of Disney, which owns ABC, tweeted that "there was only one thing to do here, and that was the right thing".

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The end of the "Roseanne" reboot is a loss for ABC—more than 27m viewers tuned in to the first episode. The network had just started to promote the show's next season to advertisers. ABC's motivation in cancelling the show was mainly economic: advertisers would have boycotted it, says Clint Wilson, the author of a book on racism and the media. It is a reflection of the growing willingness of corporations to take a political stand; after a recent massacre at a high school in Florida, Delta, an airline, Enterprise, a car-rental company, and other big corporations cut ties with the National Rifle Association, a pro-gun lobby.

It is not the first time Ms Barr's political views have caused consternation. Now a fervent Trump supporter, she once ran for the presidency on a Green Party ticket and championed liberal views on gay rights and abortion. But she has increasingly taken to retweeting conspiracy theories from the fringes of the internet. On the same day as posting her missive about Ms Jarrett, Ms Barr also tweeted that Chelsea Clinton, daughter of Bill and Hillary, was married to a nephew of George Soros, a philanthropist. She called Mr Soros "a Nazi who turned in his fellow Jews 2 be murdered in German concentration camps & stole their wealth". In late March she accused David Hogg, a teenager who survived the Florida shootings, of giving a Nazi salute.

Last year Ms Barr's children took control of her Twitter account, deleted her past tweets and changed her password. Shortly before the premiere of the "Roseanne" reboot, she was back on Twitter. ABC took a risk when it commissioned the revival of a show about the lives of an unremarkable working-class family in the Midwest. The main danger, it turns out, was the star of the show.

This article appeared in the United States section of the print edition under the headline "Roseanne's self-immolation"

Lexington

John Bolton, the world's hope

*The belligerent national security adviser has a historic opportunity to stick it to his critics***Print edition | United States** May 31st 2018

JOHN BOLTON is not well-liked in Washington. A warmonger and bully, the national security adviser is disdainful of the bipartisan foreign-policy world and the governing institutions its members cycle in and out of. That he oversees one of them is typical of the plate-smashing Trump administration. Yet few doubt that Mr Bolton is a wily operator. As President Donald Trump's third national security adviser—and the first with previous experience of civilian bureaucracy—he has already demonstrated his mastery of the inter-agency policy process. His role in derailing, at least temporarily, Mr Trump's planned meeting with Kim Jong Un in Singapore therefore demands scrutiny.

Mr Bolton suggested the “Libya model” was what America wanted from North Korea. That was not illogical. Mr Trump had demanded Mr Kim take the same step as Muammar Qaddafi in 2003: denuclearisation in return for sanctions relief. Yet the fact that Qaddafi was later bombed from power by a NATO intervention, dragged from his hiding place by insurgents, sodomised with a bayonet and shot dead, made Mr Bolton's choice of precedent complicated. The Libya model is what Mr Kim fears most. It is prime evidence for the theory that has underpinned his regime's nuclear programme, to the North Korean people's cost, for five decades: possession of nuclear weapons equals regime survival; disarmament equals regime endangerment.

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The North Korean smackdown to Mr Bolton (“We do not hide our feelings of repugnance towards him”) was predictable. But then Mr Trump blundered in. Wrongly assuming Mr Bolton had referred to the American-led bombing of Libya, not to the disarmament that preceded it, he said it didn't sound like what he had in mind for Mr Kim. But then he added that, yes, now you come to mention it, if the North Korean despot wouldn't make a deal in Singapore, his regime would “most likely” have to be “decimated”. When Mike Pence parroted that threat, the North Koreans called the vice-president “ignorant and stupid” and threatened a nuclear war. Mr Bolton went to see Mr Trump about that. The president called off the summit soon after. Mr Bolton, who doubts it is worth negotiating with Mr Kim and has long advocated toppling his regime, may not be displeased with that outcome.

At the least, he clearly intended to add a harder edge to Mr Trump's newfound enthusiasm for the “honourable” Mr Kim. In the absence of many other moderating influences on Mr Trump—whose confidence in his ability to direct global affairs appears to be growing by the day—this suggests Mr Bolton could play a more positive role than his many critics have countenanced. They fear he may lead Mr Trump into a catastrophic conflict, a valid concern. Yet it seems likelier Mr Bolton's scepticism about diplomacy, apparent good standing with the president and willingness to speak truth to power could mitigate a more pressing risk: that the president will expend a rare moment of American leverage with Mr Kim on a hasty, ill-considered deal that could leave East Asia even more insecure than it is now. “There's a synergy between Trump's desire for a deal and Bolton's ideological prejudices,” notes Jeffrey Bader, an East Asia guru and former diplomat.

This apparent turnaround in Mr Bolton's role reflects a more dramatic change in Mr Trump. The president spent much of last year threatening Mr Kim with “fire and fury”. By demanding an array of military options against North Korea, he also suggested he was in earnest. His appointment of the bellicose Mr Bolton, to replace H.R. McMaster, reinforced that impression. And if this scared the Washington crowd, it appears to have terrified Mr Kim, as well as China and South Korea, both of which fear a war on the peninsula more than they fear North Korea's nuclear arsenal. With their support, Mr Trump imposed the toughest sanctions regime on North Korea in over a decade, a substantial achievement. Yet the alacrity with which he has since melted in the face of Mr Kim's request for talks has made his war talk seem less credible. Arguably, it has exposed Mr Trump as the actor-politician—with a penchant for talking tough, a lifelong aversion to costly wars and no fixed purpose beyond concern for his own interests—that he always was. It is hard to see the sanctions regime surviving that realisation intact; China and South Korea are already itching to restore their economic ties to North Korea. This may help explain why Mr Trump, notwithstanding the Bolton-instigated hiatus, seems keener for a deal with Mr Kim than ever.

It also underlines another misconception about Mr Trump's foreign policy. Relentless media attention to his team, including Mr Bolton, is based on an assumption that he would be more easily influenced than he has turned out to be. The president likes to hear diverse opinions—hence his desire for a fire-eater like Mr Bolton, a type of adviser he lacked. But he has made the big foreign-policy calls himself, often, as in his swift acceptance of Mr Kim's invitation, on his own initiative and in the high-rolling way he ran his business. This is why it seems likely that the summit with Mr Kim will be revived and that some sort of deal, or semblance of a deal, will result: Mr Trump wants that. In turn, this is why Mr Bolton's ideological obduracy looks less risky than welcome.

Bolton braces

The deal, if it comes, is unlikely to contain much detail. The task of filling in the gaps—on how Mr Kim's commitment to a phased denuclearisation might be verified, for example, or on whether his short-range missiles could be included in it—would

fall to Mike Pompeo, the secretary of state, and Mr Bolton. It would be a perilous undertaking, requiring them to deal not only with North Korea, but also with Mr Trump's desire to be seen to have delivered world peace. And a suspicion that Mr Pompeo is unduly keen to stay tight with the president suggests only Mr Bolton might be up to it. For such a Washington bogeyman to play that heroic role would be extraordinary. Then again, who could have predicted Mr Trump negotiating with Mr Kim?

Education in Mexico

An object lesson

An object lesson

Mexico's crucial education reform risks being unwound

The leading presidential candidate has vowed to overturn the law

Print edition | The Americas May 31st 2018

IN 1918 Mexico became one of the first countries in the world to declare an annual Teachers' Day holiday. The 100th anniversary, on May 15th, was a politicised affair. Enrique Peña Nieto, the lame-duck president, gave a speech at an official celebration. Meanwhile, members of the National Co-ordinator of Education Workers (CNTE), a strident teachers' union, took to the streets. They were protesting against the education reform Mr Peña signed in 2013—whose effects are now being felt both by the students he hoped to aid and by the unions he tried to weaken.

Campaigning for Mexico's presidential election, due on July 1st, has concentrated on crime and corruption. But the biggest issue on the ballot is arguably the fate of the structural reforms that Mr Peña and his legislative allies passed in 11 policy areas. The president's aides tout his education law as the most popular of them all.

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Yet it could well be the first to go. Even though the national teachers' union, the SNTE, formally backs the reform, the CNTE, a militant branch strong in four poor, southern states, is intent on getting it reversed. Its members are planning an "indefinite" strike for June 4th, which would affect 13,000 schools. The final presidential debate, on June 12th, will focus on education. Andrés Manuel López Obrador, a left-wing populist who is the heavy favourite to win, is sure to reiterate his oft-expressed wish to do away with the law.

Mexico may venerate its teachers, but that seems not to have translated into learning. By global standards the country's education system is an underperformer. Its 15-year-olds' scores on the PISA test, which measures proficiency in science, reading and maths, lag far behind those of European countries like Bulgaria and Romania, which spend similar amounts per student on education. Even within Latin America, its scores are only slightly better than those of Colombia, whose per-student budget is 45% lower.

Learning the hard way

Given the SNTE's historical stranglehold on Mexican schools, it is surprising that the country does not fare even worse. Before 2013 the union held a majority of seats on "hiring commissions", enabling it to control who entered the profession. Teachers faced no performance reviews and could not be fired. They could transfer their position to anyone they chose: classified ads in newspapers often offered teaching jobs for sale. The government did not even have data on how many instructors it paid. In 2014 a census of teachers found that 300,000 recipients—whose estimated salaries made up 10% of the federal education budget—had left, died or never existed.

For decades the SNTE used its clout to preserve this system. Its 1.5m members tended to vote in unison, and persuaded parents to do the same. One study found that candidates the SNTE backed received a 2% boost in polling stations that were schools. The SNTE's support for Mr López Obrador's victorious rival in the presidential race of 2006 may have been decisive.

Mr Peña, however, has turned the tables. In 2013 prosecutors arrested Elba Esther Gordillo, the head of the SNTE, on embezzlement charges. Although she denies wrongdoing and is awaiting trial under house arrest, the show of force may have encouraged the SNTE to back his reform.

The law instructed the federal government to pay teachers directly, which stopped unions from handling their pay cheques. It also required candidates for jobs and promotions to undergo a written test about teaching methods and academic subject matter. Some states, like Puebla, now hold public events to announce which candidates scored the best. It has already promoted 2,000 people to the role of principal on this basis. Mr Peña wants to launch a similar platform nationwide.

It is too early to evaluate the effectiveness of the reform. The next PISA results are not due until 2019. And even if the policies are working, test scores may not improve. It will be a decade before students taking the exam will have been taught mainly by instructors hired on merit.

At this stage, the only credible benchmark is the rate at which the reforms are being implemented. It has been relatively slow. In part, that is because of the compromises Mr Peña made to win the SNTE's support. For example, teachers hired before 2013 still enjoy lifetime employment, though they can be moved to administrative roles. No one has yet been fired for failing an evaluation, or for skipping work three days in a row. Phantom teachers remain on the payroll, in smaller numbers. Only a third of new teachers participate in a mentoring scheme.

The reforms have also been stymied by fierce opposition. CNTE members are boycotting their evaluations and refusing to administer tests to their students—sometimes under threat from menacing union thugs. Strikes have interrupted every school year in Oaxaca at least once since 1994; the cohort entering in 2012 lost nearly a year’s worth of classes over six years of primary school. Despite rulings by the Supreme Court that a teacher’s right to strike does not trump a child’s right to learn, officials have not dared to fire them. They have reason to fear the consequences: in 2016 eight CNTE protesters died when police tried to clear a road they were blocking.

The greatest threat to the reforms, however, comes from Mr López Obrador. Leading the polls by up to 25 percentage points, on May 13th he vowed that “the so-called educational reform will be cancelled”. He also demanded justice for “political prisoners”—as union officials locked up for corruption call themselves. He argues that the law is a gateway to school privatisation, and that poor states like Oaxaca should not be held to nationwide standards.

The reformists’ best cause for hope is the split between the unions. The SNTE, the far bigger of the two, has cast its lot with the new policies, and may be loth to change course. The best-case scenario for supporters of the law is that Mr López Obrador is only promising repeal to shore up votes, and will merely tinker with the reform once in office. That would unleash a new wave of fury from the CNTE. But it might also give the law enough time to work, and become politically sacrosanct by the presidential election of 2024.

This article appeared in the The Americas section of the print edition under the headline “An object lesson”

A river runs through it

An expiring treaty will test the health of Canadian-American relations

Can the two countries still co-operate in the age of Donald Trump?

Print edition | The Americas May 31st 2018

THE last time Canada and the United States sat down to hammer out a deal over controlling the flow of the Columbia river, Dwight Eisenhower was president and John Diefenbaker prime minister. In those days, the two governments were eager to work together: they built the St Lawrence Seaway and set up the joint North American Aerospace Defence Command around the same time. Public acrimony like the insults Donald Trump has hurled at Canadian negotiators—he has called them “very difficult to deal with” and “spoiled” for refusing his demands for changes to the North American Free-Trade Agreement—would have been unthinkable.

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The result of their talks was the Columbia river treaty, signed in 1961 and ratified three years later. The pact required Canada to construct three dams on the 1,954km (1,214-mile) long river. It also allowed the reservoir behind a dam that would be built in Montana in 1975 to extend into Canada.

In exchange, the United States agreed to pay \$64.4m to Canada for improved flood control—in 1948 a flood had wiped out Vanport City, Oregon—and to return half of the additional electricity made possible by the smoother flow of the river. From 1973 to 2003, American utility companies bought back that power, called the “Canadian Entitlement”. Since that deal expired, they have sent the electricity instead, worth anywhere from \$120m-335m a year.

Not everyone benefited: the creation of one reservoir in Canada forced an estimated 2,500 people to move. On the whole, however, both sides have been pleased with the treaty. Whether it will remain in effect is up to Mr Trump—who in the past year has withdrawn from the Paris climate agreement and the nuclear deal with Iran.

The river treaty's current rules extend only until 2024. And in 2014, both sides gained the ability to terminate it outright with a ten-year notice period. As a result, following years of preparation, discussions began on May 29th to revise it.

Even before Mr Trump took office, the United States planned to seek a reduction of the Canadian Entitlement. The American side says that Canada has already been paid enough for building the dams, and that the deal raises electricity costs in north-western states. In 2013 America also said it wanted the treaty to have ecosystem protection as a third aim, alongside power generation and flood management. That could force Canada to do costly work on its dams to allow fish to pass.

The Canadians politely disagree. They note that the treaty delivers myriad benefits to America, such as more predictable river navigation and supply of fresh water, and inflicts costs on Canada. Frequent adjustments of water levels reduce fish and bird populations, erode waterfront land and cause dust storms when reservoir bottoms are exposed. “We never know whether we'll have a swimming area,” says Karen Hamling, the mayor of the village of Nakusp, who wants her town's reservoir level fixed and compensation paid to its 1,600 residents. The formula used to calculate the entitlement does not take account of these effects. As for migrating fish, Canada argues that America had already blocked them with a dam built in 1942, and should thus have to pay for their reintroduction.

The floodgates will not open if the talks fail. If no changes are made, Canada's automatic flood-management duties would end in 2024. Afterwards, it would only have to act to prevent flooding if America requests aid, proves that its own storage facilities are full and provides compensation. If either party does pull out, the withdrawal could not take effect before 2028.

Nonetheless, if Canada and the United States can no longer work together on river management, the prospects for collaboration on more contentious subjects look dim. Just as talks on the original Columbia river treaty, which began in 1944, marked the beginning of a warm era in their relations, so too might those on a successor deal indicate the end of one.

This article appeared in the The Americas section of the print edition under the headline “A river runs through it”

A clean sweep

The opposition wins every seat in the Barbados Parliament

*Overflowing sewers and a stagnant economy led to the unprecedented result***Print edition | The Americas** May 31st 2018

THE tally looked like a parody of a rigged election. On May 24th the Barbados Labour Party (BLP) won three-quarters of the vote for the country's House of Assembly—and every one of the chamber's 30 seats. Yet no one alleged fraud when the results came out. Instead, the new prime minister, Mia Mottley, faced an unprecedented policy dilemma: how the opposition's constitutional duties can be performed if there is no opposition in Parliament.

When voters rebuke a sitting government with so lopsided a vote, it is usually amid a dire national crisis. In Barbados, however, the electorate simply seemed to have tired of a mucky status quo—though an election-eve endorsement on Instagram from Rihanna, a pop singer and the world's best-known Barbadian, may well have put extra wind in Ms Mottley's sails.

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The sugar industry, once the Caribbean country's main source of livelihood, has shrivelled, leaving Barbados almost entirely dependent on tourism. And as competing destinations have pulled ahead, the economy has slumped: GDP fell by 0.7% in the year to April. Following years of heavy borrowing, the government now spends more on interest payments than it does on its workers' salaries, which have not risen in a decade. Trade unions, which historically joined a "social partnership" with the government and businesses to set economic policies, accused the ruling Democratic Labour Party (DLP) of failing to listen and walked out of their talks.

The economy suffered another blow in late 2016, when local media began reporting regularly on raw sewage spouting out of manholes along the southern coast, Barbados's main tourist area. In 2003 the government built a new sewage system there, which in theory should have improved sanitation. However, residents often use their drains as rubbish bins, depositing waste and grease that block the channels. The state water authority has not managed to clear them. Many of the system's pumps have stopped working, and sections of the main sewer have collapsed.

In a vain effort to maintain its majority, the DLP, which has held power for the past decade, has resorted to mudslinging. At one rally, Denis Lowe, the former environment minister, called Ms Mottley a "self-proclaimed wicker"—the Bajan street-word for lesbian. The Caribbean is famous for homophobia. However, Ms Mottley's margin of victory suggests such prejudices may be fading fast. In April a court in Trinidad and Tobago overturned laws criminalising gay sex as unconstitutional, and Jamaica's prime minister, Andrew Holness, said he would not ban homosexuals from his cabinet, as one of his predecessors did.

Ms Mottley has proposed novel plans to restructure the Barbadian public sector and attract foreign investment. Her first order of business, however, is sorting out the consequences of the BLP's electoral sweep. The public-accounts committee, which scrutinises government spending, must be chaired by the opposition leader—a position that cannot exist in a one-party Parliament. The leader of the opposition is also tasked with nominating two of the 21 senators in the upper house, and must be consulted on judicial appointments. Ms Mottley says she will seek a constitutional amendment to resolve some of these quandaries. With a 30-0 majority, she should have no trouble getting it passed.

This article appeared in the The Americas section of the print edition under the headline "A clean sweep"

A strike against the system

Brazil reinstates fuel subsidies after a disruptive lorry strike

The work stoppage may have cost as much as \$13.5bn

Print edition | The Americas May 31st 2018

AT RUSH hour, driving across São Paulo can take two hours. This week, however, taxis zipped from one district to another on eerily empty streets in just a few minutes—those that still had fuel to burn. On May 21st hundreds of thousands of Brazilian lorry drivers started a strike, halting deliveries of food and petrol, grounding flights and costing as much as 50bn reais (\$13.5bn), or 0.8% of GDP. Poultry producers said that 64m birds have starved as a result, and the stockmarket has fallen by 6.2%. One distribution centre for farm products that usually registers 1,500-2,000 shipments a day reported only 115. A vegetable vendor hired cabs to deliver lettuce; onions fetched five times the normal price.

The strike was organised not by a union but by self-employed drivers using WhatsApp. With slim profits and cumbersome taxes, the drivers' finances were already precarious; the near-doubling of fuel prices since 2016 has pushed them towards ruin. That increase was caused partly by a declining currency, but also by the government's decision last year to scrap the subsidies that Petrobras, the state-controlled oil firm, had lavished on domestic fuel sales.

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Investors had cheered the reform, one of the biggest steps taken by the president, Michel Temer, to slim down Brazil's public sector. Once the drivers began setting up roadblocks on highways and burning tyres in protest, however, he backed down. On the ninth day of the strike, he agreed to reduce fuel prices by 0.46 reais per litre, freeze them for 60 days and eliminate several taxes on lorries for good, at a cost to the government of 9.5bn reais.

The president's about-face was a concession to political reality. Despite the shuttered petrol stations and empty supermarkets, 87% of Brazilians told pollsters that they supported the drivers. Another survey found that 95% disapproved of Mr Temer's response to the strike. These majorities reflect a broader disgust with Mr Temer—and with government in general.

Mr Temer took office in 2016, after his predecessor, Dilma Rousseff, was impeached for breaking Brazil's budgetary laws. Following 14 years of rule by the free-spending Workers' Party, he has implemented conservative fiscal, monetary and labour policies, reducing inflation and advocating reform of the insolvent pension system. The economy has fared reasonably well on his watch: following the worst recession in Brazilian history, the IMF expected it to grow by 2.3% this year (though the strike should lower that estimate).

The president, however, gets little credit. Unemployment remains stubbornly high. Moreover, the "Lava Jato" investigation, which has unveiled a giant network of bribes paid by Petrobras and the construction firm Odebrecht, has inflicted political damage on Mr Temer as well. Last year prosecutors accused him of accepting bribes, although he denies wrongdoing and Congress voted to reject the charges.

The public's perplexing support of strikers wreaking havoc on the economy shows just how long a shadow Brazil's endemic scandals have cast. Outright graft makes up only a sliver of the inefficiency in government spending, the ultimate cause of the country's combination of high taxes and poor public services. The lion's share comes instead from unusually generous pensions, corporate subsidies and salaries for civil servants. But with fresh news of kickbacks day after day, says Chris Garman of Eurasia Group, a consultancy, "Brazilians are starting to associate corruption with the government's inability to provide public services". The risk is that when crooked politicians offer such a tempting scapegoat, it becomes harder to convince voters of the need to reform a system that lets much larger vested interests take regular helpings of taxpayers' money in ways that are perfectly legal.

This article appeared in the The Americas section of the print edition under the headline "Strike against the system"

The Korean peninsula

All aboard the peace train, again

All aboard the peace train, again

Detente between America and North Korea seems back on track

But it remains unclear what, if anything, will come of it

Print edition | Asia May 31st 2018

THE contrast could not have been starker. In a picture released by his office on May 25th, Moon Jae-in, South Korea's president, looked a decade older than his 65 years. All facial features pointing downwards, he might have been about to cry. Only a day later, a fresh crop of images showed Mr Moon (on the right of the picture above) in a decidedly more upbeat mood. Smiling broadly, he shared a warm embrace with Kim Jong Un, the leader of North Korea, at their second meeting in less than a month.

Mr Moon's changing expression reflects the back-and-forth of diplomacy on the Korean peninsula over the past week. On May 24th Donald Trump, America's president, abruptly cancelled a meeting with Mr Kim that had been scheduled to take place in Singapore on June 12th, citing the North's "tremendous anger and open hostility" towards America in its recent official language. The announcement caught both America's allies and Mr Kim by surprise. After the initial shock, to which Mr Moon's ashen-faced expression attested, the leaders of the two Koreas took matters into their own hands. At Mr Kim's initiative, they made arrangements to meet in the northern part of the demilitarised zone between their countries, and did so within 24 hours. The two leaders agreed their senior officials would hold talks on June 1st—a previously arranged encounter having been cancelled by the North only a week earlier. They also made plans for military talks and reunions of families divided by the Korean war of 1950-53.

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Whoever mentioned a sea of fire?

Both leaders were keen to stress their good relationship. "It was a meeting between friends," Mr Moon told reporters in the South. *Rodong Sinmun*, the North's main newspaper, published an upbeat report of the encounter. But the chief aim of the meeting appears to have been to persuade Mr Trump to renew his efforts to meet Mr. Kim. North Korea's leader was still committed to the goal of "denuclearisation", claimed Mr Moon (without specifying what that meant), but was worried about how America would guarantee his regime's security should he give up his weapons. It was therefore vital that America and North Korea keep talking to each other, said Mr Moon.

Since he became president a year ago, Mr Moon has staked much political capital on the pursuit of detente on the peninsula. So Mr Trump's volte-face, just after the somewhat subdued reception he had given his Korean ally in Washington, was embarrassing. Most South Koreans strongly support Mr Moon's efforts. They are alarmed by options for military action against the North that have been floated in Washington over the past year. In a poll this week, two-thirds said they felt optimistic about prospects for peace. Nearly 200,000 people have signed a petition encouraging Mr Moon to "cheer up" and keep trying to secure it. On the same day that Mr Trump cancelled the Singapore summit, Mr Moon's other big political project—constitutional reform aimed at reducing the power of the presidency—was derailed by the opposition in the National Assembly. That defeat may have given him all the more impetus to achieve success by bringing Mr Trump and Mr Kim together.

As *The Economist* went to press, it looked as though Mr Moon's efforts were paying off. On May 26th, after news broke of the second inter-Korean summit, Mr Trump sounded as if he had never called off his meeting with Mr Kim. "It's moving along very nicely. So we're looking at June 12th in Singapore. That hasn't changed," he said. On the following day, an American delegation including Sung Kim, a former nuclear negotiator and ambassador to South Korea, travelled to the demilitarised zone for talks. Another American delegation went to Singapore to discuss logistics for a Trump-Kim meeting. And on May 30th Kim Yong Chol, a vice chairman of North Korea's ruling party, arrived in New York for talks with Mike Pompeo, America's secretary of state, despite being technically banned from travelling to America. The diplomatic flurry suggests that Mr Trump is once again as keen on the summit as are the leaders of the two Koreas.

Yet the process remains fraught with risk. Mr Trump's flip-flopping has cost the Americans a fair amount of leverage. America's threat to impose "maximum pressure" on North Korea if things go awry is looking less credible given Mr Trump's renewed enthusiasm for a summit despite things having, in his view, gone awry once already. On May 28th, in order to smooth the way for a summit, America delayed the implementation of a fresh round of sanctions against the North. Were it to push for an even tougher batch of them, America may have difficulty persuading China to agree. In recent months China has gone much further than before in its willingness to implement UN-imposed ones. It may worry that squeezing Mr Kim even harder could cause his regime to collapse.

Still worth a try

Mr Trump's vacillation is likely to have given Mr Moon even more pause for thought about the durability of any deal that may be reached between Mr Trump and Mr Kim. There is no clear outline of the kind of agreement Mr Trump is hoping to get. America still seems to be insisting that the North give up its nuclear weapons before America makes any concessions. Mr Kim has explicitly rejected this approach. Most analysts say it will lead nowhere, and that a verifiable dismantling of the North's nuclear arsenal and its numerous related facilities could take years. Mr Trump has not given details of what he is willing to offer Mr Kim in return, beyond promises of "economic co-operation", a good relationship with America and "protections that will be very strong".

The capriciousness of Mr Trump's approach and the uncertainty surrounding his strategy, if indeed there is one, risk giving Mr Kim a moral advantage in the eyes of officials in South Korea and China, where misgivings about Mr Trump run high. Many South Koreans worry that Mr Trump is too fixated on appearing the winner in his dealings with North Korea. One example of this was a tweet in which Mr Trump appeared to boast that Kim Yong Chol's decision to visit America was the result of the now-rescinded decision to cancel the America North Korea summit.

There is a chance of progress if the summit does now happen. Mr Kim does not want to give up all his nuclear weapons, says John Delury of Yonsei University, but he may be willing to give up some of them if America sends credible signals that it is serious about changing its hostile stance towards North Korea. Even that would be fraught with difficulty if it means the North giving up long-range nukes but not the ones that threaten South Korea and Japan—all the more so if it results in America's scaling down its military presence in the South. But unless America makes clear what it is, or is not, prepared to give Mr Kim, says Robert Kelly of Pusan University, "the best we can hope for from Singapore is some vague declaration of intent that further kicks the can down the road." Given the alternatives, there may be value in just keeping up a conversation.

This article appeared in the Asia section of the print edition under the headline "All aboard the peace train, again"

A trip down fantasy lane

A historical soap reveals a lot about modern Thai politics*It's about far more than dressing up***Print edition | Asia** Jun 2nd 2018

IN SWELTERING heat at Ayutthaya Historical Park north of Bangkok, Thailand's capital, a bevy of beautifully clad ladies strut ostentatiously in their silky traditional costumes, known as *chut thai*. They are among thousands who visit daily to have their pictures taken amid the scenic ruins of the old city of Ayutthaya, destroyed by Burmese invaders in 1767.

Many of the tourists are not really there for the remains. Ayutthaya is the setting of a television series called *Buppesannivas* or "Love Destiny", which has broken audience records in Thailand and stirred the nation into a frenzy of sartorial nostalgia. It is a time-travel love story about a woman in contemporary Thailand who is reincarnated in ancient Ayutthaya. In front of an old royal temple, Wat Chaiwatthanaram, half a dozen women dressed in the protagonist's iconic pink *chut thai* wait their turn for a professional photo shoot. The temple's periphery is plastered with posters depicting scenes from the soap.

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These days the park receives 18,000 visitors daily, up from just a thousand when the series began in February (it finished in April, but is being re-run). Most visitors are Thai, but there also many foreigners—the soap is also being screened elsewhere in the region, including Vietnam, Laos, China and Russia. Some ruins have been damaged by the sudden surge of visitors. Sukanya Baonoed, the site's director, says visitors have been climbing on ancient structures and taking "inappropriate photos". In March a picture of a woman (not in *chut thai*) sitting on the lap of a Buddha statue caused fury among social-media users.

Mania for the show is widespread. Ayutthaya-era dishes have been added to the menus of Thai eateries. Hair salons offer styles seen on the show. It is a distraction for a country that has been plagued by divisive politics for more than a decade. "The show serves as escapism for Thais who imagine a kingdom that is united against foreigners instead of fighting amongst themselves," says Waranya Pimsri, who studied anthropology.

It also happens to suit the agenda of the army, which took control in Thailand just over four years ago. Prayuth Chan-Ocha, the coup's leader who is now prime minister, has complained that television dramas make people "fight and create divisions". He says scripts must be written "on reconciliation, on tourism and on Thai culture". He has praised "Love Destiny".

Since 2015 junta leaders have been encouraging officials and students to wear traditional dress, perhaps believing that this will help to inculcate a spirit of patriotic conservatism and thereby boost support for the army, a bastion of such sentiment. Until now they have had little success. Yukti Mukdawijitra of Thammasat University says that before the show, people rarely wore *chut thai* except at weddings. He says Western dress has long been regarded by Thais as a symbol of modernity.

The monarchy, another stronghold of conservatism, has been encouraging the wearing of period costume. In February King Vajiralongkorn, who in 2016 succeeded his late and long-reigning father, Bhumibol Adulyadej, revived a traditional "Winter Festival" associated with one of his ancestors. Citizens were encouraged to attend in traditional wear and take part in retro-themed activities such as garland-making. The culture minister declared that Mr Prayuth and his wife were the "best dressed" at the event.

Mr Prayuth's efforts to harness Thai culture to his own political ends are sometimes more blatant. Earlier this year, the junta launched a campaign called Thai Niyom or "Sustainable Thainess"—a project sounding like one that aims to appeal to people's cultural pride but in reality is aimed at their pockets. It involves sending out 7,800 teams to help "local development". This week, the junta approved a Sustainable Thainess project that involves doling out 200,000 baht (\$6,240) to each of 82,371 villages across the country by July to "improve the quality of life". It is unlikely to be a coincidence that national elections are planned for next February.

The junta may well have little to do with the show's success, but it has decided to ride the wave. Mr Prayuth has appeared in selfies with the cast in traditional wear (see picture). Authorities have deemed the show so culturally enriching that it is now screened in Thai prisons. In March the interior ministry announced that people could have their national ID cards replaced with ones showing them in traditional wear.

Those with an interest in history may find all this disturbing. Chris Baker, the author of "A History of Ayutthaya", writes that in the city's heyday "paternal kingship" gave way to "royal absolutism" and freedoms were "buried by slavery and monopoly". Those who cannot remember the past may be at risk of repeating it.

This article appeared in the Asia section of the print edition under the headline "A trip down fantasy lane"

So long, hipster havens

Singapore's Brutalist past could soon be gone

Some will shed tears

Print edition | Asia May 31st 2018

TIME has stopped in the Golden Mile Complex. Inside the sprawling 1970s building rows upon rows of travel agencies sit mostly empty, their employees staring into space. Stalls selling shoes, handbags, toothpaste and half-price stereo systems are illuminated in the gloom, while the smell of soap mixed with cheap perfume fills the air. From the second floor, the strains of a solo karaoke singer can be heard, defiantly off-key, from one of several dimly lit Thai bars which are full of punters even in the middle of a weekday afternoon. The place does not just feel like it is from the past, but from another South-East Asian country entirely.

The building, which was once called a “vertical slum” by a Singaporean legislator, is a densely packed mix of residential and commercial units. Along with People's Park in Chinatown (pictured), which has been praised by the Dutch architect Rem Koolhaas, it is among a handful of Brutalist buildings that were built in a surge of architectural confidence after the country became independent in 1965. They are particularly adored by those who love concrete, as well as bold and wacky colours.

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Modernist buffs have started to fret that many of these Brutalist buildings will soon be gone. In February one of them, Pearl Bank, once the highest residential tower in Singapore, was sold for S\$728m (\$544m) to CapitaLand, one of Asia's largest real-estate developers. The company plans to demolish the yellow horseshoe structure and build a “high-rise residential development” of 800 flats in its place. Since then several of the other buildings—most of which are privately owned in a co-operative-like system with hundreds of owners all having a stake—have started to prepare for sales, too.

In a place where public protest is frowned on by officials, anxious Singaporeans have been setting up protest groups on Facebook to try and stop the demolition of Pearl Bank and other Brutalist structures, or have been writing impassioned opinion pieces in the state-owned media to try and influence CapitaLand, which is partly owned by the government. Their well-mannered outcry shows how attitudes towards Singapore's past are shifting.

The tiny city-state of 6m people has always been cramped for space. Although it has grown in recent years, through extensive land reclamation, land values remain eye-wateringly high. According to government data, residential property prices were 44% higher in the first quarter of this year compared with the same period in 2009. The result is that many buildings have been torn down to pack more people into the same amount of land. Lee Kuan Yew, Singapore's late prime minister who led the country for three decades, took a pragmatic approach to conservation. (A political spat between his descendants last year centred on Mr Lee's charming 19th-century house in Oxley Road, which he said should be demolished after his death.) In 2005, despite a large public outcry, the government tore down the much-loved National Library of Singapore to make way for a tunnel.

In post-independence Singapore, many people understood that such sacrifices needed to be made for the public good, says Joshua Comaroff, an architect. But attitudes are beginning to change. In 1989 the government's urban redevelopment authority started conserving buildings, particularly pretty colonial-era shophouses and areas such as Little India. But Jerome Lim, who writes a blog about Singapore's architecture, says the 50th anniversary of independence in 2015 was a turning point. He says that is when people started to think more about the city's heritage, and to speak out more about conserving it. Before the managers of People's Park closed the Brutalist building off entirely, couples would sneak onto the roof to take pictures with the Lego-like yellow and green residential units as a backdrop, to post on social media.

Although millennials were born long after these buildings were erected, they are especially fond of them. At the top of the Golden Mile Tower is the Projector, an independent cinema which opened in 2014. It shows films that would once have been banned in Singapore such as gay and lesbian flicks or the back catalogue of Ingmar Bergman. Brutalist buildings appeal to Singaporean youngsters partly because they are so different from the rest of the steel-and-glass city-state, which is constantly undergoing change. The structures can feel subversive just because they still stubbornly exist. But millennials also like the “can-do spirit” of those who built them, thinks Weng Hin Ho, an architect. They represent a time when there was “much more belief and conviction in doing things on our own,” he says, rather than relying on foreign multinationals to come in and build an identikit city.

Mr Lee would not have liked such nostalgia—just as he would have disapproved of the decision, for the moment, to keep his house intact. But a love of Brutalism may be the flipside of economic success.

This article appeared in the Asia section of the print edition under the headline “Brutal love”

People in India often despair of their democracy

They should look at the big picture

Print edition | Asia May 31st 2018

IN THE spring of 1947 the leaders of India's independence movement reached a fateful decision. The right to vote in the soon-to-be-born Indian republic, they agreed, would no longer be restricted as under the British Raj, but open to every adult citizen. The move created the world's largest democracy, and also burdened it with a colossal challenge. As Ornit Shani, an Israeli historian, deftly explains in a new book, the logistics alone were daunting. With more than 170m eligible voters to register—some 85% of them illiterate back then—it took tens of thousands of workers two full years just to compile the rolls for India's first general election, conducted in 1951. At the time Rajendra Prasad, a politician who was to become the country's first president, made a back-of-envelope calculation. Bound in one volume, he reckoned, the voter lists would be 200 metres thick.

Today that "phone book" is five times thicker. At India's next general election, to be held sometime in the coming year, more than 900m people will be eligible to vote. But after seven decades of practice, the toughest challenge for Indian democracy is no longer logistical. It is that players have grown increasingly skilled at gaming the system. Just as Indians habitually vote at local, state and national elections, they also habitually moan at the skulduggery of Indian politics, which can seem a constant parade of horse-trading and bald-faced influence-peddling. Suffice it to note that about a third of MPs in recent Indian parliaments have had pending criminal cases against them.

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Even for a public inured to garish politics, events of late have proved worrying. Take the election held in May for the legislature of Karnataka, a southern state with a population the size of Britain's. As many had predicted, the vote split three ways, leaving a hung parliament. Blithely ignoring an agreement between two of the parties to form a majority coalition, the state's governor instead tapped the third party to rule, granting it an unseemly two weeks to cobble together a majority.

Unseemly, because in practice this decision gave the anointed party, which happens to be the governor's own Bharatiya Janata Party (BJP)—also the party in power in Delhi—a full 15 days in which to bribe, threaten or otherwise cajole enough newly elected opposition legislators to switch sides and join it in government. Amid stories that ministerial posts, and sums of up to 1bn rupees (around \$15m) had been offered as lures, the opposition allies corralled their legislators into three hotels to shield them from outside influence. Only after India's Supreme Court intervened were the two parties allowed to form a majority coalition, which the governor shamefacedly accepted.

This was hardly the first occasion when a party had locked its politicians in purdah to preserve their chastity from a predatory rival. What was disturbing this time was the abject failure of the governor—a centrally appointed official with few powers—to act impartially, as well as the scale of the bidding war which the BJP appeared prepared to mount. Given the party's hold in Delhi as well as in 20 other Indian states, and the fact that, by official reckoning, it has far more money than all its rivals put together, this grab for power in Karnataka looked unsporting even by the standard of Indian politics.

The BJP is not alone in such games. When voters in the state of West Bengal cast ballots in May to choose members of village and regional councils, they found that more than a third of the thousands of seats had already been claimed by the All-India Trinamool Congress (TMC). More accurately, they found that no other candidates had dared run against the TMC, supporters of which have a reputation for thuggish tactics. Not surprisingly, the TMC waltzed home with three-quarters of the seats.

Again, using street muscle to squash opponents is nothing new in Indian politics, just as the BJP's thinly disguised efforts, in recent elections across the country, to whip up prejudice against the Muslim minority have a pedigree. What is new is that traditional checks against such tactics, such as exposure in the press, or intervention from the courts or election bodies, seem to have grown less effective. Some of India's media have venal inclinations, making them prone to bribery by those who want to use them to get their message across.

Even those most unsullied of India's institutions, the Supreme Court and the Election Commission, have lately come in for knocks. In January four Supreme Court judges took the unprecedented step of holding a press conference to question the impartiality of their own boss, India's chief justice. This added to widespread perceptions that he may be too beholden to the party in power. As for the Election Commission, its reputation for staying above politics has been dented by, among other puzzling moves, a decision last October to delay voting in the state of Gujarat for several weeks. This allowed the incumbent BJP, faced with an unexpected surge in backing for the rival Congress party, to shower the state with a pre-election windfall of government spending. The result: a slim victory for the BJP.

Don't despair

Given the dismaying accumulation of such embarrassments, it is not surprising that Pew Global, a polling group, last year found Indians to be less enthusiastic about democracy, and more drawn to having a strong leader or even military rule, than citizens of any other democracy surveyed. But India did try dictatorship, briefly, under Indira Gandhi in the 1970s, and did not like it. Much like India's crowded and creaky railways, its democracy may sorely need an overhaul—but not because it has

actually stopped working. Messy as it may be, India's political system may be credited with some great achievements. It has helped hold a huge and almost impossibly diverse country together. It has kept the army out of power. And it has upheld civic freedoms that, for all their fragility, remain the envy of many of India's neighbours.

This article appeared in the Asia section of the print edition under the headline "Not cricket"

Regional development

Bootstrapping a backwater

Bootstrapping a backwater

One of China's poorest provinces wants to be a tech hub

Apple, Tencent and others are pouring money into Guizhou

Print edition | China May 31st 2018

A ROBOT taller than the Arc de Triomphe towers over a new theme park on the edge of Guiyang, the capital of the southern province of Guizhou. Attendants at Oriental Science Fiction Valley dress in blue-and-silver space suits. They greet visitors with salutes used by the Vulcans in “Star Trek”. The main attraction is an indoor rollercoaster. It simulates an air battle over a futuristic city with the help of virtual-reality headsets that are handed out to every rider. Outside, a troop of black-clad security guards armed with big sticks adds a genuine air of menace.

Such space-age fantasy appears incongruous in Guizhou. The mountainous region is one of China's poorest provinces (see map). More than 4m of its 35m inhabitants live on less than \$1.90 a day, according to the government. In 2016 less than 45% of them used the internet. Five years ago, however, Guizhou started selling itself as a good place for big companies to store vast reservoirs of data. Now it is experiencing a tech boom. Beneath a hill not far away from the amusements, Tencent, an internet giant, has finished excavating a bomb-proof cavern with five massive entrances. It will house one of the company's largest server centres. Last year Apple said it would invest \$1bn in the region. On April 25th it broke ground there on its first data centre in China.

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China has a history of trying to develop important industries deep inland. In the 1960s Mao began moving much of China's weapons production and other manufacturing away from coastal areas that were easy to attack. Now the country wants to lead the world in big data, artificial intelligence and other cutting-edge pursuits. The coast would make sense: that is where the techies mainly congregate. China, however, is encouraging some of this business to move beyond the wealthy boom towns of the seaboard.

The digital solution

Security is only one, minor, reason. In 2015, when the central government declared that Guizhou would be a “National-level Pilot Zone” for big-data development, it had two main motives. The first was to fulfil a promise to stimulate regions that have benefited least from China's rapid development (last year the country's leader, Xi Jinping, showed his support for backward Guizhou by attending a Communist Party congress as a delegate of the province). The second was to show that China's less industrialised regions can modernise without the dirty factories that have left urban areas elsewhere in China choking in smog. The number of tourists visiting Guizhou jumped by 40% last year—many of them attracted by its beautiful landscapes.

Officials say there are more than 8,500 big-data firms in Guizhou, more than eight times as many as in 2013. Much of the action in the province is taking place in and around Guiyang, a verdant city of 3m people surrounded by tree-covered karst. A guide displays a map of the area, pointing to its data centres. As well as those of Tencent and Apple, they include facilities for Foxconn of Taiwan, South Korea's Hyundai and China's three state-owned telecoms firms. A new complex being built by Huawei, a telecoms equipment-maker, will resemble a Swiss lakeside town.

Guizhou is a reasonable enough place to house large servers. Land is cheaper than on the coast. Electricity costs less, thanks to local hydropower and the province's position on the route of big transmission lines that bring power from China's sparsely populated west. It has a milder climate than southern coastal cities, making it easier to keep servers cool. It is not prone to natural disasters.

Tech executives also have political motives for investing in Guizhou. They want to be seen to support the government's pet projects. Investing in Guizhou has been a chance to curry favour with the party's rising stars, who are sometimes dispatched to the province as a sort of trial by fire. As party chief of Guiyang from 2013 to 2017, Chen Gang was one of the tech cluster's architects. He is now in charge of one of Mr Xi's big schemes—the building of Xiong'an New Area, a whole new city near China's capital. Chen Min'er, Guizhou's boss until last summer when he took over as party chief of Chongqing, is another person whom companies have wanted to butter up. In October he gained an additional title: member of the ruling Politburo.

But will Guizhou's data-hosting industry transform its economy? Warehouses filled with servers require huge upfront investments but few staff. The bigger spoils flow from sprightlier businesses that know how to crunch data. Guizhou also wants to attract those. One of the perks of becoming a big-data pilot zone was being allowed to supply such firms with reams of government-held data to process for profit.

Between May 26th and 29th many company bosses flew in from their coastal headquarters for a “Big Data Expo” held in Guiyang. Billboards filled the city with such pithy slogans as: “Acutely grasp the historical opportunity of informatisation development.” But getting firms to stay will be tricky. A few years ago officials enticed Huochebang—a startup that helps find loads for lorry-drivers and which was recently valued at more than \$6bn—to move to Guiyang from Chengdu, a much bigger and trendier city. But many of its best-paid staff continue to work at offices in coastal cities, notes Dan Wang of Gavekal Dragonomics, a research outfit.

The government of Guizhou is an enthusiastic champion of companies that make the province their home, says William Li of Esgyn, a database firm with offices in Guiyang and two other Chinese cities. Yu Yueqing, who owns a business that crunches educational data, agrees. He left Guiyang after graduating in 2009, but decided to move his eight-year-old company back to the city last year. However, he still struggles to find enough qualified staff. For the foreseeable future, his research team will continue working in Beijing.

It is unclear whether Guizhou’s political fortune will change now that the pilot’s early proponents—the two Mr Chens—have moved to other provinces with their own tech dreams. When a routine letter of congratulation from Mr Xi was read aloud at Guiyang’s recent expo, the province’s current boss, Sun Zhigang, described it as “historic” and “a milestone”. Such sucking up is common among officials across China. Given the competition, Mr Sun may have good reason to indulge in it.

This article appeared in the China section of the print edition under the headline “Bootstrapping a backwater”

A web of silk

China talks of building a “digital Silk Road”

*An ancient Silk Road city wants to cash in***Print edition | China** May 31st 2018

CHINA'S vague but much-vaunted Belt and Road Initiative (BRI) has been providing buzzword fodder for government leaders and official sloganeers since 2013, when the country launched the scheme to extend its political and economic influence abroad by investing in infrastructure and other big projects. The “belt” refers to an overland push across Eurasia and the “road” to a maritime route to South Asia and beyond. But in recent months some new rhetoric (consistent in its challenging use of metaphor) has been promoting a virtual dimension: a “digital Silk Road”.

Xi Jinping, China's president, has revealed few details, beyond that it will encompass quantum computing, nanotechnology, artificial intelligence, big data and cloud storage. In April he said it would involve helping other countries to build digital infrastructure and develop internet security. The digital Silk Road will help to create “a community of common destiny in cyberspace”, suggests Chen Zhaoxiong, a vice-minister of information technology.

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Whatever that means, the western city of Xi'an is eager to cash in. The city was once China's imperial capital (its army of terracotta warriors lures millions of tourists). It was also a hub on the ancient Eurasian Silk Road, which China cites as its inspiration for the BRI. That connection has encouraged Xi'an's government to claim a role for the city in the building of a digital road. Its officials speak of it as a potential rival of Silicon Valley or Bangalore.

Compared with Guiyang in the south, another inland city with such aspirations (see [article](#)) but a shortage of skilled people, Xi'an has a lot going for it. The city of 8m is home to 63 colleges and universities, as well as hundreds of research institutes. They produce 300,000 graduates each year, most of them scientists. Xi'an has a long history, stretching back to the Mao era, of supplying technicians needed by defence industries.

Officials expect Xi'an Software Park, part of the city's main tech centre, to employ 250,000 tech experts by 2021, compared with 165,000 in 2016. They predict that over the same period its revenue will rise by more than 150% to 500bn yuan (\$78bn). Hardly a tech convention goes by in Xi'an without talk of the digital Silk Road. Earlier this month city officials held a conference about civil-military co-operation in building one. At a programmers' festival in November, animations on huge screens showed data crackling westward from Xi'an to Istanbul. Speakers were greeted like rock stars by throngs of aspiring young programmers.

Xi'an's efforts to attract tech firms, such as offering housing subsidies to their staff, are paying off. Huawei, a maker of telecoms equipment, has built its largest programming research-facility there. HSBC, a bank, uses developers in Xi'an to produce a variety of software, including versions for cyber-security and market analysis. What is happening in Xi'an, says Frank Tong, HSBC's head of innovation, “is for real.” Unlike Guiyang, the city has considerable pull for young techies. It is only a bit less cosmopolitan than Beijing or Shanghai. Yet its housing is far cheaper.

The central government has been cheering Xi'an's efforts. In April China's official news agency said the city was in the “fast lane” to becoming a “Silicon Valley in the west” of the country. That may be an exaggeration. The toll of China's heavy online censorship may not hinder the code-crunching of programmers. But for the kind of world-class nerds that Xi'an wants to attract, it must be a deterrent.

This article appeared in the China section of the print edition under the headline “A web of silk”

Climate change in the Arab world

Too hot to handle

Too hot to handle

Climate change is making the Arab world more miserable

Expect longer droughts, hotter heatwaves and more frequent dust storms

Print edition | Middle East and Africa May 31st 2018

SIX years ago Nabil Musa, a Kurdish environmentalist, returned from over a decade abroad to find Iraq transformed. Rivers in which he had swum year-round turned to dust in summer. Skies once crowded with storks and herons were empty. Drought had pushed farmers to abandon their crops, and dust storms, once rare, choked the air. Inspired to act, he joined a local conservationist group, Nature Iraq, to lobby for greener practices. But Kurdish officials pay little attention. “One of the last things we want to think about is climate change,” says Mr Musa.

Apathy towards climate change is common across the Middle East and north Africa, even as the problems associated with it get worse. Longer droughts, hotter heatwaves and more frequent dust storms will occur from Rabat to Tehran, according to Germany’s Max Planck Institute for Chemistry. Already-long dry seasons are growing longer and drier, withering crops. Heat spikes are a growing problem too, with countries regularly notching lethal summer temperatures. Stretch such trends out a few years and they seem frightening—a few decades and they seem apocalyptic.

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The institute forecasts that summer temperatures in the Middle East and north Africa will rise over twice as fast as the global average. Extreme temperatures of 46°C (115°F) or more will be about five times more likely by 2050 than they were at the beginning of the century, when similar peaks were reached, on average, 16 days per year. By 2100 “wet-bulb temperatures”—a measure of humidity and heat—could rise so high in the Gulf as to make it all but uninhabitable, according to a study in *Nature* (though its most catastrophic predictions are based on the assumption that emissions are not abated). Last year Iran came close to breaking the highest reliably recorded temperature of 54°C, which Kuwait reached the year before.

Dry and discontented

Water presents another problem. The Middle East and north Africa have little of it to begin with, and rainfall is expected to decline because of climate change. In some areas, such as the Moroccan highlands, it could drop by up to 40%. (Climate change might bring extra rain to coastal countries, such as Yemen, but that will probably be offset by higher evaporation.) Farmers struggling to nourish thirsty crops are digging more wells, draining centuries-old aquifers. A study using NASA satellites found that the Tigris and Euphrates basins lost 144 cubic kilometres (about the volume of the Dead Sea) of fresh water from 2003 to 2010. Most of this reduction was caused by the pumping of groundwater to make up for reduced rainfall.

Climate change is making the region even more volatile politically. When eastern Syria was ravaged by drought from 2007 to 2010, 1.5m people fled to cities, where many struggled. In Iran, a cycle of extreme droughts since the 1990s caused thousands of frustrated farmers to abandon the countryside. Exactly how much these events fuelled the war that broke out in Syria in 2011 and recent unrest in Iran is a topic of considerable debate. They have certainly added to the grievances that many in both countries feel.

The mere prospect of shortages can lead to conflicts, as states race to secure water supplies at the expense of downstream neighbours. When Ethiopia started building an enormous dam on the Nile, potentially limiting the flow, Egypt, which relies on the river for nearly all of its water, threatened war. Turkish and Iranian dams along the Tigris, Euphrates and other rivers have raised similar ire in Iraq, which is beset by droughts.

Scientists have laid out steps that Arab countries could take to adapt to climate change. Agricultural production could be shifted to heat-resilient crops. Israel uses drip irrigation, which saves water and could be copied. Cities could be modified to reduce the “urban heat-island effect”, by which heat from buildings and cars makes cities warmer than nearby rural areas. Few of these efforts have been tried by Arab governments, which are often preoccupied with other problems. Mr Musa says the Kurdish officials he lobbies have been distracted by a war with Islamic State, a failed referendum on independence and, now, repairing relations with Iraq’s central government in Baghdad.

Politics often gets in the way of problem-solving. Countries are rarely able to agree on how to share rivers and aquifers. In Gaza, where the seepage of saltwater and sewage into an overused aquifer raises the risk of disease, a blockade by Israel and Egypt has made it harder to build and run desalination plants. In Lebanon there is little hope that the government, divided along sectarian lines, will do anything to forestall the decline in the water supply predicted by the environment ministry. Countries such as Iraq and Syria, where war has devastated infrastructure, will struggle to prepare for a hotter, drier future.

Some countries are, at least, trying to curb emissions. Morocco is building a colossal solar-power plant in the desert, as is Dubai, part of United Arab Emirates (UAE). Saudi Arabia is not going to stop exporting oil, but it plans to build a solar plant that will be about 200 times the size of the biggest such facility operating today. Like other sun-drenched countries in the region, it sees solar power as a cost-effective way to increase the electricity supply and cut energy subsidies. “When I first started, people looked at environmentalists as tree-huggers,” says Safa al-Jayoussi of IndyACT, a conservationist group in Beirut. “But now I think the most important argument is the economic one.”

States in the Middle East and north Africa can do little on their own to mitigate climate change. Inevitably, though, they will need to adapt. So far depressingly little has been done. “Sometimes I feel like I’m on a treadmill,” says Mr Musa.

This article appeared in the Middle East and Africa section of the print edition under the headline “Too hot to handle”

The balancing bear

Russia struggles to balance between Israel and Iran

Growing tensions in Syria are testing Russia's ability to manoeuvre

Print edition | Middle East and Africa May 31st 2018

AS MISSILES rolled across Red Square during Russia's Victory Day parade on May 9th, Binyamin Netanyahu, the prime minister of Israel, stood squarely beside President Vladimir Putin. He had come to secure Russian support for containing Iran in Syria. Pinned to his lapel was the orange and black St George's ribbon, a symbol of the second world war that has become synonymous with Russian revanchism in Ukraine. The overtures appear to have worked: as *The Economist* went to press, Russia and Israel were finalising an agreement that would attempt to keep Iranian forces some 15 miles (24km) away from the Israeli border in Syria.

The agreement highlights Mr Putin's delicate balancing act in the Middle East. Since intervening in Syria's civil war in late 2015, Russia has positioned itself as the indispensable player, able to speak to nearly all sides. It has maintained contact with Turkey, America and the Arab countries involved in the conflict. Most notably, it has kept good relations with Israel, with which it shares strong cultural and economic ties, as well as Iran, its partner in propping up the regime of Bashar al-Assad, Syria's blood-soaked president.

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But as the war begins to wind down in Syria, Russia may feel that it needs Iran less. In the past it looked the other way when Israel bombed convoys in Syria carrying weapons to Hizbullah, an Iranian-backed Lebanese militia that fought a bloody war with Israel in 2006. Some think Russia is now going further. As Iran tries to establish permanent bases in Syria, Israel has attacked its positions. The night of the parade in Moscow, Israel launched dozens of air strikes on Iranian forces, unimpeded by Russian air defences in Syria. Some Iranians suspect that Mr Putin provided Mr Netanyahu with the co-ordinates of Iranian bases.

Whether an agreement between Israel and Russia over the deployment of Iranian troops can be enforced remains to be seen. "Russia has limited levers of influence," says Nikolai Kozhanov, a former Russian diplomat in Iran and professor at the European University in St Petersburg. "Much depends on the desires of Iran itself." While Mr Putin has called for foreign forces to leave when the war is over, Iran's foreign legion, the Quds Force of the Islamic Revolutionary Guards Corps, which some countries classify as a terrorist group, seems bent on staying.

The interests of Russia and Israel, on the other hand, appear to be converging. "We have a good understanding with Russia and we can prevent another political crisis in Syria," says a senior Israeli official. "As far as we're concerned Assad will continue to rule." That is bad news for rebel groups in the Syrian villages near the border, which Israel had assisted with food, medical supplies and the occasional shipment of light arms. Rebel commanders say they have already seen soldiers from Iranian-backed militias pulling back. An offensive by the Assad regime seems likely to follow. Only "representatives of the Syrian Arab Republic's army [should] stand at Syria's border with Israel," said Sergei Lavrov, Russia's foreign minister.

Israel may not be satisfied even with that. Iranian forces continue to operate in other parts of Syria. An Iranian drone that entered Israeli airspace in February came from a base 150 miles away from the border. If Mr Assad and his Russian backers fail to contain Iran, more strikes are likely from Israel—and not just on Iranian targets. Israeli officials note that the sorties on May 10th also hit Syrian anti-aircraft missile batteries, provided by Russia. The balancing act may yet become more difficult for Russia. "The 'let's talk to everyone' strategy will collapse sooner or later," says Mr Kozhanov. "At some point a situation will arise when a serious choice has to be made."

This article appeared in the Middle East and Africa section of the print edition under the headline "The balancing bear"

A Ramadan viewing guide

Egypt's bumbling police get their man, at least on television

In a region where governments wield power over producers, television is a bellwether for politics

Print edition | Middle East and Africa May 31st 2018

THE clock is ticking and the interrogation is tense. Hoping to unravel a plot, the warden of Aqrab ("Scorpion") prison grills an Islamist seated alone in his cell. He scowls, delivers a warning—and then leaves, his questions unanswered. The scene might confuse anyone familiar with Aqrab, one of Egypt's most notorious jails, where militants and political prisoners are packed into cramped dungeons and tortured. It looks altogether different on "Kalabsh" ("Handcuffs"), a popular series on Egyptian television. The inmates are clean and their interrogations polite, nary a cattle prod in sight.

In many Arab homes the television is the centrepiece of Ramadan. Families stuff themselves at *iftar*, a communal meal at sundown, then sprawl in front of the set to watch nightly serials known as *mosalsalat*. A recent survey found that viewership goes up 78% during the holiday. But these shows are more than entertainment. In a region where governments wield political and financial power over producers, television is a bellwether for politics.

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The surprise hit of 2015, for example, was "Harat al-Yehud", a warm portrayal of Cairo's Jewish quarter in 1948. Jews had long been the conniving villains of Egyptian television. Suddenly they appeared as ordinary citizens, patriotic and pious. It fit perfectly with the mood under Abdel-Fattah al-Sisi, the president, who sees Israel as an ally.

This year viewers can choose from six shows about terrorism, most with sympathetic portrayals of the security forces. Mr Sisi and his generals have struggled to put down a long-running Islamist insurgency. The army struggles with basic discipline. Dozens of policemen were killed in October when they stumbled into an ambush. None of this matters on "Nesr al-Saeed" ("Hawk of Upper Egypt"), in which the hero dispatches terrorists with ease.

Even these glossy portrayals anger some viewers. In one episode of "Kalabsh" terrorists attack a checkpoint in Fayoum, a city 100km southwest of Cairo. A lawyer filed suit against the show's producers, accusing them of distorting Fayoum's image. Other shows offend governments. Ibrahim Eissa, an Egyptian journalist, was to appear in "Ard al-Nefaq" ("Land of Hypocrisy"), a drama about a struggling worker. But his role annoyed the show's Saudi broadcaster. Mr Eissa has accused Saudi Arabia of "corrupting the minds of Egyptians". After a Saudi official complained, the series was reshot without him. Another show, which depicts an Egyptian militant seeking refuge in Sudan, drew a protest from the Sudanese foreign ministry.

Adel Imam, Egypt's most beloved comic actor, makes a serious turn in "Awalem Khafeya" ("Hidden Worlds"), playing a journalist who finds dirt on senior officials. This story also seems pulled from the headlines. In February Hisham Geneina, Egypt's former top auditor, was arrested for saying he knew of secret documents about crimes the army committed during the 2011 revolution. After a swift trial, he was sentenced to five years in a military prison. Fans of Mr Imam hope for a happier ending.

This article appeared in the Middle East and Africa section of the print edition under the headline "Cairo Five-0"

Extending the safety-net in Ethiopia

Ethiopia's scheme to help the poor is setting an example

Safety-nets, in one form or another, have proliferated across Africa in recent years

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TSIDE ZEWDIE has lived in the shadow of the national palace in Addis Ababa for more than 50 years. Since her husband died four years ago the 73-year-old has cared for three orphans, the grandchildren of her late sister, alone in a rundown government-owned shack. She has no pension and, until recently, had no income. "I relied on the kindness of my neighbours," she sighs.

Last year Mrs Zewide's fortunes changed. She and some 80 of her neighbours rise at dawn to sweep the streets of the Ethiopian capital for three hours a day. For this she is paid 1,200 Ethiopian birr (\$44) a month, a fifth of which she is required to save. "It's good for me psychologically," she says. "It keeps me busy, and now at least I can tell people I have a job." Her teammates nod in agreement.

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They are participants in Ethiopia's Urban Productive Safety Net Project, which was launched in 2017 and is among the largest social programmes in sub-Saharan Africa (outside South Africa) designed specifically for urban areas. About 400,000 poor Ethiopians in 11 cities are already enrolled. The government hopes it will eventually help 4.7m people in almost 1,000 towns. Beneficiaries are selected by a neighbourhood committee based on how poor and vulnerable they are. In addition to the paid work, they also receive training. Those who want to start their own businesses are given grants.

Safety-nets, in one form or another, have proliferated across Africa in recent years. Spending on them in sub-Saharan Africa now amounts to about 1.5% of GDP (see chart). In Tanzania 10% of the population is covered by its safety-net (at a cost of just 0.3% of GDP). Most schemes in Africa are focused on rural people and many are temporary, often implemented by donors in response to natural disasters or conflict. Few are designed to help households manage the private misfortunes—such as illness or the death of a family member—that can tip them into destitution. They also do a poor job of reducing the chronic unemployment that has taken root in many African cities.

Ethiopia's programme is a step towards building a national social-security system that will, in time, replace a hotch-potch of small ones. It builds on Ethiopia's flagship rural safety-net, which is the largest of its kind on the continent and covers some 10m poor people in the countryside (out of a total population of about 102m). The government has committed \$150m to fund the new scheme and the World Bank has stumped up the remaining \$300m needed for the first five years. Ethiopia hopes that within ten years it will no longer need help financing the programme.

For years the Ethiopian government flinched at terms like "social protection". Donors are hopeful that it now considers the safety-net a long-term policy rather than "a sticking plaster that won't be necessary once industrialisation takes off", says Tom Lavers of Manchester University. But, he notes, antipathy towards Western-style welfarism remains strong. The government flatly rejected the idea of no-strings cash handouts, which are popular among donors and development economists, partly because they are cheap to administer. "People can't expect a free lunch," says Belynshe Regassa, the head of Mrs Zewide's local committee.

Ethiopia's rural scheme is widely regarded as a success. It has reduced rural poverty and helped the poor buy food during a severe drought in 2016 that might have led to famine. But towns and cities are a different challenge altogether. It can be hard to know which people are most in need. Applicants must have lived in the district for at least six months to be eligible, so transient urban folk may slip through the safety-net. Mrs Regassa says locals complained to her when they were not selected by the committee. Critics say supporters of the ruling party are more likely to get picked.

Despite such gripes, Ethiopia's experience suggests that even poor countries can start extending safety-nets. But if Ethiopia is to achieve its goal of weaning the scheme off donor support, it may have to make cuts to wasteful subsidies, which would be politically painful.

The biggest challenge lies in the fact that even the broadest safety-nets in Africa only cover a small portion of the poor. Mrs Regassa, for example, is not eligible for help because she owns her own house. But as a single mother with four children she hopes the programme will one day include her, too.

This article appeared in the Middle East and Africa section of the print edition under the headline "Extending the net"

Fighting talk

Repression is worsening in Cameroon amid an uprising over language

The president shows little interest in finding a peaceful solution to the crisis

Print edition | Middle East and Africa May 31st 2018

THE parade featured singing schoolchildren and goose-stepping soldiers. A giant presidential portrait was wheeled along the boulevard. To some observers it must have looked like a comic sketch about an event staged by an African dictator. But no one dared snigger. The celebration of Cameroon's national day on May 20th was lorded over by President Paul Biya, who at 85 is Africa's oldest head of state.

He hoped the parade would show national unity. But it hinted at a deep fissure dividing Cameroon. In the country's two English-speaking regions a simmering uprising has been met by brutal repression. As members of the main opposition party, the Social Democratic Front, marched past the president they showed their indignation. Placards were banned, so the marchers pulled up their shirts to expose pictures taped to their bodies of people tortured, mutilated or murdered by the government.

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The conflict started in October 2016, when English-speaking lawyers took to the streets complaining that legal documents were not being translated from French and that English-speakers were discriminated against. The country has been officially bilingual since its two constituent parts voted to form a federal republic after gaining independence in 1960 and 1961. But English-speakers, who make up less than a fifth of the population, say their regions get less than their fair share of public money and that the government forces them to use French in schools, courts and other public institutions.

Mr Biya's government responded by arresting activists and cutting off the internet in English-speaking regions. In doing so it fanned secessionism, transforming peaceful protests into a vicious war, with kidnappings and beheadings. Atrocities have been committed by both sides. More than 100 civilians have reportedly been killed, as have more than 40 members of the security forces.

Peter Henry Barlerin, America's ambassador to Cameroon, says April proved the bloodiest month. He accuses the government of authorising "targeted killings" and the "burning and looting of villages". Thousands of people have fled, many of them across the border into Nigeria.

The strife is also affecting the fight against Boko Haram, a jihadist insurgency that has spilled over from Nigeria into neighbouring countries. The dense swamps that surround Lake Chad in northern Cameroon give the jihadists cover. Elite Cameroonian soldiers, who are among the most effective fighters in the region, have been removed from Lake Chad and redeployed to English-speaking regions in the south (see map).

There are few signs that Mr Biya is trying to find a peaceful solution. For much of the year the ageing president reportedly rules Cameroon from a luxury hotel in Switzerland, a country he likes to visit with his wife Chantal (known for her designer dresses and signature hairstyle).

In March Mr Biya called his first cabinet meeting since October 2015 and gave a speech that sounded as if he had already hit the campaign trail for the presidential election scheduled for later this year. Mr Biya has not yet said whether he will stand, but if he does run it would be for his seventh term in office.

In any case, the government is wasting no time clearing his path. Ahead of senatorial elections in March it arrested several journalists and opposition activists. On May 25th seven activists were convicted on charges of rebellion and acts of terrorism. They were given jail sentences of 10-15 years. Cameroon's war over words seems likely only to intensify.

This article appeared in the Middle East and Africa section of the print edition under the headline "Fighting talk"

Fast funerals in Conakry

Why hearses sport sirens and lights in Guinea

Bodies do not do well in the stifling heat, especially if stuck in traffic

Print edition | Middle East and Africa May 31st 2018

A SIREN wails out across the jammed streets of Conakry, the capital of Guinea. As horns toot, vehicles part for a car sporting a spinning blue light. It is not the police or an ambulance. Instead a hearse comes wailing through. Politicians and the emergency services are not the only ones to use lights and sirens in Conakry. Congestion is so bad that the dead use them, too.

Funerals generally have to take place quickly. Most people in Guinea are Muslims and their faith prohibits the embalming of the dead. It also stipulates that people should be buried as soon as possible after they have died, and generally within 24 hours. Another reason for quick burials is economic. Keeping the remains of a loved one chilled in a mortuary costs about \$5.50 a day, or more than twice the average daily wage in one of the world's poorest countries, says Aboubacar Diallo of Gamal Abdel Nasser University in Conakry. Yet getting to the cemetery can prove difficult because the capital is set along a narrow peninsula and has tight, congested roads. Driving across town can take as long as five hours. To cope with the challenge, some funeral companies have started offering a speedy blue-siren service for 300,000-500,000 francs (\$30-55).

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Many think it is money well spent. Bodies do not do well in the stifling heat, especially if stuck in a "monster jam", says the manager of one funeral company. Mohammad Keita, a local driver making way for a blue-light hearse agrees: "If they don't get through quickly the bodies might begin to smell."

This article appeared in the Middle East and Africa section of the print edition under the headline "Do not go gently"

Italy

Matteo Salvini's quest for power

Matteo Salvini's quest for power

Political chaos in Italy as new elections beckon

The right-wing Northern League is on a roll

Print edition | Europe May 31st 2018

THE powers of an Italian president are few, but mighty. He—there has never been a she—can declare war, dissolve parliament and name the prime minister. The constitution also stipulates that the president names the ministers, “on the proposal” of the prime minister-designate—a provision that has been interpreted to mean that a prospective head of government must table a list of choices that the president can accept or, sometimes, reject.

On May 27th President Sergio Mattarella deployed the last of those powers to devastating effect, halting the formation of a populist coalition between the anti-establishment Five Star Movement (M5S) and the hard-right Northern League. He refused to swear in a Eurosceptic, Paolo Savona, as finance minister. After the prospective coalition partners refused to withdraw Mr Savona's name, Giuseppe Conte, the lawyer who was to have headed their government, backed out.

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His withdrawal raised the likelihood of an early election that could become a proxy referendum on euro membership. The prospect sent a wave of panic through capital markets far beyond Italy (see [article](#)) as investors fretted that the euro zone's third-biggest economy might leave the single currency.

But as Italy approached its 90th day without a properly functioning government, it was far from clear whether Mr Mattarella's rebuff had advanced or obstructed the march of Eurosceptic populism. The answer may not be clear for weeks, even months. On the one hand, the president has equipped Italy's populists with a dream narrative: mainstream elitist thwarts the representatives of the popular will (together, the M5S and the League won half the votes in the general election on March 4th and together hold a majority in parliament). Incomprehensibly, Mr Mattarella added credence to that tale by handing the task of forming a stop-gap government to Carlo Cottarelli, a former official in the IMF, an organisation reviled by anti-establishmentarians the world over.

But on the other hand, Italy's continuing political melodrama has demonstrated that Europe's populist insurgents are under immense constraints. James Carville, who helped Bill Clinton to power, famously quipped that he wanted to be reincarnated as the bond market, because “You can intimidate everybody.” That is especially true of Italy, whose public debt stands at around 130% of GDP. If investors in its government bonds start to worry about the risk of default, as they did this week, they demand a greater return in the form of higher yields, making it costlier for the government to borrow, and in turn increasing the risk of default.

The EU's budget commissioner, Günther Oettinger, sparked outrage in Italy when he said that he hoped the market turmoil would persuade Italians “not to hand populists on the right and left any responsibility in government”. Politicians of all stripes accused him of interfering in the affairs of a member state. But he had a point, and it was not lost on the young leader of the M5S, Luigi Di Maio. Hours later Mr Di Maio made an abrupt U-turn, dropping an earlier call for Mr Mattarella to be impeached and signalling his readiness to renew talks on a coalition. Amid rumours of a compromise that would give the finance portfolio to a euro-friendly economist, a degree of calm returned to the markets. But that ignored the attitude of Matteo Salvini, the pugnacious head of the League, who initially said that all he wanted was a date for fresh elections, but not until after the summer. This revived suspicions that his aim from the outset had less to do with putting a Eurosceptic in the Treasury than with picking a fight with the president that would force a new election.

One thing that is clear is that the anti-immigrant League is on a roll, as much for its views on kicking out migrants as on the economy. Its support has grown from 17.4% at the general election to as high as 27% in some opinion polls. Just as important, backing for the League's rival for the leadership of the right, Silvio Berlusconi's Forza Italia party, has slumped from 14% to as low as 8% in some polls. One recent survey found Mr Salvini is now Italy's most popular political leader. As *The Economist* went to press, it was still unclear whether Mr Salvini would now continue to push for an early election, or whether a new agreement between the two populist parties, without Mr Savona as finance minister, was back on the cards.

Both parties are to hold rallies on June 2nd, a national holiday in Italy. Police have been asked to increase protection for official buildings. But, for now, the threat of violence is remote. The Five Star Movement is doctrinally pacifist. The League's bark has always been worse than its bite. But there are plenty of other reasons to feel glum about Italy. Apart from an all-populist government, there are no obvious options. There has been a degree of speculation that the M5S might again to seek a deal with the left-of-centre Democratic Party (PD). But the PD, which had a disastrous election, is bitterly split and has so far

refused even to talk to the M5S. Others have wondered about a right-wing coalition of the League, Forza Italia and two smaller groups. But this would be a minority government, forced to cobble together ad hoc majorities for every bill.

As for Mr Cottarelli, were he indeed needed to head up a caretaker government, he may not have much difficulty assembling a team of apolitical experts. But it would have scant legitimacy: not a single major party has said it would back it in the votes of confidence it would need to win in both houses of parliament. Without them, Mr Cottarelli's enterprise would be reduced to keeping the country ticking over until election day. And when that came, perhaps as soon as the autumn, there would be every possibility that the electorate would again deliver a result that hands the majority of votes and seats to two populist parties that remain deeply wary of each other, that disagree on how to get Italy working for ordinary people, yet who still may well end up working together in a star-crossed coalition. Neither outcome looks encouraging.

This article appeared in the Europe section of the print edition under the headline "Matteo Salvini's quest for power"

Taking it easy

Uproar over new speed limits on French country roads

Tree-lined roads in rural France look idyllic but are deadly

Print edition | Europe May 31st 2018

PASSING through wide fields of wheat and potatoes, route D915 links the northern French port of Dieppe with Pontoise, north-west of Paris. On a straight stretch of single-carriageway road, lined with sycamores, cars tear along above the 90kph (55mph) speed limit, dodging oncoming traffic to overtake. Periodically, as on other similar roads, vehicles collide, killing their occupants. To curb the country's accident rate, the French government is reducing the speed limit on country roads from July 1st. In rural France, few recent policies have prompted such indignation.

Speeding is the main cause of fatal traffic accidents in France, most of which, as elsewhere, take place on single-lane roads that lack a central reservation. Cars crash either into each other, or into one of the shade-providing trees that line many country routes. It was on just such a road that Albert Camus, at the age of 46, and his publisher, Michel Gallimard, were killed when their car collided with a roadside plane tree in 1960. Today, Edouard Philippe, the prime minister, says that reducing the speed limit to 80kph on roads that are not protected by a central reservation—about 400,000km of them—will save 300-400 lives a year.

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French roads have a hold on the collective imagination. In the early 20th century, Michelin developed its guides to encourage touring motorists to potter along them, making the odd detour for a *steak frites* (and to wear out their tyres). For tourists, motorways and chain-run service stations have long since taken over that role. But for those who live and work in rural France, roads are not for dawdling but getting about, and fast.

Rural France is not happy. Over 2m people have already signed a petition to protest. Fully 86% of rural folk are against the reduction in the speed limit, next to 74% of the French as a whole. Parisians, for the most part, are unbothered. But the further away from big cities one gets, the more people are fed up with the measure. Politicians say that it is one of the most frequently raised subjects of discontent among voters in rural areas. At a time when President Emmanuel Macron is trying to push through difficult reforms, some of his own deputies are perplexed as to why he is allowing it. As one of them points out, a reduction in the speed limit was not in his election manifesto, and the push has come from the prime minister. Mr Macron now says that the measure will be tested over two years, and then reviewed.

This article appeared in the Europe section of the print edition under the headline "Foot off the gas"

Neap tide

France's strikes may now be starting to ebb

The French president is on course for victory in his battle with the street

Print edition | Europe May 31st 2018

ONE protester carried a placard depicting Emmanuel Macron as a Nazi. Another produced an effigy of the French president swinging from the gallows. As France prepares for its tenth week of strikes, the mood among protesters on the streets has ranged from festive to violent. On May 26th some 190 rallies and marches were held across the country in an attempt to create a “popular tide” against Mr Macron’s reforms of the railways, universities and much else besides.

At first glance, the pressure on the French president remains intense. Train drivers and other railwaymen are due to continue their rolling strike, on two days out of every five, until June 28th, as planned. On May 29th over half of train drivers were still observing the strike, thereby continuing to make life miserable for commuters. Last week civil servants also took to the streets to defend their special status. Fresh complaints by students arose after half of the 800,000 applicants to university this year under a new, tougher, admission system ended up last week with no initial offer.

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Yet, behind the scenes of discontent, Mr Macron may in fact be on the verge of an important victory. The evidence for this is threefold. First, railway workers, or *cheminots*, themselves seem to be losing faith. Fully 77% of train drivers went on strike on the first day of industrial action in early April, well above the current rate. The overall share of railway workers taking part in the strikes has dropped from 34% then to just 14% today. With worries about loss of pay, and lack of impact, only a small minority has decided to battle on.

Public opinion, too, has grown tired of the industrial action, but not in the way it did in the past. In 1995, when Alain Juppé, a centre-right prime minister, abandoned pension reform in the face of paralysing strikes, popular support for the unions increased as the weeks wore on. This time, support for the government has increased from 51% on the eve of the first day of strikes to 64% now. The strikes have been inconvenient, occasionally exasperating, but not crippling. New technology, from apps to organise ride-sharing to the SNCF’s live updated train schedules, has helped commuters cope.

Third, an attempt by unionists and political leaders to bring about a *convergence des luttes* (convergence of struggles), whereby workers and students unite—as they did in May 1968—in a moment of worker-bourgeois solidarity, has failed. Universities, from Rennes to Montpellier, that were blocked by sit-ins have been cleared, and most end-of-year exams are taking place. There have been some joined-up events. Unusually, the Confédération Générale du Travail (CGT), a big union that likes to organise its own demonstrations, took part on May 26th in marches organised by Jean-Luc Mélenchon’s Unsubmissive France (FI), a far-left party. Yet the numbers on the streets that day—some 32,000 in Paris—were meagre. It “was not an equinox tide,” conceded François Ruffin, an FI deputy, wryly.

Caution is always in order when it comes to the French street. Things could yet get out of hand. But the chances are that the government will now get its railway reform through the Senate, where it went for review this week, without ceding much ground. Edouard Philippe, the prime minister, has done a decent job of explaining that the reform is not about privatisation, as some unionists claim, but about giving the French railways a chance of withstanding competition under forthcoming European Union rules. To this end, he has announced that the state will take on €35bn of the railways’ debt—assuming this secures EU approval. For his part, Mr Macron has been clear from the start that there was “no chance” he would shelve railway reform. Even student frustration seems to be ebbing. A week in, with university offers updated regularly, two-thirds of applicants had received at least one.

If Mr Macron does indeed emerge victorious from his battle over the railways this summer, it will not automatically clear the way for further reforms. A planned overhaul of pensions and public spending “could be more difficult because they directly affect everybody,” says Alexandre Holroyd, one of his La République en Marche members of parliament. Yet, if nothing else, Mr Macron’s show of steeliness in the face of the longest disruption so far to his young presidency will have shown that, when properly handled, reform in France is possible.

This article appeared in the Europe section of the print edition under the headline “Neap tide”

A modern country

Ireland votes solidly to allow abortion

The power of the Catholic church has faded away

Print edition | Europe May 31st 2018

IN 1979, when Pope John Paul II visited the Republic of Ireland, 1.2m people attended his open-air mass in Phoenix Park in Dublin—more than a third of the population of the country at that time. As many again turned up at other smaller venues.

Four years later Catholic clergy and lay groups held back the tide of social reform sweeping across much of the rest of Europe by getting two-thirds of voters to back the eighth amendment to the constitution, banning abortion in any circumstances, including rape, incest and even an imminent threat to the life of the mother. Three years after that, in 1986, the same religious coalition persuaded 63% of voters to retain a constitutional ban on divorce.

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By then, though, the power of the church had already passed its zenith. In 1985 the sale of condoms, previously tightly restricted, was liberalised despite the church's best efforts. Divorce was permitted in 1995.

In 2012 Savita Halappanavar, a 31-year-old dentist, died of septic shock in Galway after being refused a termination. In the ensuing public outcry, the state ignored the anti-abortion lobby and legalised terminations when needed to save the life of a mother. Then, in 2015, Ireland became the first country in the world to approve gay marriage by popular vote. Last year Leo Varadkar (only 38 at the time) took over as prime minister; he has a steady boyfriend, though he has yet to tie the knot.

So it should not have been much of a surprise when Irish voters chose last week to repeal the eighth amendment entirely and clear the way for legal abortion. And yet the result had been in doubt. Opinion polls had shown a majority in favour of repeal, but there was a very high percentage of undecided voters. Many who supported repeal of the ban for “hard cases” like rape, incest and fatal fetal abnormality were less persuaded by the government's plan—which Mr Varadkar says he will now put into effect—to legislate for abortion on request in the first trimester of pregnancy.

The pro-life campaign focused its efforts on winning these waverers over. In the end, the measure was passed by a much higher vote than anyone had predicted—66% on a 64% turnout, with the support of both sexes and all age groups except the over 65s, and of all but one (Donegal) of the Republic's 26 counties. For the crowd of mostly young and female campaigners who packed into Dublin Castle to share “After Eight” mints and hear the result, pleasure was heightened by surprise and relief: the “hidden Ireland” of undecided and undeclared voters, of reticent men and shy old country ladies, had, it seemed, mostly been hiding an intention, however reluctant, to vote yes. In 35 years, Ireland has changed utterly.

Daithí Ó Corráin, a historian at Dublin City University, says that, since the 1990s, a now familiar wave of abuse scandals weakened the church's moral authority. But he believes that its real decline began 30 years earlier, when a reforming prime minister, Sean Lemass, undertook to modernise Ireland's stagnant and rural economy. A central plank of this policy was the introduction of free secondary education. “Instead of just listening to the clergy, people were able to make up their own minds for themselves,” said Mr Ó Corráin. “When the first cohort of these people came out in the 70s, you really see changes beginning from there.”

This article appeared in the Europe section of the print edition under the headline “A modern country”

Wind in their sails

Turkey's opposition scents success against Erdogan

Turkey's authoritarian president may be in a spot of bother

Print edition | Europe Jun 2nd 2018

VICTORY for Turkey's Recep Tayyip Erdogan and his Justice and Development (AK) party in presidential and parliamentary elections on June 24th should have been a foregone conclusion. The strongman enjoys unwavering support from his religious base, indirect control over practically all big news outlets, and emergency powers that allow him to rule by decree, lock up some critics and make others think twice before speaking.

The second-largest opposition party in parliament, the pro-Kurdish People's Democratic Party (HDP), has been in effect banished from the airwaves. Its candidate for president, one of Mr Erdogan's most outspoken rivals, Selahattin Demirtas, was arrested in 2016 on trumped-up terrorism charges, and is leading his campaign from a prison cell.

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The president's opponents are still the underdogs in the coming votes, to be held early and for the first time simultaneously. But they seem to have picked up momentum—and found the right candidates. Muharrem Ince, the nominee of the Republican People's Party (CHP), is a popular firebrand and one of the few secular politicians capable of connecting with religious voters. Born into a conservative family, Mr Ince prays regularly and defends the right of female civil servants to wear the Islamic headscarf, but also seems to enjoy an occasional drink. Meral Aksener, a veteran nationalist and a former minister of the interior, has propelled herself and her Iyi (“Good”) party from obscurity to the national stage. Remarkably for a party founded less than a year ago, Iyi seems poised to receive well above 10% of the vote in the parliamentary election. Recent polls give Mrs Aksener herself up to 20% in the first round of the presidential contest. Mr Demirtas has also polled in the double digits—not bad for a politician forced to communicate with the outside world through his lawyers and a few social-media accounts.

Mr Erdogan's opponents have taken a few pages out of the president's playbook. Earlier this year AK formed an electoral coalition with the right-wing Nationalist Movement Party (MHP), whose leader spent years calling Mr Erdogan a dictator only to change tack in exchange for help fighting off an internal challenge. By hitching its wagon to the ruling party's, the MHP will no longer have to clear the 10% threshold needed to enter parliament.

The opposition has responded in kind. Soon after Mr Erdogan called early elections, the CHP, Iyi, the Felicity Party (SP) and the small Democrat Party forged an alliance of their own, paving the way for even the smallest of the group to send a few members to parliament. A surprising display of solidarity followed. When rumours started to fly that Iyi might be barred from running in the elections due to a controversy about the timing of its party congress, the CHP loaned it some of its own MPs. (Any party with at least 20 members of parliament can take part in the elections.) Each of the two main opposition hopefuls has promised to endorse the other in the second round against Mr Erdogan, assuming he does not win outright.

The opposition has been less magnanimous towards the HDP, which was not invited to join the alliance. Most Turks view the party as a front for the PKK, a Kurdish insurgent group. But some overtures have been made. The presidential contenders have all called for Mr Demirtas to be released before the elections, a plea the courts and the government have ignored.

The sight of the CHP, a secularist party, in cahoots with the SP, an Islamist one, probably has their respective founders, Kemal Ataturk, the father of modern Turkey, and Necmettin Erbakan, a former prime minister, turning in their graves. But desperate times make for desperate bedfellows. Temel Karamollaoglu, the SP's leader, says the alliance is a marriage of necessity designed to rescue what remains of Turkey's democracy from Mr Erdogan's grip. The president and his men have less in common with political Islam than with crony capitalism, says Mr Karamollaoglu. “There is no justice,” he says. “The separation of powers is gone.”

The opposition parties have vowed to scrap Mr Erdogan's new constitution, which passed by a sliver in a 2017 referendum marred by irregularities and allegations of fraud. The changes will kick in immediately after the elections, reducing parliamentary oversight, abolishing the office of prime minister and concentrating all executive power in the hands of the president. Mr Ince describes this as a recipe for a “one-man regime” and promises to change the constitution again to return to parliamentary rule “as soon as possible”. He and others also pledge to end the state of emergency, which began days after an abortive coup in July 2016, and which has served as cover for sweeping government repression. They may be able to do this, if they can win enough seats to wrest control of parliament from the AK.

For now, Mr Erdogan's biggest headache is a currency crisis largely of his own making. The president has long insisted on holding lending rates down to keep the economy firing on all cylinders. The central bank has obliged. But the resulting credit binge has come at a cost. The value of the Turkish lira has fallen by half against the dollar since 2015. Following an interview in May in which Mr Erdogan repeated his odd view that high interest rates cause inflation and signalled he would take even greater control of monetary policy after the elections, the currency lost 10% of its value in a week. It strengthened only when Mr Erdogan ceded to orthodoxy and allowed the central bank to raise rates (see [article](#)). Turkish companies that racked up mountains of foreign debt may now be on the verge of default. Despite his authoritarian record and wacky economic theories,

the markets have always preferred Mr Erdogan and his AK to the fragmented opposition. Over the past month they may have had a change of heart.

This article appeared in the Europe section of the print edition under the headline "Wind in their sails"

Charlemagne: Beneath the paving stones

The legacy of Germany's student protests in 1968

An unfamiliar polarisation is roiling a country used to consensus

Print edition | Europe Jun 2nd 2018

IT RESEMBLES just another Berlin courtyard—some straggly bushes and a bike rack—but Krumme Strasse 66 can claim to be a birthplace of today's Germany. It was 1967; the Shah of Iran was at a performance of "The Magic Flute" at the nearby Opera; crowds of protesters had been forced into side streets; a shot rang out. Benno Ohnesorg, a 26-year-old, lay bleeding on the ground, his head cradled by another student in a photo that shocked the young Federal Republic and radicalised the movement for the demonstrations that swept German universities over the following year. Ohnesorg's killer had been an unmarked police officer, later acquitted. This convinced protesters that, long after 1945, authoritarian violence still lurked in German society.

In Germany "1968" means more than just such events. It is a symbol—a "memory marker", says Armin Nassehi, the author of a new book on the subject—that also denotes the wider downgrading of values like tradition, deference and unabashed national pride which, the student protesters believed, had led their parents' generation into the abyss. In its 50th anniversary year, implicit and explicit debates about 1968 and its legacy are roiling German politics.

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Many "68ers" ended up running things. The movement was institutionalised by the birth of the environmentalist, anti-authoritarian Green party in 1980. It came of age in 1998, when the Greens under Joschka Fischer (who started his political career throwing things at police in Frankfurt) joined a federal government with the Social Democrats (SPD) under Gerhard Schröder (who had defended many radicals as a young lawyer). Angela Merkel's governments from 2005, led by her Christian Democrats (CDU), have largely continued the earlier "red-green" priorities: child care, green energy and open borders.

The protesters have become the establishment, in other words. German films and novels abound with "old 68ers", typically former student militants now in their 60s and 70s and running industries, ministries and newspapers. In one movie, "The Edukators", a gang of juvenile anti-capitalists are discombobulated when Hardenberg, the millionaire they kidnap, turns out to have been a major figure in the 1968 protests. Cultural radicals from the era like Alice Schwarzer, a feminist commentator, are now part of the talk-show establishment. *Bild*, a populist newspaper loathed by the 68er students, even noisily backed Mrs Merkel's decision to keep Germany open to refugees in 2016.

The most prominent site of this post-68 Germany is, perhaps, the Holocaust Memorial in Berlin, a vast concrete expression of the urge to commemorate Nazi crimes. But its spiritual home is Prenzlauer Berg, a north Berlin district of posh cafés and organic shops beloved by prosperous bohemians. It sums up the good and the bad about old-68ers and their like: progressive and well-meaning, but sanctimonious, a bit too comfortable and too reflexively defensive of 1968. Sophie Dannenberg, an author who in 2011 drew attention to the student movement's totalitarian elements in "The Pale Heart of the Revolution", was deemed "crazy" and "one of the worst 100 Berliners" for her pains.

Arrayed against this nostalgia are two sources of dissent, the first more objectionable and the second more influential. The former is centred on the right-wing Alternative for Germany party (AfD), which often lambasts the "foul, red-green, 68er generation", and includes commentators who claim 1968 infected the country with self-loathing. The fact that some such figures were themselves leftist activists in the 1960s should not come as a surprise: as Ms Dannenberg observed, the movement's occasional lust for violent revolt and sympathy for dictators like Pol Pot might explain the ease with which some of its alumni have now lurched to the right-wing extreme.

The second group of 1968-critics comprises Merkel-sceptics on the centre-right. Among their number are Jens Spahn, the health minister and a possible future chancellor, who in February declared the post-68 era in Germany over; and Alexander Dobrindt, a Bavarian conservative who is calling for a "conservative revolution" on the grounds that "Prenzlauer Berg determines public debate in Germany". They believe that the 68ers have been in charge for too long. Their proposed remedy seems to take the form of tighter refugee policies, restrictions on abortion advice and a more confident sense of German identity. It is in this direction that mainstream German conservatism may well evolve once Mrs Merkel goes.

Hardenberg versus Michael and Bruno

The overall spectrum of views on such matters is wide. But increasingly it seems to coalesce into two distinct sides. On one is the broad pro-1968 establishment, particularly Mrs Merkel's liberal wing of the CDU, the Greens and much of the wider left. One might call them the Hardenbergs. On the other are those who believe the 1968 settlement needs contesting or dismantling: parts of the broader CDU, the liberal Free Democrats, but also the AfD and parts of the socialist Left party. If they had a cinematic counterpart, it might be Michael and Bruno, the nihilistic brothers who rebel against their hippy mother in "The Elementary Particles", a darkly humorous German film based on a French novel.

Both camps contain multitudes, but the sense of division in German politics was illustrated on May 28th, when the most convinced wings of both came onto the streets of Berlin to demonstrate. On the one side was the AfD. On the other was a counter-rally organised by techno clubs, epitomes of the right-on, post-68 Germany. Both presented a stark version of their

camps. The furious AfDers, chanting “We are the people”, were a long way from the moderate Merkel-sceptics of the CDU and CSU. And the rainbow-painted ravers were hardly classic Merkel or SPD supporters. But in a country that has become used to consensus, it spoke of something unfamiliar: polarisation.

This article appeared in the Europe section of the print edition under the headline “After the revolution”

Universal credit

The new safety net

The new safety net

Britain's switch to a "universal credit" is not going well

Despite big glitches, the government seems unwilling to change its policy

Print edition | Britain May 31st 2018

BREXIT may get all the headlines, but for millions of Britons another change is looming which could have an even bigger impact on their lives. By 2022 the government hopes to have fully implemented "universal credit", the biggest shake-up of the welfare system in decades. One in four households will receive payments under the new regime. Many aims of the scheme are laudable. But it is plagued with problems that could spell trouble for its recipients—and for the government.

Recent administrations of left and right have reformed welfare to make work pay. Today Britain has one of the rich world's highest working-age employment rates, at around 75%. In America, whose rate is more like 70%, those on the political right often say that Britain has shown the way. The Conservative government claims that universal credit, which merges six existing benefits—from working tax credit to housing benefit—into one, will nudge another 250,000 people into work.

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Yet as it is gradually rolled out, universal credit is proving deeply unpopular. Bradford, a relatively poor city in northern England, will introduce it this month. At a benefits "summit" organised by community groups in a hall on the outskirts of the city, there is a palpable nervousness. Over onion bhajis, locals air their fears. One has heard that evictions have risen in areas where universal credit has been implemented. Another exhorts the assembled throng to "arm ourselves" with information to cope with the change. To understand why everyone is so anxious, consider how universal credit is designed, and how it works in practice.

Universal credit was conceived in the late 2000s as a fairly generous scheme that would establish the Tories as champions of the deserving poor, rather than the misers many working-class voters believed them to be. Yet over time, the government came to see the new system as a way to save money. George Osborne, the chancellor in 2010-16, reduced the amount that claimants had to earn before their benefits were withdrawn. The upshot is that universal credit is expected to end up being about £2bn (\$2.7bn) less generous overall than the previous (already hard-nosed) system, shaving around 3% off the total bill.

One of its appeals is its apparent simplicity. Rather than having to supply personal information again and again to different government bodies, in theory claimants need do so only once, points out David Finch of the Resolution Foundation, a think-tank. By merging six payments into one, claimants are less likely to miss benefits to which they are entitled. Simplification also removes some of the perverse incentives of the old system, under which some claimants faced marginal tax rates of up to 100%.

Yet this simplicity also has downsides. Take the way that universal credit is paid. Claimants generally receive a single payment once a month. That arrangement rationalises what was a mish-mash of disbursements under the old system. It also mimics the way that most employees are paid. But over a tenth of employees are paid weekly, and the share is higher among low earners, who are most likely to receive universal credit. Reams of research show that people on low incomes struggle to budget over long periods. A recent official memo points out that "[f]or some claimants this change of payment frequency on transition to UC has been challenging and [has] led to rent arrears."

Claimants also appear to be struggling with the conditions attached to receiving benefits, which have been tightened for many people under universal credit. As of early 2018 about 4% of universal-credit claimants were being "sanctioned" for breaking their commitments, resulting in a lower payment. David Webster of Glasgow University suggests that the sanction rate for unemployed universal-credit claimants is about twice that under the old unemployment benefit.

However, the biggest problem facing universal credit has been poor implementation. Claimants generally must wait for five weeks before receiving their first payment, as employees often do when they start a new job. Plenty of those moving onto universal credit have practically no financial assets, making this a painful wait. And IT glitches mean that five weeks is often a minimum. Towards the end of last year the government revealed that 4% of claimants had not been paid in full even after ten weeks. Food banks report higher demand in areas where universal credit has been rolled out.

The upside to a tougher benefits system could be higher employment. Yet Paul Johnson of the Institute for Fiscal Studies, a think-tank, has said that the impact on employment is "highly uncertain". Evidence so far suggests that it may be less impressive than the government hopes. Our analysis finds that the employment rate in areas where universal credit has been introduced has grown no faster than in areas where it has not. Joblessness is already very low; the minority that cannot find work probably require intensive training rather than changes to the way that benefits are administered.

With universal credit being rolled out bit by bit, the government can adjust the scheme as it goes along. In the budget in November, Philip Hammond, the current chancellor, bumped up the transitional loans to which claimants are entitled as they await their first payment. It is getting easier for claimants to have their money paid directly to landlords, so that they do not fall into rent arrears.

It is odd, though, that a government which is courting votes from the “just about managing” classes is not more sensitive to the upset its policy seems to be causing. Reducing the waiting period to a fortnight, say, would not cost much. Pausing the scheme to fix its administrative problems would be easy. Yet despite evidence suggesting it should change course or risk doing real damage, the government seems determined to plough ahead with a giant, increasingly unpopular project that will reshape the country. Sound familiar?

This article appeared in the Britain section of the print edition under the headline “The new safety net”

Non-identical twins

Ireland's abortion vote sparks calls for change in Northern Ireland

It is now the only place in either the UK or Ireland to ban terminations in almost all circumstances

Print edition | Britain May 31st 2018

ALTHOUGH the people of Ireland voted to overturn the country's ban on abortion on May 25th, in one part of the island the restrictions continue. In Northern Ireland, unlike the rest of the United Kingdom, abortion has never been legal except in the rarest of circumstances.

Within days of the Irish referendum, Arlene Foster, the leader of the Democratic Unionist Party (DUP), Northern Ireland's largest party, declared that the result would have no impact on the law in her part of the world. But it quickly became clear that although she was legally correct, she could be politically mistaken. Campaigners in Dublin jubilantly brandished signs promising "the north is next". In Belfast, activists predicted a "seismic wave" of support for the north to follow suit.

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The issue goes well beyond medical and moral matters. In Westminster, the DUP made a pact last year with the ruling Conservative Party, lending it the votes of its ten MPs in return for £1bn (\$1.3bn) of extra money for Northern Ireland. Those votes are the only thing keeping Theresa May's government in office. Following the Irish referendum, senior figures in the Tory party, as well as the opposition, are pushing for abortion reform in Northern Ireland. Yet the DUP, a socially conservative Protestant outfit, is vehemently against.

The prospect of a vote on the matter in the House of Commons has alarmed the DUP. For years it has successfully defeated motions in the Northern Ireland Assembly proposing abortion reform. But whereas it has what amounts to a veto in the Assembly, it has no such control in the Commons. Its fundamentalist Protestant base would be angered if it failed to stop abortion in Northern Ireland.

Never a party noted for subtlety, it has already issued a blunt warning that Mrs May "would regret" allowing Tory MPs a free vote. The DUP's pact with the Tories does not mention abortion. But the DUP has made it known that it sees the issue as a deal-breaker. The party's chairman, Lord Morrow, declared: "Why would [Mrs May] risk losing the support of the DUP? She would not be foolish enough to do that."

The British government argues that the abortion question is, in the first instance, a matter for the Northern Ireland Assembly. That is true, but ignores the fact that the Assembly has been suspended since January 2017, after an almighty falling out between the DUP and Sinn Féin, the biggest nationalist party, with which it is obliged to share power. The Assembly can be revived only if the two parties agree to work together again, and there is no sign of that on the horizon.

This has led to calls in Westminster for the British government to step in. Dawn Butler, the shadow minister for women, decried the "injustice" of Northern Irish women being denied access to safe and legal abortion. "We should not be relying on a Victorian law. It is time for change," said Lord Duncan, a Conservative peer who serves as parliamentary undersecretary for Northern Ireland.

Would Northern Irish voters embrace such a change? Attitudes have been getting increasingly liberal. Polls find that they strongly support extending the right to abortion to cover cases of rape, incest or fetal abnormality. But an official survey in 2016 found a majority against the right to abortion on demand, of the sort that Ireland has just endorsed.

Even without reform in the north, the DUP and other pro-life campaigners worry that Ireland's decision will increase the number of abortions sought by Northern Irish women. Leo Varadkar, the Irish *taoiseach*, has indicated that they may well be allowed to cross the border to have abortions in the south. For many years Irish women went to Britain to terminate their pregnancies. It may not be long before British citizens are travelling from Northern Ireland to the south for the same reason.

This article appeared in the Britain section of the print edition under the headline "Non-identical twins"

The wrong sort of “Global Britain”

Tommy Robinson’s sentence shows how hate has gone global

Britain has become a favourite exhibit of the online far-right

Print edition | Britain May 31st 2018

LEEDS Crown Court provided an unlikely backdrop for a storm involving alt-right American blogs, a far-right Dutch MP and Donald Trump’s son. On May 25th Tommy Robinson, an anti-Islam activist and founder of the far-right English Defence League (EDL), was sentenced to 13 months in jail for contempt of court. It came after Mr Robinson—whose real name is Stephen Yaxley-Lennon—commented on an ongoing case outside the court, streaming his opinions live to his Facebook page, which has 860,000 followers. Mr Robinson had already received a three-month suspended sentence and a stark warning from a judge for pulling a similar stunt last year. But reporting restrictions, designed to prevent the collapse of the trial on which Mr Robinson was commenting, meant that these circumstances were not made public until four days later.

By then, hysteria over the “censorship” of Mr Robinson had broken out. The conservative Drudge Report, one of the world’s largest news aggregators, had the arrest as one of its lead items. Geert Wilders, a far-right Dutch MP, weighed in. “The lights of freedom are going out!” he declared in a video shared 10,000 times online. Elsewhere, half a million people signed an online petition to free Mr Robinson. Even Donald Trump’s son, Donald Jr, decided to join in. “Reason #1776 for the original #brexit,” he tweeted.

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Mr Robinson’s arrest fed into a wider narrative about Britain put forward by a nexus of far-right websites and politicians in America and Europe. Britain is portrayed as a police state that is overrun with Muslims and home to a sinister, “socialised” health service that delights in letting children die. Last year President Trump retweeted videos from Britain First, a far-right anti-Islam group whose leaders were jailed earlier this year for religiously aggravated harassment. (Like Mr Robinson, they too have been arrested for causing a fuss during a trial.)

Worryingly, some British politicians have started echoing these views. Gerard Batten, the leader of the populist UK Independence Party, offered a full-throated defence of Mr Robinson. Previously, UKIP had steered clear of Mr Robinson and his ilk. The party offered a tweedy, boozy image and tried to avoid the openly Islamophobic rhetoric common in other radical-right parties in Europe. Not all appear happy with how the party has changed. James Carver, a UKIP MEP, resigned earlier this week.

Before his sentence, Mr Robinson enjoyed a peculiar place in the British establishment. He appeared on Newsnight, a highbrow BBC programme, barely three months ago. In 2014 he spoke at the Oxford Union, which delights in sometimes hosting disagreeable sorts. Such invitations may now dry up. But an army of Facebook followers, and a growing profile abroad, mean that Mr Robinson will not disappear. A global—and disturbingly large—alternative establishment has already welcomed him.

This article appeared in the Britain section of the print edition under the headline “The wrong sort of “Global Britain””

Big little ones**As rich children slim down, poor ones are getting fatter**

*The gap in childhood obesity rates is growing***Print edition | Britain** May 31st 2018

IT IS mid-afternoon in Camberwell Green and the fast-food joints are filling up with schoolchildren. Some are in groups of friends, others are picking up dinner with their family. It is hard to escape unhealthy food in this south London neighbourhood. Posters in supermarkets and on bus-stops display deals for fizzy drinks and burgers. Newsagents' doorways glitter with packets of sweets and crisps. Even a church, converted from a bingo hall, has a snack-dispensing vending machine in its lobby.

The children of Camberwell Green are among the fattest in England. Half of ten- and 11-year-olds there are overweight or obese (meaning that a boy of average height would weigh over 40kg, as opposed to a healthy 35kg or so). By contrast, in Dulwich Village, a few miles south, where household incomes are twice as high, only a fifth of children are in that category, one of the lowest levels in the country.

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Poor children have been fatter than rich ones since around the 1980s. But over the past decade the rich have started to slim down, as the poor have got bigger. This is true in poor Camberwell and posh Dulwich, where rates of childhood obesity have respectively risen by ten percentage points and fallen by two in the past six years. And it is true of the country at large (see chart).

Since the 1990s the public has become more aware of the risks of obesity. The rich and well educated are best placed to act on this knowledge, says Ronny Cheung, a paediatrician in London. They have more time to cook healthy meals at home and are more likely than poor folk to live near green spaces or join sports clubs.

At the same time there has been an uneven growth of fast-food joints, explains Thomas Burgoine of the Centre for Diet and Activity Research (CEDAR) at Cambridge University. He and colleagues looked at the density of fast-food outlets in Norfolk between 1990 and 2008. In the poorest areas it increased by two restaurants per 10,000 residents, whereas in the richest it grew by just 0.5. Across England, there are 8.2 fast-food outlets per 10,000 people, and 11.6 in the poorest parts of the country, according to Public Health England, a government agency.

The temptation to indulge is furthered by the marketing of fatty foods. Cancer Research UK, a charity, suggests that poor children are more likely than rich ones to be exposed to junk-food ads.

People have a limited amount of mental capacity to think about their problems, argues Hugo Harper of the Behavioural Insights Team, a part-publicly owned think-tank which co-authored a recent report on the subject with Guy's and St Thomas' Charity. Parents concerned about paying rent and keeping the electricity on are thus less likely to think about cooking a healthy dinner. One experiment found that subjects who were asked to memorise a long string of numbers were more likely than others to pick a chocolate cake over a fruit salad. Stress has a similar effect.

And it may be getting costlier to eat well. CEDAR found that in 2002-12 the most nutritious foods, like vegetables and unprocessed meats, were pricier than unhealthy meals such as pizzas and burgers—and that the price gap grew each year by about 10p (\$0.13) per 1,000 calories.

Politicians have taken note. In April the government introduced a tax on sugary soft drinks. It is expected to announce a new anti-obesity strategy within weeks; Scotland will set out its own plan in the summer. On May 30th a report by the health select committee of MPs recommended that junk-food ads be banned from television before 9pm and that cartoon characters not be permitted to advertise snacks, among other measures.

But the underlying causes of childhood obesity are fiendishly tricky to fix. As Sir Michael Marmot, head of University College London's Institute of Health Equity, puts it: "If you want to solve the obesity problem, you have to solve the inequality problem first."

This article appeared in the Britain section of the print edition under the headline "Big little ones"

More yin than yang

Europe's oldest Chinatown fights for survival

Chinese migrants founded Liverpool's Chinatown in the 1860s. But the latest arrivals are uninterested

Print edition | Britain May 31st 2018

AT 13.5 metres high, the dragon-themed archway that marks the entrance to Chinatown has become a Liverpool landmark. Built in 2000, it is the tallest such gate outside China, local officials like to boast. Walk through the grand archway, however, and an inconvenient truth emerges: the oldest Chinatown in Europe appears to be on its last legs.

Nelson Street, its hub, is quiet on a balmy early afternoon. Its dozens of restaurants look empty, and a cluster of Chinese professional-services firms have shut early. One of the few shops with more than ten customers inside is an American-style bagel joint. The only other people in sight are a handful of tourists snapping selfies. The two other streets that make up Chinatown look just as barren. "Chinatown is not just in decline, it is destitute," laments Brian Wong, co-founder of the Liverpool Chinese Business Association, who nonetheless believes things can be turned around.

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Although they are still the biggest minority group in Liverpool and its environs, ethnic Chinese residents (excluding students) have seen their numbers halve since the mid-20th century, to around 12,000. The first wave of Chinese migrants, the founders of Chinatown, arrived in the 1860s, when Liverpool established itself as Europe's main trading post with China. A second phase came in the 1950s and 1960s, as refugees fled communism. Both waves of migrants faced discrimination in the job market. Partly due to this hostility from the host population, the Chinese lived closely together and literally minded their own business, opting for self-employment.

The declining fortunes of Liverpool's port and the local economy more broadly in the ensuing decades spurred young, British-born Chinese Liverpudlians to seek greener pastures in Manchester and London, whose Chinatowns have since eclipsed Liverpool's. As they left, many of the launderettes, restaurants and legal firms that had catered to them folded. Simon Wong, a local shop owner, predicts that more Chinatown businesses, particularly in the catering industry, will be forced to close down in future.

Two remedies have been suggested. The first is to convince the city's 10,000 Chinese students to spend more in the enclave. That may be difficult, however. Manchester's much larger Chinatown is just a short ride away, and in any event "Liverpool's Chinatown is too grimy," says Li Jinzhu, who is studying at the University of Liverpool. Moreover, because Liverpool's Chinatown specialises in Cantonese fare (reflecting the culture of its earliest settlers), it has struggled to attract Mandarin-speaking students from other parts of China, whose palates are radically different.

A more ambitious idea, proposed in 2015 by a local property developer and supported by the council, is to build a £200m (\$265m) "New Chinatown", replete with luxury flats and glossy office towers, on a tract of wasteland by the historic Chinatown. The goal was to create Europe's first modern Chinatown, marrying Chinese culture with City of London-like architecture. But the plan evaporated when the developer pulled out last year, after finding itself in legal trouble with the city council. Another developer has since bought the leasehold, but scrapped "New Chinatown" as originally conceived.

The grand archway on Nelson Street is said to have been built according to the principles of *feng shui*, thus bringing good luck. Clearly no one bothered to raise the point that the height of the arch in feet, 44, means "double death" in Chinese.

This article appeared in the Britain section of the print edition under the headline "More yin than yang"

Rum, strategy and the cash

Britain's Royal Navy has big ambitions—but a small budget

Can the force remain “truly global” even as it shrinks?

Print edition | Britain May 31st 2018

TO UNDERSTAND how seafaring Britons, in romantic moments, see their island's maritime story, it helps to join the tourists taking a cruise around the harbour that was once home to the world's mightiest navy. In the same skyline, visitors are urged to admire the finest of the old and the shiniest of the new. Gazes switch from the oaken planks of *HMS Victory*, from which Admiral Horatio Nelson smashed the French and Spanish but lost his own life in 1805, to *HMS Queen Elizabeth*, a new aircraft-carrier which is by far the biggest vessel ever built for the Royal Navy.

To judge by its stated intentions and the ships it means to buy, Britain is planning to celebrate Brexit by reasserting some of its ancient prowess as an ocean-going power. Gavin Williamson, the defence secretary, announced on May 24th that a frigate would be kept permanently in Bahrain, as part of an “enduring presence” in the Gulf, and that three British ships would be deployed in the Asia-Pacific region. This reflected a “vision of a Royal Navy always forward-deployed and truly global,” he said. As well as the *Queen Elizabeth* and another huge carrier, which will both be endowed with snazzy American fighter aircraft, the order book includes fresh generations of attack submarines and surface combatants, plus four subs armed with nuclear missiles.

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All this has boosted the morale of a service which was hurt by the spending squeeze mandated in 2010 after the economic downturn. At that time, navy chiefs reluctantly accepted a reduction in surface combatant ships to a historic low of 19 (down from about 50 at the end of the cold war) as the price for saving the ambitious carrier plan. A defence review in 2015, noting the dangerous state of the world, helped turn the tide. But hard questions still hang over a service now dwarfed by its closest friend (America's navy has about 300 big ships) and challenged by China and Russia.

All at sea

The Royal Navy's strength, including reserves, is now about 35,000 sailors, roughly half the cold-war level. Staffing and equipping even a reduced fleet can be a stressful business. As the National Audit Office, a spending watchdog, points out, the navy is short of technicians, pilots and IT specialists, and it will need to make further efficiency savings to fund the new nuclear subs. There have been times in the past two years when none of the surface fleet was far from home waters.

The navy insists it is winning the battle to make do. As of mid-May, the defence ministry says, some 24 ships and subs were at sea and 9,000 sailors were deployed or about to sail. More than 96% of navy posts were filled and “plans were advancing” to find personnel for the second carrier, due for completion around 2020.

But another worry is that, having focused on low-tech foes like pirates and drug-smugglers, British ships may have lost the culture and capacity needed to fight high-intensity war with what strategists call peer competitors. The navy has just extended the life of its main anti-ship missile, the Harpoon, by two years. Nobody knows what will happen after 2020.

Aircraft-carriers need battle groups to protect them, and Britain's shrunken fleet can hardly manage that alone. Sir Mark Sedwill, the national security adviser, made the revealing admission on May 1st that the two giant new ships would probably not enter contested waters without an ally (presumably America) to protect them. As Chris Parry, a retired admiral, points out, that negates one of the aims of the carriers when the concept was dreamed up in 1998: to keep an independent capacity to act in distant seas like the south Atlantic, where Britain fought Argentina in 1982.

The other question is whether, even when stretching its resources cleverly, Britain can hope to stay in an accelerating technological race between the world's leading powers. America, China and Russia are all working hard to develop hypersonic missiles and laser weapons, which may transform maritime warfare. Russia, dismissed until a few years ago as a spent naval force, is broadening the range of vessels from which it can fire cruise missiles. China is building frigates and aircraft-carriers at a pace which makes cash-strapped British planners look plodding. It was announced recently that a new generation of British frigates would take eight years to construct, a timetable that was dismissed as an excessively “leisurely build” by Save the Royal Navy, a campaigning website.

In a small way, Britain already goes head to head with both emergent powers. The number of times when the Royal Navy was deployed to deflect potentially threatening actions by Russian ships rose to 33 last year, from 20 in 2016 and just once in 2010. In March a British frigate sailed through part of the South China Sea where the Chinese authorities are trying to establish a sphere of influence. This was a gesture of support for America's effort to maintain free navigation on the high seas. The best sense anyone can make of Britain's modestly rising maritime ambitions is that the Royal Navy, including its showpiece carriers, hopes to be a useful adjunct to the American one.

Back in Portsmouth, the difficulty of prevailing in a naval race is vividly illustrated. A prize exhibit in the old dockyard is *HMS Warrior*, a steam-and-sailing ship that outgunned all comers when launched in 1860 but held her lead for barely 15 years. Ever inventive, the navy kept using the hull as a fuelling barge until 1979.

Bagehot

Last orders for political drinking

Waning interest in booze is transforming British politics

Print edition | Britain May 31st 2018

FOR political journalists of a certain age it is impossible to read about the imminent closure of the Gay Hussar, due on June 21st, without a flood of nostalgia. The restaurant is a purveyor of memories as much as Hungarian food. The walls are lined with cartoons of leading politicians and journalists. A couple of images on the stairwell capture their subjects perfectly: a cartoon of Michael Foot beaming at his 90th birthday party and a photograph of Gordon Brown storming out after a dinner with editors.

There are all sorts of reasons for the closure. The rise in property prices in Soho is forcing all sorts of landmarks to close. The restaurant is too far from Parliament for MPs to get back in time to vote. The most remarkable thing about the Gay Hussar is that it has survived for so long in a volatile industry. Opened in 1953, it started as a meeting place for Jewish immigrants from eastern Europe, many of them communists, became a favourite of Labour MPs and trade unionists in the 1960s, and then conquered the whole political world in the 1980s. Tory “wets” plotted against Margaret Thatcher there and Tory “bastards” against John Major.

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But the restaurant's imminent death surely has something to do with the decline in political drinking. Few people went to the Gay Hussar for the food. Hungary's is not one of the world's great cuisines and the Gay Hussar's rendering of it was more faithful than inspired. Nor did they go for the comfort. The tables are cramped, particularly upstairs, and the corridors are higgledy-piggledy. They went for the booze—or, more precisely, for the intoxicating mixture of drink and gossip, alcohol and plotting, that once made British politics such a joy.

Drink has certainly not disappeared from public life. The Westminster village is about to embark on a long cycle of summer parties (last July David Lidington, a Tory MP, blamed plots against Theresa May on “too much sun and too much warm prosecco”). The summer season will be followed by the even boozier party conference season. Drink still has the power to change the course of political history. Ed Miliband introduced the current system for electing the Labour leader because a drunken Labour MP, Eric Joyce, assaulted four other fellow drinkers and the party's attempt to replace him produced fears of vote-rigging by unions. If Mr Joyce hadn't got so sloshed, Jeremy Corbyn might still be on the backbenches, and Labour might have campaigned much more vigorously for Britain to stay in the European Union.

That said, today's Westminster looks like a temperance meeting compared with the Westminster of old. Ben Wright's lovingly researched “Order, Order! The Rise and Fall of Political Drinking” demonstrates that British politics was once sodden with drink from the top downwards. Winston Churchill started on the whisky shortly after breakfast and later added formidable quantities of wine, brandy and his particular favourite, champagne. Ernest Bevin had the same relationship with alcohol as a car has with petrol. Nye Bevan was nicknamed the “Bollinger Bolshevik” and Roy Jenkins “Old Beaujolais”. By contrast, Mr Corbyn is a virtual teetotaler and Mrs May boasted, in her bid for the Tory leadership, that she doesn't hang around the Commons bars.

Drinking was more than an after-work indulgence. MPs needed to drink in the House of Commons' numerous bars in order to build up a network of supporters (or to spread poison about their rivals) and to be able to match journalists drink-for-drink in order to burnish their public image. During the glory days of political drinking it was routine for journalists to share a bottle of wine or more with their sources over a long lunch and then stagger back to their offices in order to hit their deadlines. Today lunches are usually short and dry, though still ridiculously expensive.

Why has the great tradition of political drinking gone into decline? The most popular answer—that everybody is too busy these days—is nonsense. Mr Corbyn and Mrs May are no doubt working hard to construct their dubious legacies, but it is difficult to imagine that they work harder than Bevin, who ensured that Britain sided with America in the cold war, or Jenkins, who liberalised the country's social legislation, let alone Churchill. Political journalists are no doubt also very busy tweeting. But it is hard to think that they are busier than legendary drinkers-cum-workhorses such as Henry Fairlie and Christopher Hitchens.

Used judiciously, alcohol can be a stimulant to the sort of work that makes a difference in politics. It can promote creativity and problem-solving. (William James once said that alcohol “brings its votary from the chill periphery of things to the radiant core”.) It can dissolve hierarchies and create bonds. And it can promote truth-telling—a dangerous thing for politicians, but a wonderful one for journalists and society in general. There are more scoops in a bottle of wine than a bottle of Perrier.

One for the road

The real reasons are more depressing than “pressure of work”. One is that the government is becoming the nation's nanny. It is impossible to tell ordinary people to limit themselves to 14 units of alcohol a week if you consume 14 units with your lunch

every day. Another is that people are increasingly aware that, however good alcohol is as a servant, it is an evil master. Charles Kennedy, a former leader of the Liberal Democrats, is one of several MPs who drank himself to death.

The saddest reason is the rise of a professional political class. Drink provided a link between politics and society. The Labour Party recruited MPs and activists from working men's clubs that existed in large part to provide workers with cheap drink. Ministers routinely let their guard down when they demolished the ministerial drinks cabinet with their civil servants and advisers. Today, both Labour and the Tories recruit their MPs from think-tanks and ministers keep up their guard at all times. The decline of political drinking has snapped yet another link between the political elite and the people that they are supposed to serve.

This article appeared in the Britain section of the print edition under the headline "Last orders"

Effective altruism

Faith, hope and clarity

Faith, hope and clarity

Can “effective altruism” maximise the bang for each charitable buck?

A growing social movement is trying to bring scientific rigour to philanthropy

Print edition | International Jun 2nd 2018

DONORS to charities rarely make the sort of cost-benefit calculations investors, for example, would think obligatory. So charities attract donations with pictures of smiling gap-toothed children, rather than spreadsheets showing how they actually spend their money. Tugging at the heartstrings, however, does little to allay the doubts of economists sceptical about the efficacy of charity. Who is to say whether donating to a homeless shelter is a better use of money than donating to a school?

Yet advances in social science, particularly in development economics, mean donors can now have a reasonably good idea of how far each dollar will go. Empirically minded do-gooders, members of the nascent “effective altruism” movement, argue that it is at last possible to put into practice a “fundamental axiom” of utilitarianism, first invoked in 1776 by Jeremy Bentham, a British philosopher: “It is the greatest happiness of the greatest number that is the measure of right and wrong.”

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The vast majority of charitable contributions come not from big foundations, but from individuals. Data from the Giving USA Foundation, a non-profit, show that of the \$390bn Americans gave to charity in 2016, \$280bn came from individual donors. Of this, around \$120bn went to religious organisations and \$60bn to educational institutions (mostly universities).

Not all of this money was given with the intention of maximising human welfare. Take, for instance, the Make-A-Wish Foundation, which helps children stricken with life-threatening illnesses, by granting “wishes”, such as meeting celebrities or visiting theme parks. The typical wish costs the foundation around \$10,000 to fulfil—heartwarming for the recipient but of little help in improving health generally. Yet some charities, notably those active in poor countries, can produce big public benefits for relatively small amounts of money. One estimate finds that surgery that prevents blindness induced by trachoma, an infectious disease, costs a charity just \$100 per operation.

William MacAskill, a philosopher at Oxford University, argues that promoting inefficient charities might actually do more harm than good. Competition for donations is acute. Research by the Centre for Effective Altruism, a think-tank he co-founded, finds that every dollar raised by one charity means 50 cents less for others. Mr MacAskill also worries about “moral licensing”. One study found that people tend to treat giving to charity like buying a medieval indulgence—they may believe they have the right to act immorally if they have done something they deem altruistic.

Measuring a charity's efficiency is not straightforward, however. Effective altruism's most-cited evaluator is GiveWell, a non-profit group based in San Francisco founded in 2007 by Holden Karnofsky and Elie Hassenfeld, two former hedge-fund analysts. Traditionally, charities used to be rated according to their overheads. GiveWell instead calculates standardised returns on investment across charities, as measured by factors such as cost per life saved (see chart). The charities it rates most highly are not all household names.

Toby Ord, another philosopher at Oxford, argues that people from rich countries who are interested in maximising human welfare should focus their charity abroad. A donor who wants to improve educational outcomes, for instance, would do better to donate not to American schools but to charities trying to improve the diets of children in poorer countries. A rough meta-analysis by GiveWell finds that ensuring children in a poor country have enough iodine in their diets can lead to a four-point increase in average IQ.

One of GiveWell's highest-rated charities is the Against Malaria Foundation (AMF), which distributes medically treated bed nets in poor countries. Malaria still kills some 400,000 a year, mostly in sub-Saharan Africa. There is still no cure for the mosquito-borne disease. But it is relatively easy to prevent its spread. The AMF estimates that it costs \$4 to buy and distribute a treated bed net. According to GiveWell's analysis, the health benefits from this in sub-Saharan Africa are equivalent to a child's life saved for every \$2,000 spent.

GiveWell's approach to evaluation has its limitations. It is hard to make like-for-like comparisons of the efficacy of different charities with different goals. An alternative approach is simply to give money to poor people. A proliferation of mobile-payment apps has made this easier than ever before. GiveDirectly, a charity founded by a group of development economists in 2008, facilitates direct transfers to people in Kenya and Uganda. Mr Hassenfeld likens the organisation to an index—it serves as a baseline against which other charities can be judged. GiveWell reckons that in order for a charity to be more cost-efficient than GiveDirectly, it would have to provide goods or services that people cannot readily purchase by themselves.

Inevitably, even effective altruists have to accept a degree of uncertainty about the impact of their donation. The question is how much? GiveWell is relatively conservative when it comes to recommending charities, listing just nine organisations under

its list of “top charities”. The Open Philanthropy Project, a research group spun out of GiveWell, is more willing to back ventures with only a small chance of success provided the potential benefits are big enough. An extreme example is its recommendation that donors finance research on the safe use of artificial intelligence (AI). The increasing economic importance of AI, and the fact that it is so poorly understood, have led many altruists to believe it may soon become one of the biggest threats to society.

It is hard to gauge quite how big the effective-altruism movement has become. But it does have some serious backers. Good Ventures, a non-profit group founded by Dustin Moskovitz, a co-founder of Facebook, and his wife, Cari Tuna, makes donations based almost exclusively on the Open Philanthropy Project’s recommendations. It does not accept outside donations, but is dedicated to spending Mr Moskovitz’s and Ms Tuna’s wealth, which *Forbes* reckons to be \$15bn. Last year, Good Ventures gave out over \$300m in grants.

Effective altruists fret that their movement might, in fact, have very limited appeal. Utility-maximising automatons might see the sense in buying mosquito nets over the internet for distant strangers. Human beings might find, say, volunteering at a local soup kitchen more satisfying emotionally. Ari Kagan, a researcher at the Centre for Advanced Hindsight, a think-tank at Duke University, points out that many people find the idea of applying quantitative reasoning to altruism repugnant—like charging family members for a meal. Surveys show that while the effective-altruism movement has grown quickly, it has mainly done so within a limited group of people—ie, young white men with degrees in science and philosophy.

Effective altruism can be a hard sell, even for the rationally minded. Silicon Valley-types have been keener to embrace the philosophy than those working on Wall Street, for instance. Mr Hassenfeld reckons that this is partly because programmers who get rich tend to do so at a young age, and are hence more open-minded about charity. Bankers, in contrast, start to make real money only in their 40s, by which time they may already have formed their charitable habits. With many potential donors, Mr Hassenfeld says, “it’s easy to get intellectual agreement, but harder to get action.” As utilitarians have long found, and Bentham himself lamented, “the rarest of all human qualities is consistency.”

Correction (June 7th 2018): This article originally cited an estimate of \$5 to buy and distribute a treated bed net. The AMF informs us that figure should be \$4. Sorry.

This article appeared in the International section of the print edition under the headline “Faith, hope and clarity”

Marginal utilitarianism

To help save the world, become a banker not a doctor

Better than the obvious choices may be a lucrative job, allowing generous charitable gifts

Print edition | International May 31st 2018

WHEN Kit Harris was a student at Oxford University, he was not sure what he wanted to do later. He thought about becoming an actuary—decent pay and hours and the chance to use his training in probability theory. But, though Mr Harris enjoyed solving maths puzzles, he also wanted to help the less fortunate. Dilemma resolved! Naturally, he took a job as a derivatives trader.

He reasoned that, though plenty of do-gooders can grab entry-level jobs at non-profit groups, few have the quantitative skills to earn six-figure salaries at a bank. So he could make more of a difference by taking a lucrative job and donating large chunks of salary than by working for a charity directly.

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Shunning his own advice, Mr Harris has since left finance to work for the Centre for Effective Altruism in Oxford. One of its initiatives, 80,000 Hours, advises people on careers they should pick to maximise their impact on the world. It argues such decisions should be based not on how much good a profession does overall, but on how much good an individual would do personally. One woman started her career as a teacher, but doubted she was actually making any impact. Inspired by 80,000 Hours, she decided to work for an investment bank instead, calculating that she would have much more money to donate. Her leftish friends were aghast.

Medicine is another obvious profession for do-gooders. It is not one, however, on which 80,000 Hours is very keen. Rich countries have plenty of doctors, and even the best clinicians can see only one patient at a time. So the impact that a single doctor will have is minimal. Gregory Lewis, a public-health researcher, estimates that adding an additional doctor to America's labour supply would yield health benefits equivalent to only around four lives saved.

The typical medical student, however, should expect to save closer to no lives at all. Entrance to medical school is competitive. So a student who is accepted would not increase a given country's total stock of doctors. Instead, she would merely be taking the place of someone who is slightly less qualified. Doctors, though, do make good money, especially in America. A plastic surgeon who donates half of her earnings to charity will probably have much bigger social impact on the margin than an emergency-room doctor who donates none.

This article appeared in the International section of the print edition under the headline "Put money in thy purse"

Data for detectives

I know what you'll do next summer

I know what you'll do next summer

Increased amounts of data and surveillance are transforming justice systems

The relationship between information and crime has changed

Print edition | Technology Quarterly May 31st 2018

ON WHAT does the administration of justice depend? Devotees of the Old Testament might say wisdom, as displayed in King Solomon's judgment. Others might say a dispassionate objectivity. It also requires the threat of punishment—the basis of the modern state's coercive power to enforce laws. But John Fielding knew that, before administrators of justice could mete out punishment or exercise wisdom, they needed something else: information.

Together with his half-brother Henry (a magistrate better remembered as the author of "Tom Jones"), in 1749 Fielding founded the Bow Street Runners, London's—and the world's—first professional police force, paid for largely with public funds. Information was at the centre of everything Fielding did. He retained descriptions of suspected criminals, for instance, as well as a "watch book", which contained details of expensive timepieces to help prevent their resale if stolen.

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The world's most famous detective shared Fielding's view; Sherlock Holmes retained an extensive indexed library of criminals and their crimes. The delight readers took in following him—a delight that makes crime fiction one of the great literary genres—also had information at its heart. What is a clue? What is a red herring? How does justice work? We pay homage to that tradition with the graphic story that illustrates these pages.

In fact as in fiction, the trend has continued. The Metropolitan police department, which has patrolled Washington, DC, since 1861, retains annual reports detailing crimes in each precinct. American homicide detectives record details of their cases in "murder books", which are then filed for future consultation.

Historically, gathering information was an arduous process, requiring innumerable conversations, many of which later proved to be irrelevant; hours staking out a subject; researching documents and testimony; and reams of tedious paperwork. In illiberal countries, where governments do not care about their citizens' civil rights, police could easily tap phones and open letters. Liberal countries make that harder; police who want to listen to someone's phone calls can do so only for limited periods and specific purposes, and then only with judicial approval.

It's not Cagney and Lacey

Now the relationship between information and crime has changed in two ways, one absolute, one relative. In absolute terms, people generate more searchable information than they used to. Smartphones passively track and record where people go, who they talk to and for how long; their apps reveal subtler personal information, such as their political views, what they like to read and watch and how they spend their money. As more appliances and accoutrements become networked, so the amount of information people inadvertently create will continue to grow.

To track a suspect's movements and conversations, police chiefs no longer need to allocate dozens of officers for round-the-clock stakeouts. They just need to seize the suspect's phone and bypass its encryption. If he drives, police cars, streetlights and car parks equipped with automatic number-plate readers (ANPRs, known in America as automatic licence-plate readers or ALPRs) can track all his movements.

In relative terms, the gap between information technology and policy gapes ever wider. Most privacy laws were written for the age of postal services and fixed-line telephones. Courts give citizens protection from governments entering their homes or rifling through their personal papers. The law on people's digital presence is less clear. In most liberal countries, police still must convince a judge to let them eavesdrop on phone calls.

But mobile-phone "metadata"—not the actual conversations, but data about who was called and when—enjoy less stringent protections. In 2006 the European Union issued a directive requiring telecom firms to retain customer metadata for up to two years for use in potential crime investigations. The European Court of Justice invalidated that law in 2014, after numerous countries challenged it in court, saying that it interfered with "the fundamental rights to respect for private life". Today data-retention laws vary widely in Europe. Laws, and their interpretation, are changing in America, too. A case before the Supreme Court will determine whether police need a warrant to obtain metadata.

Less shoe leather

If you drive in a city anywhere in the developed world, ANPRs are almost certainly tracking you. This is not illegal. Police do not generally need a warrant to follow someone in public. However, people not suspected of committing a crime do not

usually expect authorities to amass terabytes of data on every person they have met and every business visited. ANPRs offer a lot of that.

To some people, this may not matter. Toplines, an Israeli ANPR firm, wants to add voice- and facial-recognition to its Bluetooth-enabled cameras, and install them on private vehicles, turning every car on the road into a “mobile broadcast system” that collects and transmits data to a control centre that security forces can access. Its founder posits that insurance-rate discounts could incentivise drivers to become, in effect, freelance roving crime-detection units for the police, subjecting unwitting citizens to constant surveillance. In answer to a question about the implications of such data for privacy, a Toplines employee shrugs: Facebook and WhatsApp are spying on us anyway, he says. If the stream of information keeps people safer, who could object? “Privacy is dead.”

It is not. But this dangerously complacent attitude brings its demise ever closer. One of the effects technology has on law enforcement is to render its actions less visible. You would notice if a policeman took photos of every parked car and pedestrian on your street. But ANPRs and body-worn cameras (“bodycams”) let officers do that as an unnoticed matter of course. That makes speaking up about privacy concerns more important, not less.

Technology used responsibly and benignly by one country or agency can be used for sinister purposes by another. Activists in, say, Sweden or New Zealand may have few concerns that police will use their technological prowess to arrest them on trumped-up charges, because rule of law is strong and those governments generally respect citizens’ civil liberties. Activists in China or Russia have far more to fear.

Some people argue that those who have done nothing wrong need not worry. But that justifies limitless state surveillance, and risks a chilling effect on citizens’ fundamental civil liberties. After all, if you are not planning crimes while talking on the phone, why not just let police officers listen to every call? Police need oversight not because they are bad people but because maintaining the appropriate balance between liberty and security requires constant vigilance by engaged citizens. This is doubly true for new technologies that make police better at their jobs when policy, due process and public opinion have not caught up.

This report will examine the promise and the dangers of those technologies. It explores several arenas in which technology is radically changing how the justice system operates—in street-level surveillance, the ease with which law enforcement can bypass encryption, the use of electronic monitoring as an alternative to prison, and the introduction of algorithms by police and courts.

It examines technology’s effects on crime and criminals, and on innocent people caught up in a tech-dominated approach to policing. The report does not demand the wholesale rejection of these technologies. Instead it calls for rigorous oversight, which has been shown to benefit both citizens and law enforcement, and which is the only way to ensure that, in their quest for security, societies do not inadvertently surrender too much liberty.

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This article appeared in the Technology Quarterly section of the print edition under the headline “I know what you’ll do next summer”

Walls have eyes

It is hard now to avoid street-level surveillance

Police have many new ways of monitoring people

Print edition | Technology Quarterly May 31st 2018

ON AUGUST 25th 2017 Johnnie Rush was walking home after a 13-hour shift washing dishes at Cracker Barrel, a restaurant in Asheville, North Carolina. Police watched Mr Rush cross a street without using a zebra crossing. They waited for him to buy beer and then confronted him about the jaywalking, an offence in that state. When he argued and ran away, they knocked him to the ground, used a Taser and punched him in the head.

Eight months later, following a lawsuit, officials in Asheville released nine videos from the officers' bodycams. These cameras are usually clipped to the front of an officer's uniform or used as a headset. They record audio and video, often with date and time stamps as well as GPS co-ordinates. They can also be Bluetooth-enabled and set to stream in real time. Some have to be turned on manually, others can be triggered automatically by, for instance, an officer unholstering his weapon.

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Bodycams are just one way that what officers on the street can see, store and search is changing. These new technologies help in investigations and also offer benefits such as accountability. They make it more difficult for police and citizens to lie about contested encounters, or whether a person or car was at the scene of a specific incident. Yet they are still controversial. Evidence of whether bodycams reduce bad behaviour by police officers is ambiguous. And the potential for abuse of facial-recognition technology is vast, allowing, as it does, real-time deep surveillance.

Bodycam bodyslam

The videos of the assault on Mr Rush are sickening. The officer who punched him resigned in January, reportedly just before the department could fire him. Another officer was reassigned, a third disciplined, and Asheville released a statement condemning their behaviour. In a narrow sense, this represented a victory for bodycam advocates. But that does little for Mr Rush's battered head. Bodycams are not just supposed to record bad behaviour. The threat of recording is supposed to impel good behaviour, from both officers and citizens.

The first large randomised study of the issues was in 2012. It found that police use of force and citizen complaints in Rialto, California, dropped markedly when officers wore bodycams. A study conducted in Britain and California by Cambridge University two years later found similar results: wearing bodycams was associated with a 93% drop in complaints about police behaviour.

But these effects appeared only when cameras recorded entire encounters. Another study of eight British and American police forces conducted by Cambridge criminologists found that rates of assault against police were 15% higher when an officer turned his bodycam on in the middle of an encounter compared with officers who wore no cameras—suggesting that turning on a bodycam may represent an escalation. And a randomised study of officers in Washington, DC, found that wearing bodycams had no statistically significant effect on police use of force or citizen complaints.

Not everyone has embraced bodycams. City officials often balk at the cost: cameras cost as much as \$1,000 each, with an additional \$100 per month per camera for video-storage fees. Police unions have expressed privacy concerns. Some civil libertarians fear they will be used to surveil already heavily policed communities. Policies governing public access to, and retention of, bodycam footage vary widely. Still, usage is growing. One in five American police departments uses them, and nearly all others plan to do so. By some estimates the market for bodycams and data management is \$1bn a year in America alone.

It should give Westerners no comfort that China—a one-party state obsessed with social order—is at the forefront of developing bodycams. One Beijing company says it has invented a shoulder-worn, networked model that can recognise faces. Another Chinese firm has equipped police with facial-recognition cameras embedded in glasses that are meant to let officers know in real time if they are looking at someone on a police blacklist. One estimate values China's surveillance-tech market in 2018 at \$120bn. Human-rights campaigners fear that such technology has already been used to monitor activists, enabling arbitrary detention.

Cameras do not have to be worn by policemen. London has one fixed camera for every 20 people. Washington, DC, has about one for every 22. But the data they provide are not always usable. Sometimes their images are poor quality, their formats are not always uniform, and there is often too much to sort through quickly. After the terrorist bombing of a concert hall in Manchester in 2017, British police had to wade through more than 16,000 hours of CCTV footage.

According to Mick Neville, who spent 28 years with London's Metropolitan Police before leaving to found his own forensic facial-recognition firm, police find usable CCTV images in only 2% of reported crimes in London. "That's because they don't have systems in place," says Mr Neville. "There are too many cameras, too many formats, maybe they're working; maybe not." Don't blow money on gear without systems to extract the data, he advises.

Entrepreneurs have noticed the new market: startups that can analyse CCTV footage in nearly any format are now offering their wares to video-addled forces around the world. The ideal, says one facial-recognition startup founder, is “one to many in the wild”, meaning that a successful platform will be one that can compare a single face to its full database of faces, all with non-posed images, looking up or down, or half in shadow.

Round up the usual suspects

Machine learning and neural networks—software modelled on the human brain that learns from observational data and inference as humans do—power today’s facial-recognition products. They could make tomorrow’s even more powerful as they incorporate data on body mass, gait and gestures, rather than just the standard metrics such as distance between the eyes and width of nose. These platforms can also be trained to recognise objects, such as bags or a wristwatch, and to link them to people.

Roughly half of all American adults—the vast majority non-criminal—have images of their faces stored in FBI-accessible databases, according to Georgetown University Law Centre. Other countries are expanding biometric storage. This raises questions of racial bias. People from minority groups with disproportionately high arrest rates are more likely to be in such databases, and so disproportionately likely to be targeted by dragnet surveillance.

But citizens are also staring back at police. The American Civil Liberties Union, a watchdog, has released an app through which citizens can automatically send it recordings of police interactions. Mobile-phone cameras have recorded the deaths of a number of African-Americans killed by police. Footage of the death of one, Walter Scott, led to the indictment of the officer who shot him.

ANPRs raise concerns similar to those about facial-recognition databases. Police drive around, collecting and storing images of number plates registered to people not suspected of any crime. Vigilant Solutions, an ANPR firm, has a database of at least 7bn data points from number plates, most of which presumably belong to the innocent. If they become suspects, police can then trawl through ANPR data to create detailed portraits of their lives.

Supporters also say that they do nothing more than collect publicly available information, and that it is securely stored. Yet even that is not always true because rules governing storage and information-sharing vary. In 2015 a journalist in Boston found the city’s entire number-plate database online, including the addresses of everyone with a city parking permit, and the names of thousands of people suspected of being terrorists or gang members.

Such data can be abused personally as well as constitutionally. A policeman in Washington, DC, was convicted of extortion for blackmailing the owners of cars parked near a gay bar. ANPR firms insist what they do is constitutional—in America the First Amendment protects public photography. But not everything constitutional is desirable. Even the International Association of Chiefs of Police has admitted that ANPRs could have an impact on freedom by recording vehicles going to political gatherings, abortion clinics or other sensitive venues.

The argument is that ANPRs and CCTV with facial recognition give the state a time machine. If they connect a suspect (or a car) with a crime, they can simply track him through footage recorded before he became a suspect. Police argue that they try to do that anyway by digging into a suspect’s history; the new technology just makes it easier to do it better, and sometimes deeper. But you can be sure that, if police had real time machines—based, perhaps, in old-fashioned blue phone boxes—regulators would be all over them. With virtual time machines, not so much.

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This article appeared in the Technology Quarterly section of the print edition under the headline “Walls have eyes”

Read my phone

Police can bypass encryption and monitor anything

*The law is not keeping up*Print edition | **Technology Quarterly** May 31st 2018

“YOU can tell me who you are,” says Leeor Ben-Peretz, an executive at Cellebrite, an Israeli security-tech company, “But give me 15 minutes with your phone and I can tell you who you really are.” Mr Ben-Peretz’s office windows have a lovely vista of the low-slung skyline of PetahTikva and the burnished mountains beyond, but the real view is on a large monitor in front of him.

A young engineer connects a smartphone to what looks like a desktop computer with several ports on the front. After a quick login and a few clicks, the computer identifies the phone type. The user can then bypass the locked phone’s passcode and continue to use one of several extraction methods. “Logical extraction” reveals immediately accessible data: stored text messages, e-mails, pictures and instant messages. With more time, Cellebrite’s machines can also perform a “physical extraction”, revealing more information, including data that may have been deleted. The neatly organised, labelled data can then be viewed, saved, shared, filtered and searched.

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Police officers can also carry with them a tablet-sized device that does a basic device search—a sort of digital triage that lets them decide quickly whether a fuller investigation and extraction is merited. “Crime scenes in the past were about fingerprints and footsteps,” says Mr Ben-Peretz. “Today it’s digital: mobile devices, connected cars and tablets. Our digital footprint: this is the strongest indicator for what really happened.”

The spread of such technology—more than 10,000 law-enforcement agencies in 150 countries use Cellebrite’s services—raises profound privacy concerns. Most countries have laws offering people’s homes protection from intrusive searches. But laws governing devices are not nearly so clear. Cloud computing makes things ever more complex. As Adam Ghetti, a cyber-security entrepreneur, points out, “The law and the constructs that it was built on were written at a time when everything you had was near you and could be touched.” That is no longer the case, he says. “The average human in a developed country has more data that they created in a faraway place than in a tactile place at home.”

Cracking the code

One response is encryption, which has grown from a niche market to a standard feature of digital life. As one veteran European intelligence analyst puts it: “Encryption was dodgy when I joined. Now the modern economy runs on it.” WhatsApp, Signal, Telegram and Facebook Messenger offer end-to-end encryption, meaning that messages can be read only by the sender and the receiver; they cannot be intercepted in transit, nor can the companies themselves read them. The easiest way for law enforcement to read encrypted messages is to gain access to the phone of the sender or receiver.

Users can protect mobile phones by setting passcodes that restrict access. And not all phones are created equal. “Your best bet for default privacy is, hands down, getting a modern iPhone,” says Mr Ghetti. “There’s no close second.” What sets Apple apart is not just the quality of its encryption but also its commitment to user security. After a mass shooting in San Bernardino, California in 2015, the FBI asked Apple to build an operating system to install on a recovered iPhone in order to bypass its encryption. Fearful of setting a precedent that, as Tim Cook, Apple’s chief executive, wrote, “would hurt only the well-meaning and law-abiding citizens who rely on companies like Apple to protect their data”, the company fought the order in court. A six-week battle ended when the FBI found another way to extract the data.

What that method was and who did it (a source outside government, according to the FBI) remains a mystery. But bypassing encryption appears to involve tricking a phone’s co-processor—the part that limits the number of times a user can guess a passcode—into allowing unlimited guesses without triggering the phone’s security measures. Those measures may involve destruction of its encryption keys, which makes accessing the phone’s data impossible, or exponential increase in the time required between each guess, making brute-force guessing not worth the time.

The method required for physical extraction varies with each phone. Cellebrite has a large research department and a laboratory filled with thousands of different mobile-phone models stacked in drawers, floor to ceiling. Some are easier to crack than others. Over the past few years iPhone models have included an upgraded co-processor with an additional level of encryption. Cellebrite may have found a way to bypass it but, if so, Apple will no doubt patch the weakness, and encryption-bypassers will hunt for another.

Pulling metadata from a phone is much easier. Police can use fake mobile-phone towers (colloquially known as “Stingrays”), which trick mobile phones into connecting to them rather than to a real tower. Police can then learn which websites a user visited, and whom he texted and called, as well as the International Mobile Subscriber Identity, a unique number associated with the phone. It can also give the police a precise user location.

According to the American Civil Liberties Union (ACLU), a watchdog, at least 73 agencies in 25 states in America use Stingrays, though the true number is probably much higher. Police rarely seek approval or admit to using them, and indeed agencies that buy them generally keep them secret, on the basis that public knowledge of their use will render them ineffective.

Sting in the tail

Privacy advocates cite two problems with Stingrays. First, they suck up information about all phones in a certain location, not just that of a suspect; and second, they can pinpoint phones in homes and pockets that privacy laws often protect from warrantless searches. Though governments claim they need Stingrays to catch suspected terrorists and drug kingpins, they are more often used in routine police work, without warrants or oversight.

Police also monitor what people do on their mobile phone through social-media analytics. Most users expect their postings and preferences to be tracked and analysed. But in 2016 Geofeedia, an analytics firm, had its access to Facebook and Twitter removed after revelations that it marketed itself to law enforcement as a way to monitor “overt threats” such as unions and activist groups. Shortly after they bought it, police in San Jose, California, used the service to surveil Sikh and Muslim protesters.

Some argue that because social-media posts are public, police monitoring of them does not have the same privacy implications as, say, tracking your phone’s metadata, or using a GPS tracker to follow all your movements. But, says Matt Cagle of the ACLU of Northern California, users do not expect or desire law enforcement to conduct surveillance of their social-media posts.

Mr Cagle’s statement hints at a broader confusion over privacy in the digital age. To what extent do—or should—people expect that privacy norms and laws written for the landline and newspaper age protect their digital data? Laws are changing. The European Court of Justice ruled in 2016 that blanket metadata collection and retention violates privacy laws, and America’s Supreme Court ruled in 2014 that police need a warrant to search an individual’s mobile phone. But they are not changing as quickly as human habits. As people move more of their lives online, they will demand the same level of protection for their data as for their personal papers at home. Mobile phones, after all, are not simply communication devices; they are also personal filing cabinets. They are just not kept behind locked doors.

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This article appeared in the Technology Quarterly section of the print edition under the headline “Read my phone”

Home, home within range

Electronic monitoring is a different approach to jail

You don't have to go to prison to go to prison

Print edition | Technology Quarterly May 31st 2018

KARL'S troubles began, as troubles often do, in a pub. He and his daughters, both in their early 20s, went out drinking near their home in Stockholm. His daughters got into a scrap with some other young people. He stepped in. "I was dragged down to the ground and it all happened so quick," he explains. "My side of the story is I was defending my two girls. But the other girls reported me for assaulting them." The other girls prevailed in court; Karl was sentenced to six months' imprisonment for assault.

Under Swedish law, anyone sentenced to six months or less can apply to the Prison and Probation Service to serve that sentence at home, under electronic monitoring (EM). Karl's application was successful. He is 45, runs a painting firm with 23 employees, and has no previous convictions—all factors in his favour. "It would have been a disaster if they had put me into jail," Karl says. "Financially, economically, and I don't know what would have happened to my marriage...This works pretty good for me."

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EM works well for Sweden, too, saving the taxpayer money. According to Helena Lundberg, a criminologist who works for the justice ministry, prison costs SKr3,000 (\$365) per prisoner per day, compared with just SKr450 under EM. Also, gainfully employed people such as Karl continue to work, contributing to the economy rather than draining it. It also helps keep staff costs down in low-security prisons, where EM replaces guards: an alarm sounds if a prisoner crosses the facility's boundary.

EM's success in Sweden shows how technology, combined with enlightened public policy, can cut public spending while also benefiting society. Some worry that its ease and cost efficiency might lower barriers to putting more people under state supervision. But it remains preferable to sending lots of nonviolent criminals to prison.

The wherewithal to get an offender to wear a rubber anklet with a radio-frequency identification (RFID) transmitter that sends a signal to fixed units in his home and workplace is not new. The technology was already a decade old when Sweden introduced it in 1994. There have been innovations, though. Some offenders are now given GPS trackers which tell police precisely where a subject is, log and store a person's movements and can also be used to "geofence" restricted areas, alerting police when, say, a sex offender gets too close to a school, or a domestic abuser to his victim's home or office.

EM sentences in Sweden come with strict schedules. Except for agreed-upon free hours for errands or family, the offender must either be at home or at work. Karl, for instance, has designated working hours of 6am to 5pm, so must leave his house at 5.45 every morning. The service also has a mobile RFID unit. Officers drive or walk randomly past offenders' homes and places of work to ensure that they are where they should be. They also make unannounced visits to test offenders for drugs and alcohol, both of which are forbidden.

In addition to offering EM as a replacement for prison time, Sweden also allows long-term prisoners (those who have served at least six years) to use it to complete the last six months of their sentence at home. Although few violent criminals get "front-end" EM—in 2016 most of those who successfully applied had been sentenced for drunk driving or drug crimes—no such limits apply to those serving the end of long sentences at home. They can be rapists or murderers. One probation officer explains, "The system knows them. They have good behaviour [in prison]...They understand schedules. And they have a goal: 'I want to go home with my family and go to work'."

Sweden is not the only place to use EM. At least 27 countries in Europe do so, as well as all 50 American states. Frequency of use varies. Scandinavian countries use it as Sweden does, to reduce imprisonment for the many short sentences their judicial systems impose. Britain uses it to impose curfews on probationers, to let prisoners serve the last parts of their sentences at home, and as a condition of bail. Parts of Britain have also used EM with transdermal drug and alcohol monitors, as opposed to the Swedish inperson drug-testing model. Germany, by contrast, remains relatively resistant. Prosecutors there see EM as too lenient, while many in the probation service see house arrest and the conditions imposed by monitoring with RFID as too punitive.

Get out of jail free

Across Europe, however, the judicious use of EM is associated with long-term reductions in prison populations and imprisonment rates. In America, it remains relatively rare, accounting for only 2% of all of those under correctional control. It is used there not as a substitute for imprisonment but to monitor those on probation and on parole, as well as for pre-trial monitoring. Yet, in 2005-15, its use in America grew by 140%, driven mainly by the growth in GPS-enabled monitoring. Much of Europe might balk at placing under state supervision people who have not been convicted. But in America it happens all the time. Jails are full of pre-trial detainees ("jail" being where people are held before trial or for short periods, while "prison" is for post-conviction sentences).

EM's use in America looks set to rise further. Despite Donald Trump's law-and-order bombast, America's prison population is falling, even in Republican-controlled states, as the system realises that jailing people is an expensive way to turn them into better criminals. Monitoring them remotely is much cheaper and avoids the criminogenic effects of prison.

Yet Mats Johanssen, a senior officer with Sweden's PPS, cautions, "If you want to change someone, EM alone won't do it." It is impressive that just 17% of Swedes sentenced to EM reoffend within a year, compared to over half of those who do six months or less in prison. That reflects not just the sort of criminals who get the two types of sentence, but also the host of interventions such as counselling and job training that come along with EM in Sweden. These are in keeping with the country's overall attitude that prison should rehabilitate rather than just punish, and its overarching goal that people who go to prison do not return there.

If EM can help keep people out of jails while awaiting trial, that could also have long-term benefits: a study from Harris County, Texas, found that defendants jailed before their trials are more likely to plead guilty, serve longer sentences and re-offend than those who are released. That could just mean that police are jailing the right people. But defence lawyers say that people jailed before their trial cannot participate effectively in their own defence, and often plead guilty just to avoid a long pre-trial wait in jail. EM has also shown benefits on the other end. A study from Florida found that it reduced the risk of released felons failing to meet their parole terms by 31%. Another analysis in Washington, DC, reached similar conclusions.

But an intriguing study from Argentina suggests Mr Johanssen may be overstating the need for supplemental programmes and judicious selection of EM recipients. It looked at detainees accused of serious offences who received EM more or less at random, and found that it cuts the risk of reoffending nearly in half, compared with a prison sentence. Moreover, the offenders received no counselling, education, training or other programmes—suggesting that the easiest way to keep people out of prison may be not to send them there in the first place.

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This article appeared in the Technology Quarterly section of the print edition under the headline "Home, home within range"

The promise and peril of big-data justice

Can algorithms accurately predict where crime will occur?

Print edition | Technology Quarterly May 31st 2018

EIGHT storeys above downtown Los Angeles, Sean Malinowski, deputy chief of the Los Angeles Police Department (LAPD), focuses intently on a computer map of his old stomping ground. Nestled between Burbank and Santa Clarita, the Foothill district is a hotch-potch of industrial and residential districts riven by highways. Mr Malinowski ran its police station before his promotion moved him downtown.

Colourful dots representing reported crimes freckle the map like psychedelic pimples. Adjacent to some of the dots are red squares. Each one represents a 250,000-square-foot (2.3-hectare) area that PredPol, a crime-prediction software used by the LAPD and at least 50 other law-enforcement agencies around the world, has flagged as being at risk of future criminal activity. Mr Malinowski says that, if he were still in charge of policing in Foothill, he would ask his officers to drive through those areas frequently, “so we’re there randomly—it throws the criminals off.” The idea is not to nab people red-handed, but to deter them through increased police presence.

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PredPol is just one of a number of firms offering crime-prediction software to police forces. While the precise components of each firm’s algorithms probably differ, the broad idea is the same. They aim to help police allocate resources efficiently by using large amounts of data to predict (and therefore prevent) crime.

The use of algorithms to tackle complex problems such as urban crime, or to try to forecast whether someone is likely to commit another crime, is not inherently alarming. An algorithm, after all, is just a set of rules designed to produce a result. Criminaljustice algorithms organise and sort through reams of data faster and more efficiently than people can. But fears abound: that they remove decisions from humans and hand them to machines; that they function without transparency because their creators will not reveal their precise composition; that they punish people for potential, not actual, crimes; and that they entrench racial bias.

Defenders of such programmes argue, correctly, that police have always relied on prediction in some form. Officers line parade routes, for instance, because experience has shown that the combination of crowds, alcohol and high spirits create an increased public-safety risk. Eliminating prediction from policing would produce an entirely reactive force. All these programs do, defenders say, is harness more data from more sources to help police make better decisions.

But the algorithms on which police base their decisions are, as far as the public is concerned, black boxes. The companies that create and market them consider their precise composition trade secrets. “Algorithms only do what we tell them to do,” says Phillip Atiba Goff of John Jay College of Criminal Justice in Manhattan. If their creators feed them biased data they will produce results infected with bias. And predictive policing is just one way in which the criminal-justice system is using algorithms to help them make decisions.

New Jersey uses an algorithm based on past criminal history, age, past failure to appear at trial and the violence of the current offence to determine whether someone is suitable for bail—that is, whether he presents too great a risk of flight or of committing more crimes while awaiting trial. Several states use algorithms to provide sentencing recommendations. At least 13 American cities use them to identify people likely to become perpetrators or victims of gun violence.

NYPD, too

The first time such approaches came to public notice was in the 1990s, when William Bratton introduced CompStat, a statistically driven management system, into the New York Police Department (NYPD), which he ran. CompStat involved regular meetings of commanding officers discussing prevention strategies and recent crime data from their precincts. As one former NYPD deputy commissioner says, CompStat encouraged police to ask, “What is the problem? What is the plan? What are the results to date?” and to use data to answer all of those questions.

But CompStat was largely reactive rather than predictive. It also used precinct-wide data, while software such as PredPol can target enforcement to specific blocks. Crime does not occur randomly across cities; it tends to cluster. In Seattle, for instance, police found that half of the city’s crime over a 14-year period occurred on less than 5% of the city’s streets. The red squares in Foothill cluster around streets near junctions to main roads—the better to burgle and run while homeowners are at work—as well as around businesses with car parks (lots of inventory, empty at night) and railway stations. Burglars who hit one house on a quiet street often return the next day to hit another, hence the red squares.

And, unlike CompStat, which used arrests as a measure of officers’ productivity, PredPol aims to prevent rather than punish crimes. “I’m more concerned about the absence of crime” than citations and arrests, says Mr Malinowski. “We don’t want mass incarceration for little crimes.” As for measuring productivity, that, too, has grown easier. LAPD patrol cars are geotagged, and the red boxes geofenced, so senior officers know precisely how long each car spends there.

Exactly what data get fed into the algorithms varies by company. Some use “risk-terrain modelling” (RTM), which tries to quantify what makes some areas crime-prone. One RTM algorithm uses five factors: prevalence of past burglaries, the residence of people arrested for past property crimes, proximity to main roads, geographic concentration of young men, and the location of apartment buildings and hotels. Some include requests for police help, weather patterns and the proximity of bars or transport stations. PredPol uses reported, serious crimes such as murder, aggravated assault and various forms of theft, as well as the crime’s date, time and location. Most of these algorithms use machine learning, so they are designed to grow more accurate the more predictions they make and the more data they take in.

Some analytic programmes suck in and link up more data. A joint venture between Microsoft and the NYPD called Domain Awareness System pulls data from the city’s thousands of publicly owned CCTV cameras, hundreds of fixed and car-mounted ANPRs, and other data sources. The NYPD says its system can track where a car associated with a suspect has been for months past, and can immediately alert police to any criminal history linked with a flagged number plate.

You have the right to remain silent

So do these algorithms work? Do they accurately forecast where crime will occur and who will go on to commit future crimes? Here the evidence is ambiguous. PredPol touts its 21-month-long trials in Kent, an English county, and Los Angeles, which found that the programme predicted and helped to prevent some types of crime (such as burglary and car theft) more accurately than human analysts did. A trial in Louisiana of a different data-driven predictive-policing model, however, found no statistically significant reduction in property crimes compared with control districts.

But even if such approaches proved effective beyond a doubt, concerns over their potential to trample civil liberties and replicate racial bias would remain. These concerns are most acute for algorithms that implicate people rather than places. The Chicago police department has compiled a “strategic subject list” of people it deems likely to be perpetrators or victims of gun violence (both groups tend to comprise young African-Americans from the city’s south and west sides). Its central insight parallels that of geographic predictions: a small number of people are responsible for a large share of violent crime. The department touts its accuracy. In the first half of 2016, it says, 74% of gun-violence victims and 80% of those arrested for gun violence were on the list.

Police say they update the list frequently. When someone new shows up on it, officers will sometimes visit that person’s home, thus promoting contact with police before a person has committed a crime. Nobody knows precisely how you end up on the list, nor is it clear how (short of being shot dead) you can get off it. One 22-year-old man, Robert McDaniel, told the *Chicago Tribune* that police came to his home and told him to straighten up—even though he had just a single misdemeanour conviction (he may have been earmarked because a childhood friend with whom he was once arrested was shot dead).

In a study of the first version of the list from 2013, RAND, a think-tank, found that people on it were no more likely to be victims of a shooting than those in a random control group. Police say the current list is far more accurate, but have still refused to reveal the algorithmic components behind it. And both Chicago’s murder rate and its total number of homicides are higher today than they were when police started using the list in 2013.

Meanwhile, algorithms used in sentencing have faced criticism for racial bias. ProPublica, an investigative-journalism NGO, studied risk scores assigned to 7,000 people over two years in Broward County, Florida, and found black defendants twice as likely as whites to be falsely labelled at high risk of committing future crimes. It also found the questions predicted violence poorly: only around 20% of those forecast to commit violent crimes actually did so. Northpointe, the firm behind the algorithm, disputed ProPublica’s findings.

But the questions on Northpointe’s risk-assessment form illustrate how racial bias can infect an algorithm even without any direct questions about race. It asked how often a defendant, his family members and friends have been arrested. Those numbers will presumably be higher in poor, overpoliced, non-white districts than rich ones. It also asked whether friends were in gangs, how often the defendant has “barely enough money to get by” and whether it is “easy to get drugs in your neighbourhood”—all questions that ethnic minority defendants will, on average, answer affirmatively more often than white ones. More broadly, a proprietary algorithm that recommends a judge punish two people differently based on what they might do offends a traditional sense of justice, which demands that punishment fit the crime not the potential crime.

Another analytical system, called Beware, assigns “threat scores” in real time to addresses as police respond to calls. It uses commercial and publicly available data, and it has a feature called Beware Nearby, which generates information about potential threats to police near a specific address, meaning officers can assess the risk when a neighbour calls the emergency services.

This raises privacy concerns, but it could cause other problems, too. For instance a veteran who has visited a doctor and taken medicine prescribed for PTSD, who also receives gun catalogues in the post, could be deemed high risk. Police might then approach his house with guns drawn, and it is not hard to imagine that kind of encounter ending badly. Such threat scores also risk infection with bad data. If they use social-media postings, they also raise free-expression concerns. Will police treat people differently because of their political opinions?

Questions of bias also surround place-based policing. Using arrests or drug convictions will almost certainly produce racially biased results. Arrests reflect police presence more than crime. Using drug convictions is suspect, too. Black and white Americans use marijuana at roughly similar rates, with the rate for 18- to 25-year-olds higher for whites than blacks. But blacks are arrested for marijuana possession at nearly three times the rate of whites across America—and even more often than that in some districts. Black people in Washington, DC, and Iowa are eight times likelier than whites to face arrest for marijuana. Charges for possession of that one drug comprise half of all drug arrests. Small wonder that a study by Kristian Lum of the Human Rights Data Analysis Group and William Isaac found that when a predictive algorithm was trained on historical drug-crime data in Oakland, California, it targeted black areas at twice the rate of white ones, and low-income neighbourhoods at twice the rate of high-income ones.

Place-based prediction also raises questions about reasonable suspicion. If police are on a residential block algorithmically predicted to be at risk of theft, and they drive past a man carrying a heavy satchel, does that justify stopping and searching him, especially when they might not do the same on another block?

Some accept that algorithms may replicate racial biases, but say they at least do not aggravate them. “It’s not a perfect world,” says one advocate of algorithm-based bail reform. You need to compare risk-based assessments with the status quo, he says. If a black and a white defendant came before a judge with the exact same record today, the judge might treat the black defendant worse. “At least with the risk assessment they’ll get the same score.” But that is a depressingly low bar to set.

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This article appeared in the Technology Quarterly section of the print edition under the headline “Algorithm blues”

Watching the detectives

Rigorous oversight is essential to check police activity

An engaged citizenry is starting to hold law enforcement to account

Print edition | Technology Quarterly May 31st 2018

ACOUSTIC sensors trained to recognise the sound of gunfire and send alerts to officers' mobile phones telling them when and where the shots were fired. Glasses that recognise faces and record everything. Drones equipped with high-definition video cameras. GPS readers and ANPRs, allowing for constant surveillance of entire swathes of a city. CCTV systems with embedded facial recognition that lets authorities track people in real time.

All of these new technological possibilities are upending a wide range of activities and the customs associated with them. Law enforcement is no different. But if citizens do not like how their doctor or hairdresser, or a social-media site, uses their data or tracks their purchases, they can go somewhere else. The state wields a monopoly on punishment through law enforcement. Police can arrest, and even kill, their fellow citizens. Judges have the power to imprison people. That makes transparency and public consent in the justice system essential.

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There is no reason for the police to eschew the best available technology just because it can be used invasively. If criminals store information on their phones, police should be able to see it. If data can help police prevent crime, they should use them. But this needs to be done without impinging on people's civil liberties. Police and politicians cannot let the allure of new technology lead them to overlook how it will affect the people they serve. And citizens must hold them to account.

Such vigilance must extend to the sellers of these systems as well as their users. Some regimes have embraced emerging technologies the better to control and surveil people: China, for instance, has blanketed its restive regions of Xinjiang and Tibet with facial-recognition cameras, iris scanners and other such kit. In January the European Parliament, following popular concern, imposed export controls on surveillance technology that regimes can use to spy on citizens.

In liberal countries, big-data policing is not about police chiefs sitting around strategising, says Andrew Ferguson, author of a book on the subject. "It's tech companies selling them cool stuff, charging police departments for storage and data...[and] telling them, 'We can help you solve more crimes with our cool tech.'" The companies give technology free to help police solve their problems, he says.

Mr Ferguson suggests five questions that departments should answer before buying new technology. Can you identify the risks that the technology addresses? Can you ensure accurate data inputs? How will the technology affect community relations and policing practice? Can it be tested to ensure transparency and accountability? And will police use the technology in a manner that respects the autonomy of the people it will affect?

Some places have begun to create institutions to answer those sorts of questions. Just like many tech firms, the cities of Seattle and Oakland have chief privacy officers, charged with vetting and managing the privacy implications of their cities' policies. Oakland's grew out of its privacy commission, a nine-member advisory body to the city council formally established in 2016, after citizens resisted its plan to introduce a domain-awareness system similar to the one Microsoft and the NYPD built in New York.

"We just started showing up and educating the council on the risks of this equipment," says Brian Hofer, a member of the commission. The Oakland PD and the commission meet once a month to discuss surveillance and the data of Oakland residents. They write tech-use policies together, and the department submits public annual reports on how often and for what purpose its surveillance tech was used. On May 1st Oakland's city council proposed a bill requiring that any new police technology be approved by the city council and privacy commission.

One might imagine that background—successfully stopping a planned surveillance programme in one of America's most liberal cities—would augur an oppositional relationship between the privacy commission and the police department. But the opposite is true, say both Mr Hofer and Tim Birch, who heads the Oakland PD's research and planning division.

Working with the commission "encourages us to think about what technology is really needed," and to ask whether the benefits are worth the costs, says Mr Birch. Or as Mr Hofer puts it, "The police are aware that they have to behave differently because someone is watching." He notes that the commission has never recommended the city council bar police from obtaining new technology that they want. "Technology itself isn't good or bad, as long as they tighten up their [usage] policies."

Several other municipalities in California have passed surveillance-transparency requirements similar to Oakland's. Last February a state senator in California introduced legislation requiring that municipalities create and publicise policies for the use of surveillance technology, and restricting the sale or transfer of information gathered through surveillance.

Accidents will happen

Concerns over data-sharing have led cities in California to rethink contracts with Vigilant, an ANPR firm that recently signed up Immigration and Customs Enforcement (ICE), America's federal immigration police, as a client. Civil-liberties groups worry that ICE could tap into local law-enforcement ANPR data stored on Vigilant's servers to target undocumented immigrants.

Vigilant insists that would be impossible unless a local law-enforcement agency explicitly allowed it, which California's would not. But, according to Mr Birch of Oakland PD, the ICE contract "terrifies people". The prospect that the government could find a back door into Vigilant's massive database, or that a rogue officer who disagrees with California's liberal policies could share information from the database with federal police, was enough to make co-operation politically impossible for California's liberal cities.

New Orleans recently ended its relationship with Palantir, a company that built predictive-policing software for the city entirely outside public view. (Its founder, Alex Karp, is a non-executive director on the board of The Economist Group.) Palantir donated the product to the city, but civil-rights activists feared the firm was using New Orleans as a testing ground. Had the city acquired the services through the usual procurement process, it may not have caused a fuss. But a secretive deal for a predictive-policing program run with proprietary algorithms proved too much.

Local politicians upholding their communities' values is cause to cheer, particularly when it happens in the usually grey area of law-enforcement surveillance. This does not mean that the sort of strict oversight favoured by liberal, multi-ethnic northern California will fly everywhere. "It has to be local," says Mr Birch. "That's the only way these privacy commissions can work. They have to reflect local standards."

There are also benefits in sharing results of number-crunching with other arms of government and civil society. A map of crime is also a map of need. "What you're modelling is a host of factors, and you're only giving it to one publicly available resource, which is the punitive resource," says Mr Goff of John Jay College. "Why would you not also give this to social-service providers?"

Similarly, Andrew Papachristos, a sociologist whose research helped the Chicago PD create its strategic subject list, urged the police to share data, and wrote, "The real promise of using data analytics to identify those at risk of gunshot victimisation lies not with policing, but within a broader public-health approach." The young men at risk of being shot may also need job training and counselling. Trained mediators could calm conflicts before they flare into violence.

Any number of interventions might benefit them and the community better than contact with the police. As Mr Ferguson writes, "Police may be the primary actors in the system to solve crime, but they do not have to be the primary actors in the system to reduce risk." And if police can measure their success at driving down crime rates, surely cities can measure providers' success at offering social services.

But they have to want to do it, and this, too, is a question of citizen involvement—not of oversight, but of political will. "Law and order" candidates win elections more often than "efficiently targeted social-services" candidates. New technology helps justice systems collect and organise data more efficiently. They can use it to punish. Or they can use it for the unglamorous, less politically rewarding work of dealing with the causes of crime.

Ultimately, citizens in open societies must decide for themselves what they are willing to tolerate. Technological change is inevitable, but does not have to happen without being questioned. Perhaps people want their neighbours to drive around in cars topped with facial-recognition cameras that report everything to police. If they do not, they need to speak up—forcefully, and now.

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This article appeared in the Technology Quarterly section of the print edition under the headline "Watching the detectives"

The future of tech startups

Into the danger zone

Into the danger zone

American tech giants are making life tough for startups

Big, rich and paranoid, they have reams of data to help them spot and buy young firms that might challenge them

Print edition | Business Jun 2nd 2018

IT IS a classic startup story, but with a twist. Three 20-somethings launched a firm out of a dorm room at the Massachusetts Institute of Technology in 2016, with the goal of using algorithms to predict the reply to an e-mail. In May they were fundraising for their startup, EasyEmail, when Google held its annual conference for software developers and announced a tool similar to EasyEmail's. Filip Twarowski, its boss, sees Google's incursion as "incredible confirmation" they are working on something worthwhile. But he also admits that it came as "a little bit of a shock". The giant has scared off at least one prospective backer of EasyEmail, because venture capitalists try to dodge spaces where the tech giants might step.

The behemoths' annual conferences, held to announce new tools, features, and acquisitions, always "send shock waves of fear through entrepreneurs", says Mike Driscoll, a partner at Data Collective, an investment firm. "Venture capitalists attend to see which of their companies are going to get killed next." But anxiety about the tech giants on the part of startups and their investors goes much deeper than such events. Venture capitalists, such as Albert Wenger of Union Square Ventures, who was an early investor in Twitter, now talk of a "kill-zone" around the giants. Once a young firm enters, it can be extremely difficult to survive. Tech giants try to squash startups by copying them, or they pay to scoop them up early to eliminate a threat.

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The idea of a kill-zone may bring to mind Microsoft's long reign in the 1990s, as it embraced a strategy of "embrace, extend and extinguish" and tried to intimidate startups from entering its domain. But entrepreneurs' and venture capitalists' concerns are striking because for a long while afterwards, startups had free rein. In 2014 *The Economist* likened the proliferation of startups to the Cambrian explosion: software made running a startup cheaper than ever and opportunities seemed abundant.

Today, less so. Anything having to do with the consumer internet is perceived as dangerous, because of the dominance of Amazon, Facebook and Google (owned by Alphabet). Venture capitalists are wary of backing startups in online search, social media, mobile and e-commerce. It has become harder for startups to secure a first financing round. According to Pitchbook, a research company, in 2017 the number of these rounds were down by around 22% from 2012 (see chart).

The wariness comes from seeing what happens to startups when they enter the kill-zone, either deliberately or accidentally. Snap is the most prominent example; after Snap rebuffed Facebook's attempts to buy the firm in 2013, for \$3bn, Facebook cloned many of its successful features and has put a damper on its growth. A less known example is Life on Air, which launched Meerkat, a live video-streaming app, in 2015. It was obliterated when Twitter acquired and promoted a competing app, Periscope. Life on Air shut Meerkat down and launched a different app, called Houseparty, which offered group video chats. This briefly gained prominence, but was then copied by Facebook, seizing users and attention away from the startup.

The kill-zone operates in business software ("enterprise" in the lingo) as well, with the shadows of Microsoft, Amazon and Alphabet looming large. Amazon's cloud service, Amazon Web Services (AWS), has labelled many startups as "partners", only to copy their functionality and offer them as a cheap or free service. A giant pushing into a startup's territory, while controlling the platform that startup depends on for distribution, makes life tricky. For example, Elastic, a data-management firm, lost sales after AWS launched a competitor, Elasticsearch, in 2015.

Even if giants do not copy startups outright, they can dent their prospects. Last year Amazon bought Whole Foods Market, a grocer, for \$13.7bn. Blue Apron, a meal-delivery startup that was preparing to go public, was suddenly perceived as unappealing, as expectations mounted that Amazon would push into the space. This phenomenon is not limited to young firms: recently Facebook announced it was moving into online dating, causing the share price of Match Group, which went public in 2015, to plummet by 22% that day.

It has never been easy to make it as a startup. Now the army of fearsome technology giants is larger, and operates in a wider range of areas, including online search, social media, digital advertising, virtual reality, messaging and communications, smartphones and home speakers, cloud computing, smart software, e-commerce and more. This makes it challenging for startups to find space to break through and avoid being stamped on. Today's giants are "much more ruthless and introspective. They will eat their own children to live another day," according to Matt Ocko, a venture capitalist with Data Collective. And they are constantly scanning the horizon for incipient threats. Startups used to be able to have several years' head start working on something novel without the giants noticing, says Aaron Levie of Box, a cloud and file-sharing service that has avoided the kill-zone (it has a market value of around \$3.8bn). But today startups can only get a six- to 12-month lead before incumbents quickly catch up, he says.

There are some exceptions. Airbnb, Uber, Slack and other “unicorns” have faced down competition from incumbents. But they are few in number and many startups have learned to set their sights on more achievable aims. Entrepreneurs are “thinking much earlier about which consolidator is going to buy them”, says Larry Chu of Goodwin Procter, a law firm. The tech giants have been avid acquirers: Alphabet, Amazon, Apple, Facebook and Microsoft spent a combined \$31.6bn on acquisitions in 2017. This has led some startups to be less ambitious. “Ninety per cent of the startups I see are built for sale, not for scale,” says Ajay Royan of Mithril Capital, which invests in tech.

This can be enriching to founders, who can go on to start another firm or provide financing to peers with smart ideas. To the extent that such exits provide more capital to spur innovation, this is no bad thing. The tech giants can help the firms they acquire grow more than they might have been able to do on their own. For example, Facebook’s acquisition of Instagram took out a would-be competitor, but it has thrived under the social-networking giant’s sway by adopting the technical infrastructure, staff and know-how that Facebook had in place.

Friend or foe?

But plenty of people in the Valley reckon the bad outweighs the good and that early, “shoot-out” acquisitions have sapped innovation. “The dominance of the big platforms has had a meaningful effect on the entrepreneurial culture of Silicon Valley,” says Roger McNamee of Elevation Partners, a private-equity firm, who was an early investor in Facebook. “It’s shifted the incentives from trying to create a large platform to creating a small morsel that’s tasty to be acquired by one of the giants.”

And when startups are bullied into selling, as some are, it is even more worrying. Big tech firms have been known to intimidate startups into agreeing to a sale, saying that they will launch a competing service and put the startup out of business unless they agree to a deal, says one person who was in charge of these negotiations at a big software firm (which uses such tactics).

There are three reasons to think that the kill-zone is likely to stay. First, the giants have tons of data to identify emerging rivals faster than ever before. Google collects signals about how internet users are spending time and money through its Chrome browser, e-mail service, Android operating system, app store, cloud service and more. Facebook can see which apps people use and where they travel online. It acquired the app Onavo, which helped it recognise that Instagram was gaining steam. It bought the young firm for \$1bn before it could mature into a real threat, and last year it purchased a nascent social-polling firm, tbh, in a similar manner. Amazon can glean reams of data from its e-commerce platform and cloud business.

Another source of market information comes from investing in startups, which helps tech firms gain insights into new markets and possible disrupters. Of all American tech firms, Alphabet has been the most active. Since 2013 it has spent \$12.6bn investing in 308 startups. Startups generally feel excited about gaining expertise from such a successful firm, but some may rue the day they accepted funding, because of conflicts. Uber, for example, took money from one of Alphabet’s venture-capital funds, but soon found itself competing against the giant’s self-driving car unit, Waymo. Thumbtack, a marketplace for skilled workers, also accepted money from Alphabet, but then watched as the parent company rolled out a competing service, Google Home Services. Amazon and Apple invest less in startups, but they too have clashed with them. Amazon invested in a home intercom system, called Nucleus, and then rolled out a very similar product of its own last year.

Recruiting is a second tool the giants will use to enforce their kill zones. Big tech firms are able to shell out huge sums to keep top performers and even average employees in their fold and make it uneconomical for their workers to consider joining startups. In 2017 Alphabet, Amazon, Apple, Facebook and Microsoft allocated a whopping \$23.7bn combined to stock-based compensation. Big companies’ hoarding of talent stops startups scaling quickly. According to Mike Volpi of Index Ventures, a venture-capital firm, startups in the firm’s portfolio are currently 10-20% behind in their hiring goals for the year.

A third reason that startups may struggle to break through is that there is no sign of a new platform emerging which could disrupt the incumbents, even more than a decade after the rise of mobile. For example, the rise of mobile wounded Microsoft, which was dominant on personal computers, and gave power to both Facebook and Google, enabling them to capture more online ad dollars and attention. But there is no big new platform today. And the giants make it extremely expensive to get attention: Facebook, Google and Amazon all charge a hefty toll for new apps and services to get in front of consumers.

Seeing little opportunity to compete with the tech giants on their own turf, investors and startups are going where they can spot an opening. The lack of an incumbent giant is one reason why there is so much investor enthusiasm for crypto-currencies and for synthetic biology today. But the giants are starting to pay more attention. There are rumours Facebook wants to buy Coinbase, a cryptocurrency firm.

Regulators will be watching what the giants try next. Criticism that they have been too lax in approving deals where tech firms buy tiny competitors that could one day challenge them has been mounting. Facebook’s acquisition of Instagram and Google’s purchase of YouTube, before it was obvious how the pair might have taken on the giants, might well have been blocked today. To fight back against the kill-zone, regulators must closely consider what weapons to wield themselves.

This article appeared in the Business section of the print edition under the headline “Into the danger zone”

Bartleby

Are you stuck in a “bullshit job”?

David Graeber’s thesis about modern office jobs is less groundbreaking than it seems

Print edition | Business May 31st 2018

SISYPHUS, king of Corinth, was condemned for all eternity to push a boulder up a hill, only to watch it roll down again. David Graeber, an anthropologist, thinks that many modern workers face the same fate today, forced to perform pointless tasks, or “bullshit jobs”, as his new book* calls them.

Mr Graeber defines a bullshit job as one “that is so completely pointless, unnecessary or pernicious that even the employee cannot justify its existence”, though they may have to pretend that they believe in it. This definition, and indeed much of the book, combines two categories of roles. In the first are jobs that Mr Graeber tends to think are socially worthless, such as corporate lawyers or investment bankers. (Some of those workers may take an equally dim view of the utility of anthropologists.) In the second group are jobs where employees find themselves with little or nothing to do and, worse, must still look as if they are frantically busy.

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What is his evidence? The author places a lot of faith in anecdotes and a couple of opinion surveys which found that only 37-40% of workers in Britain and the Netherlands felt they “made a meaningful contribution to the world.” He doesn’t seem to allow for the possibility that modesty might govern their answers.

In any case, the contention that many of us are wasting much of our time at work is hardly a new one. C. Northcote Parkinson coined the idea that “work expands to fill the time available” in an essay in *The Economist* in 1955, adding that “there need be little or no relationship between the work to be done and the size of the staff to which it may be assigned.” The futility of many middle-class jobs is also an old theme, being the plot driver of the 1970s British sitcom “The Good Life”.

Nor are feelings of boredom and pointless activity confined to the arena of work. Anyone who has been a schoolchild can remember being forced to write essays, or take tests, about subjects that seemed neither interesting nor likely to be of any use in later life. Indeed, many teachers are probably as bored marking the schoolwork as pupils are producing it.

Nevertheless, some workers will feel that Mr Graeber’s analysis is timely. Both meaningless job titles and mindless tasks seem to have proliferated. A study† by Gary Hamel and Michele Zanini, two management theorists, estimated that there are nearly 24m corporate “bureaucrats” in America, or about one for every 4.7 workers. Reassigning them to more productive tasks could give the American economy a \$3trn boost, they reckon.

Mr Graeber constructs some elaborate theories as to why this problem has arisen. He suggests that automation in recent decades did cause mass unemployment but that society conspired to create a bunch of illusory jobs to disguise the fact. He also argues that while executives in the Reagan/Thatcher era prided themselves on how many low-level workers they could lay off, they then hired lots of management flunkies to enhance their status. And he postulates that it is all part of a system of social control, in which young people are loaded up with debt and then pushed into meaningless jobs in order to pay it off, thereby keeping them docile.

But these explanations seem inherently unlikely. Modern executives are motivated by share options which usually require them to meet profit targets. They are pursued by activist investors, who may get them fired if they underperform. Given those threats, bosses would hardly employ lots of useless, profit-sapping staff.

Instead, the problem lies in the nature of a services company. In a factory, you can count the widgets made each day, which limits the scope for bullshit. In a service business, it is harder to monitor the quality and quantity of output. Like the old quip about advertising, executives may know that half of their workers’ time is wasted, but not which half.

In response to this lack of knowledge, executives create a host of targets, and hold a lot of meetings to try to understand what is going on. As Messrs Hamel and Zanini put it, “A growing percentage of employee time gets consumed in efforts to keep the organisation from collapsing under the weight of its own complexity.”

In other words, there is no need for Mr Graeber to construct elaborate theories about neoliberal conspiracies to explain the phenomenon of wasted effort. Parkinson nailed the issue six decades ago: “Officials make work for each other.”

Economist.com/blogs/bartleby

* “*Bullshit Jobs: A Theory*”, published by Allen Lane

† “*The \$3 Trillion Prize for Busting Bureaucracy (And How to Claim It)*”

This article appeared in the Business section of the print edition under the headline “Not working properly”

Copper bottom

Shootings in India tarnish Vedanta's reputation

Local police kill thirteen protesters against the expansion of the firm's copper-smelting facility

Print edition | Business Jun 2nd 2018

AFTER 99 peaceful days of protests, the 100th brought carnage. On May 22nd in Tuticorin, a coastal town near the southern tip of India, police indiscriminately fired live rounds into a crowd of several thousand demonstrators who were opposing the planned expansion of a copper-smelting facility. Thirteen people died and scores more were injured. The fallout threatens to be a chronic headache both for the Indian authorities and Vedanta, the mining giant which owns the facility.

Corporate public-relations consultants in London, where Vedanta's main holding company is based, have depressingly ample experience in helping commodities firms whose reputations risk being sullied by such police violence. Royal Dutch Shell, an oil group, still faces ire for the way Nigerian authorities arrested then executed Ken Saro-Wiwa, an activist, in 1995. Lonmin, a platinum-miner also listed in London, had to rebuff claims by South African police that it should carry some blame for cops shooting its striking workers there in 2012, which resulted in 34 deaths.

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Vedanta's Indian founder and boss, Anil Agarwal, stuck to the PR script, repeatedly describing the shooting as "absolutely unfortunate". That proved an insufficient penance: state authorities in Tamil Nadu announced the Tuticorin plant would be shut permanently, never mind expanded.

As a firm that gets stuff out of the ground, mostly in poor places, Vedanta is used to campaigns. But its claims of world-class environmental stewardship at the Tamil Nadu plant sit awkwardly with reports of every home in Tuticorin containing at least one person wheezing or worse. In 2013 it was fined 1bn rupees (then \$16m) for violating pollution control norms. Its troubles span the country. Earlier this year it said it would write off \$600m after losing rights to drill iron ore in Goa, on India's western coast, after "pollution and licensing irregularities". A tribe in Odisha, a state up the coast from Tamil Nadu, fought for years to stop Vedanta drilling for bauxite in hills it considered sacred, inviting comparisons to the plot of the film "Avatar".

Neither the firm nor the authorities come out of the latest dispute well. Authorities in Tamil Nadu stand accused both of being too soft on Vedanta before the shooting and of over-reacting in its aftermath. The reason they gave for closing the plant was that it was unpopular, something which was clearly true before it decided to shoot people for saying just that. Vedanta will surely challenge the closure in court once tempers have cooled.

M.K. Stalin, a prominent Tamil opposition politician, questioned why protesters were given no warnings before shots were fired, terming the incident "mass murder of innocent people". A video of a policeman before the shooting, saying that at least one protester should die, looks incriminating. The violence and its chaotic aftermath are hardly the image the Indian government will want advertised as it assiduously courts foreign investment.

The firm's own share of the trouble will take more than press releases to remedy. Its shares have tumbled by a quarter since the Tuticorin protests kicked off. Standard & Poor's, a credit-rating agency, says the facility's closure could trim pre-tax earnings by up to \$250m (about half of the pain would be borne by outside investors in the Indian entity). The parent company's comparable earnings were \$1.4bn in the year to March 2017 and \$2.5bn in the year to March 2018.

Opponents seized on Vedanta's London stockmarket listing to exert pressure. John McDonnell, shadow chancellor of the exchequer for the opposition Labour party, called the shooting a massacre and demanding Vedanta shares be delisted. The episode will vindicate those who already think its opaque structure, complex corporate governance and recurring run-ins with environmental watchdogs as reason enough to avoid it.

Mr Agarwal, once a scrap merchant who built the company over four decades, has prided himself on understanding India better than foreign interlopers trying to make a quick rupee. Despite his regret over the deaths, he says that "fake activists" are taking advantage of its democracy. Having refined and reprocessed metals for so long, he will now have to do a similar job on his company's reputation.

This article appeared in the Business section of the print edition under the headline "Copper bottom"

Steeling itself

Activist investors go after a German industrial icon

The aim is to thoroughly shake up the last of the country's unreformed conglomerates

Print edition | Business May 31st 2018

FEW industrial scenes offer the drama of a steelworks in full flow. Perched high in a cabin, a technician guides a bucket the size of a house to send 250 tons of lava-like molten metal into a vast crucible. As a roar echoes across a gargantuan hall, a pile of scrap slides into the mixture. Plumes of illuminated smoke rise. Sparks like giant fireflies tumble down. ThyssenKrupp's steelmaking plant in Duisburg makes 30,000 tons of the metal daily.

The firm itself is going through an industrial drama, after years of ailing. Its boss, Heinrich Hiesinger, was seen as its saviour after arriving from Siemens late in 2010. But swiftness is not his forte: a colleague says he talks of "diligence before speed". He did rid the firm of loss-making steel plants, such as assets in the Americas that cost €8bn (\$9.3bn) in write-downs. Yet he has not reformed a top-heavy company.

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Several bits of the group—a hotch-potch that includes submarine-, ship- and lift-building, auto supplies and a unit for constructing entire factories—underperform their peers. Notwithstanding some bright areas, such as lifts (see chart), overall operating margins are just 3.5%, after years of failed promises by managers to match the market average for European peers of 7%. All divisions are guided by a powerful head office in Essen that is said to guzzle an extraordinary 30% of total profits. ThyssenKrupp's share price badly lags behind Germany's largest listed firms. Meanwhile, Siemens, Bayer and others have broken off subsidiary units and simplified structures. This "is the last man standing" says an observer, asking what makers of lifts and submarines have in common.

Two big changes loom, as activist investors demand reform. One is the end of steel, which provides two-fifths of revenues. The firm has agreed with Tata, an Indian maker, to bundle their European steel assets into a joint venture. The idea is to reduce steelmaking capacity and for ThyssenKrupp to pass on pension liabilities. Yet the Tata deal, announced in September, has dragged. ThyssenKrupp partly blames months of delays on Brexit (Tata faces uncertainty over its operations in Port Talbot, in Wales) and on a new boss at Tata. A signing ceremony is due this month.

The second, bigger question is how to revive the firm's industrial activities. Mr Hiesinger says he has bright ideas for change, but will not spill them until the deal with Tata is signed. He talks up the activities of high-end engineering units, notably the lift business. Yet analysts say even the better-performing units suffer under a heavy superstructure. As a stand-alone firm, liftmaking, which is far more profitable than the firm's other divisions, could be worth more than the entire conglomerate's market capitalisation of €14.5bn, argues one observer. Managers still trot out 20th-century-style defences of conglomerates. They say units can share bright ideas and technology, citing a nifty idea for a horizontal motorised lift that came from the railways team. Yet more autonomous units, or outright independent firms, would be most open to innovation.

Cevian, an activist shareholder of long standing which owns 18% of ThyssenKrupp, is demanding "fundamental reorganisation" of industrial activities, scrapping Mr Hiesinger's centralised structure. Cevian is relatively friendly to managers; a sharper spur to action is Elliott, the world's largest activist hedge fund, which has just bought a stake. Both may have some quiet support from unions and from the Krupp family foundation, in Essen, which has the dominant stake. ThyssenKrupp's shares leapt after news of Elliott's arrival: the hope is for big changes this summer.

This article appeared in the Business section of the print edition under the headline "Steeling itself"

Wizz on the up

A Hungarian startup could beat Ryanair at its own low-cost game

Wizz is poised to attack the Irish carrier's strongholds in western Europe

Print edition | Business May 31st 2018

JUST a few hundred metres from Budapest airport's runways, the wails of scorched airline passengers echo around an industrial estate. But no real people are being harmed. Here Wizz Air, a rapidly growing Hungarian carrier, trains cabin crew and pilots in evacuating its planes safely. Last year the airline recruited 1,000 new staff, twice as many as the year before. In February construction work started on a bigger training centre to teach an extra 1,400 cabin crew it will need next year.

If anyone will be burned by this expansion it will be Europe's cheapest airline, Ryanair. Over the past two decades its chief executive, Michael O'Leary, turned the Irish minnow into Europe's biggest carrier by copying the low-cost model of Southwest, an American budget airline. It has long had no-frills rivals such as easyJet and Norwegian. But these two have never been able to match Ryanair's low cost base. Yet after Wizz's full-year results on May 24th, in which it reported record profits, analysts say the carrier is about to do just that (on the basis of cost incurred for each "available seat kilometre", a measure that takes into account distance flown). Wizz is now launching an assault on Ryanair's western European strongholds.

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Already the biggest airline in eastern Europe, Wizz has aimed to expand across the entire continent since the start, says Jozsef Varadi, its founder and chief executive. Its first flight from Katowice in Poland to London in May 2004 came just weeks after Hungary joined the EU, which allowed its airlines to fly anywhere within the bloc. So far it has focused on flights between eastern and western Europe. Booming flows of migrants and tourists on these routes have increased its passenger numbers from 14m in 2014 to over 28m last year (see chart).

Mr Varadi now thinks the time is right to start flying within western Europe. In May Wizz launched a British unit to fly new routes within the region, such as from London to Iceland and to Bari in Italy. Juicier fares and profits are a big lure. Wizz also sees Ryanair's recent troubles as an opportunity. The Irish carrier is struggling to find enough cheap labour to man its flights. Last September it cancelled 20,000 flights because of a pilot shortage. It has also lost a court case over cabin-crew contracts, a judgment that will swell its pay bill.

Keeping staff costs low is essential for Wizz and Ryanair. The Hungarian upstart does not just look like a "Ryanair mini-me", explains Daniel Roeska of Bernstein, a research firm. It is one. One of Ryanair's early investors, Bill Franke of Indigo Partners, a private-equity firm, is also Wizz's biggest backer. It saw in Wizz an opportunity to take the Ryanair model to an extreme. Wizz cuts basic fares lower than Ryanair and makes even more back in extra charges on luggage and the like. It also wants to avoid complications such as connecting flights—which Ryanair has started to offer—so they do not bloat its cost base.

Wizz's big advantage is that its home country has some of the lowest labour costs in the EU. It can undercut Ryanair on pay while appearing to offer good jobs by local standards. Its Irish rival, in contrast, is often pilloried for treating its staff badly by western European norms to save money.

Ryanair's trump card is that its size and established status means its cost of aircraft ownership is lower than for Wizz. But the gap is closing, Mr Varadi says. As Wizz's profits grow it can borrow money and lease planes more cheaply. And it has started to get discounts on new jets by buying in bulk with Indigo Partners' other airlines across the world.

To its credit, Ryanair has long prepared for the day a competitor rivalled it on cost. Its chief financial officer, Neil Sorahan, points out that seats on short-haul flights are a low-margin commodity. There is little to stop another airline competing away your profits, he admits. And so Ryanair wants to use its heft in the airline business to profit from selling high-margin holiday extras such as hotel rooms, car hire and the like. Kenny Jacobs, its chief marketing officer, wants its website to be the "Amazon of travel", even selling airline tickets for its competitors. Ryanair is not rolling over, but its planned diversification is a sign of how much Wizz has achieved.

This article appeared in the Business section of the print edition under the headline "Wizz on the up"

There can be only one

Comcast and Disney battle over Rupert Murdoch's empire

The winner will seek to take on Netflix and Amazon globally

Print edition | Business May 31st 2018

A YEAR ago, investors in 21st Century Fox, Rupert Murdoch's entertainment empire, could have been forgiven a bout of the blues. Shares were down by 30% from their peak in December 2014. Viewership of most of the company's American networks was in decline, and millions had dropped expensive pay-TV packages, including its own, in favour of cheaper web-delivered video.

On May 25th Fox's shares reached a new all-time high, rising above \$39 a share. The business has not turned around, but Fox's value has, as a prize for other media titans seeking global scale. Comcast, a cable giant, is preparing to top Disney's \$52bn all-stock offer for much of Fox (plus almost \$15bn in debt) with an all-cash offer of at least \$60bn. Disney is reportedly readying cash to sweeten its offer, which Fox's board had approved in December. The final sale price could exceed \$70bn. The winner will take on Netflix and Amazon in the competition for customers globally. The loser will be at risk of falling behind in that chase.

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The bidding war, if it comes, will probably not begin until June 12th, when a federal judge in Washington is expected to rule on the government's antitrust lawsuit seeking to block AT&T's \$109bn purchase of Time Warner. If that vertical merger of distribution and content goes through, Comcast will have a more credible case that its offer could pass regulatory muster. If the deal is blocked, Comcast may limit what it seeks to buy from Fox or focus on its £22bn (\$29bn) bid for Sky, a European satellite broadcaster that was to be turned over to Disney in the Fox sale.

Fox's size, rather than its trajectory as a business, explains the fervour of its suitors. Much like Randall Stephenson, the boss of AT&T, Bob Iger of Disney and Brian Roberts of Comcast have concluded that to compete with Netflix and other tech giants for customers in entertainment, they must achieve huge scale. Disney plans to launch a direct-to-consumer Netflix-like streaming service in 2019; Comcast, which owns NBCUniversal, probably would announce similar plans were it to add heft.

The assets that Mr Murdoch agreed to sell to Disney meet that need: Fox's film and TV studios; its vast library of content, including "The Simpsons"; cable networks such as FX; international assets like Sky (pending Fox's battle with Comcast for control of Sky); and Fox's 30% stake in Hulu, which would give either Disney or Comcast, each of which also owns 30%, control of a streaming platform with 20m customers in America. (Mr Murdoch and his family would retain the flagship broadcast network and their national sports and news networks, including Fox News Channel, the company's cash cow).

The stakes appear higher for Comcast. Disney's enviable collection of film franchises should provide enough backing for a successful streaming service without Fox. Comcast, if it were to lose, would be left to hunt for much smaller prey to bulk up its offering. Lionsgate, a mini-studio, might be one target. Mr Roberts could also seek to prise Hulu or other properties from a Disney-Fox transaction. Either victor may need to surrender some assets as concessions to regulators.

The Murdochs prefer Disney, saying it is a better fit (they turned down an offer from Comcast in the autumn). On March 29th James Murdoch, Fox's boss, reiterated this rationale at Code, a media conference in California. But the family holds only 17% of Fox. Other investors may well opt for Comcast's cash over Disney's shares; the cash is taxable but so would the shares be once sold. In the end most analysts believe Mr Iger will raise Disney's bid by as much as it takes to get Fox. Either way Fox investors will not have minded the attention.

This article appeared in the Business section of the print edition under the headline "There can be only one"

A new leaf

HEYTEA wants to make tea-drinking cool again in China

The chain's tea-ristas and hip design are helping sales of fresh tea soar

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TIPPED, not stirred, is how hip young things in China now take their tea. To be exact, at a 45-degree tilt. So advise the tea-ristas of HEYTEA, a budding, pricey tea chain, the better to blend the bitter tang of freshly brewed leaves with a salty cream-cheese “cap”. *Naigai cha*, or cheese-tea, has taken China’s rich eastern cities by storm. For months after HEYTEA shops appeared in Shanghai in February 2017, security guards had to manage queues with waiting times of up to three hours. Impatient customers hired queuers from personal-services apps to stand in line for them. Cups were limited to two purchases a person to ward off scalpers (the limit is still in place in Beijing).

To many in the beverage industry this smacked of “thirst marketing”, purposely keeping supply scarce. HEYTEA denies this, as well as accusations of padding out its own queues. Though everything from fancy eateries to convenience stores is on China’s main food-delivery apps, HEYTEA stayed off them early on (the firm’s first shops were in a handful of second-tier cities in southern Guangdong in 2012). Nie Yunchen, its 26-year-old founder, says his priority was to offer high-quality teas. These are gently brewed and cheese-capped to order: not for him the grab-and-go streetside tea chains that use powdered mixes. Most HEYTEA outlets are in ritzy shopping malls, with space to sit and wall displays of tea in glass beakers.

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But many customers only stay long enough to receive their drink and snap a selfie or two. In that sense HEYTEA turns the concept of ritual-laden *chaguan*, or tea rooms, which seem stuffy to young people, on its head. It may be making tea-drinking cool again. Mr Nie thinks the early idea from Starbucks, to create “a third space” for coffee drinkers—neither the home nor the office—is no longer as relevant when youngsters are gathering online to chatter. Instead he wants his pretty stores to be widely shared, “social-media currency”.

This year HEYTEA will open in provincial capitals in middle and western China, including Chengdu and Chongqing. A second funding round completed in April that raised 400m yuan (\$63m) was led by Longzhu Capital, the venture-capital arm of Meituan-Dianping, an online-services and delivery giant. Exclusivity was good for the brand early on, says Jason Yu of Kantar Worldpanel, a market-research firm, but success will depend on scale. The firm wants to double the number of its stores to 200 by the end of this year.

Will that be at Starbucks’s expense in China? Mr Nie says that he is not trying to challenge the American caffeine giant. Still, he is probably competing for the same, premium market, charging 25-30 yuan for a cup of tea. His concept stores, such as HEYTEA Black, bring to mind the Starbucks Reserve Roastery, which features in-house roasting of unusual coffees. Since entering China in 1999, Starbucks has fared well selling coffee to a nation of tea-drinkers. It has around 3,300 stores that serve more than 6m customers a week. Last month it raised its target for new stores from 500 to 600 a year until 2022.

Yet sales of freshly prepared tea grew by 19% in 2017 as those of coffee fell by 4%, according to Kantar. Yi Dian Dian, a Taiwanese milk-tea company, has become the world’s largest chain of streetside kiosks, according to Euromonitor, expanding from 300 outlets in mainland China in 2012 to over 3,500 last year. Citic Securities, a broker, predicts that the combined revenue of China’s new big tea chains will soon reach 12bn yuan, close to Starbucks China’s estimated revenue of 13.8bn yuan in 2016. Yi Dian Dian, whose stalls arrived in mainland China in 2011, has reportedly attracted 700m yuan in local investment. A large supplier to drinks chains in China says that Starbucks’s expansion plans feel for the first time like “a defend strategy”.

Meanwhile HEYTEA is riding a frothy cream-cheese wave (it also offers popular fruit-based teas). Singapore is among the candidates for the location of its first shop abroad. Each one in China makes more than 1m yuan in monthly revenue, selling between 1,000 and 2,000 cups a day. It hopes that its distinctive blends, such as the “Golden Phoenix King”, will get customers hooked: either a flight of fancy—or the rebirth of the tea business.

This article appeared in the Business section of the print edition under the headline “A new leaf”

Schumpeter

Six muddles about share buy-backs

Stock repurchases by American firms are on the rise. So is the confusion surrounding them

Print edition | Business May 31st 2018

THE last time a corporate-finance concept went mainstream was during the financial crisis, when banks' capital became a subject you could raise in yoga studios or biker bars without being hushed or hospitalised. Now there is a new candidate: share buy-backs, which reached \$189bn in the three months to March for firms in the S&P 500 index, a record high. They may rise even further when a wave of cash comes home in response to America's new tax rules, which encourage firms to repatriate the \$1trn of funds they have parked in foreign subsidiaries. Apple plans to spend \$100bn on buy-backs, for example.

As the sums rise, so does the controversy. In a buy-back a firm acquires its own stock to return cash to its shareholders. To critics they are a financial voodoo that exacerbates inequality and depresses investment. Elizabeth Warren, a left-leaning senator, wants them partially banned. But among investors such hostility is seen as a "derangement syndrome", to quote Cliff Asness, the boss of AQR, an investment firm. The financiers are right. Buy-backs are a sensible tool. They largely reflect economic imbalances, such as bloated profit margins, rather than cause them.

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First permitted by American regulators in 1982, buy-backs are now widely used. Some 97% of firms in the S&P 500 indulged over the past decade, slightly more than paid dividends. Even holdouts, such as Berkshire Hathaway, have no objection in principle. Of the \$8trn returned to shareholders in this period, just over half was via share repurchases. A fifth of buy-back activity was by ten big spenders, including Apple, Microsoft and Exxon.

The recent surge is clear to see but also skewed. Buy-backs rose by 41% in the last quarter compared with the prior year. The share of gross cashflow paid out as buy-backs rose to 48%, versus a ten-year average of 30% (excluding financial firms). However, an elite of 20-odd firms with piles of cash stashed abroad accounted for a third of this rise. If you also exclude a monster buy-back by Amgen, a drugs company, the share of cashflow spent on repurchases by the remainder has risen more modestly.

The debate over buy-backs is bedevilled by six muddles. The first is an inchoate sense that firms buying themselves is unnatural. In fact buy-backs are like dividends: cash moves from the firm to its owners. Their advantage is flexibility. Unlike with dividends, shareholders can elect whether to participate, and firms can turn the tap on and off without disappointing investors.

The second confusion is that buy-backs create shareholder wealth. That is like saying that withdrawing dollars from an ATM makes you richer. Buy-backs can transfer wealth between shareholders—if you sell at a price that later turns out to be low, the remaining owners benefit. They can also send signals about how managers intend to allocate capital. But they do not significantly change the underlying worth of America Inc or its shareholders.

The third mix-up is that firms' main motivation is to manipulate either their stock prices or their earnings-per-share (EPS), which can be cosmetically boosted as the number of shares falls. The charge is hard to sustain, in aggregate, because buy-backs are small relative to the stockmarket, worth 2% of its value and 1% of shares traded for S&P 500 firms each year. Rules prevent firms from dominating trading in any given day. True, if executive-pay schemes are poorly designed around EPS, they can artificially encourage buy-backs. But of the 20 largest repurchasers today, three-quarters do not have EPS as a main element of their pay plans.

A fourth muddle is the idea that the world would be a better place if the same firms doing huge buy-backs reinvested the money instead. The trouble is that buy-backs are dominated by firms that specialise in intellectual property, which would be unable to reinvest all their profits. For example, had Apple reinvested the sums it has repurchased in the past decade, its physical plant would be six times larger than it is. A healthy economy is one in which abnormally high profits are recycled by the financial system, not one in which fat incumbents get ever more sprawling.

The fifth confusion is that buy-backs lead to low investment. A study by Federal Reserve economists in 2017 found little evidence of this. As firms' cashflow has risen relative to GDP since the 1990s, a lower proportion has been spent on investment. But this reflects the denominator rising, not the numerator shrinking: investment relative to GDP is in line with 1990s levels. Surges in buy-backs and investment may sometimes even be complements, not substitutes. They can happen at the same time, such as in the second half of 2007. Today, buy-backs and investment are rising sharply again, in tandem. In the most recent quarter 64% of firms that boosted buy-backs also boosted investment—indeed they were slightly more likely to do so than other firms.

The sixth muddle is that buy-backs are a good measure of whether corporate-tax reform was in the public interest. They are not. Better alternatives are whether overall investment rises by more than the annual \$100bn tax break (this looks possible in 2018), whether firms' wage bills are rising (yes, but not much faster than before) and whether these effects will last (debatable).

Born to be wild

Most criticism of buy-backs is motivated by legitimate concerns about serious problems, including excessively high profits and squeezed wages, the concentrated ownership of firms and the reluctance of the financial industry to back more capital-hungry startups (Tesla and Uber are exceptions). All are important but none would be solved by obliging already profitable firms to hoard even more cash. Indeed, the most important signal sent by surging buy-backs is rather different. Leverage is creeping up, as 54% of firms spent and invested more than they earned in the last quarter. And when firms splurge on their own stock it is usually a sign of peak optimism: the last time they did was right before the 2008 crash. That's worth mentioning the next time you chat during a downward dog or are quizzed by a Hell's Angel.

This article appeared in the Business section of the print edition under the headline "Six muddles about buy-backs"

Italy and financial markets

Tragedy or farce?

Tragedy or farce?

Italy's political crisis is roiling financial markets once more

The suggestion by Five Star and the League that they might abandon the euro has shaken investors across Europe

Print edition | Finance and economics May 31st 2018

HERE we go again. Financial markets don't much like uncertainty. Thanks to Italy's politicians, in recent days they have had plenty. By May 30th some calm had returned: it seemed possible that a pair of populist parties, the Five Star Movement and the Northern League, would form a government after all (see [article](#)). Markets had been in turmoil for two days, unsettled by a farcical back-and-forth between the populists and the country's president, who had rejected the parties' choice of a Eurosceptic economist as finance minister. The politicians may have done the markets a service, by shaking them out of complacency. Investors may have returned the favour, by shaking some sense into the politicians—at least for now.

Italy is perennially slow-growing and groans under public debt of around €2.3trn (\$2.7trn), or 132% of GDP. The drama reawakened dormant worries about those two problems—and the deeper fear that the euro zone's third-biggest member might be sneaking towards the exit. So the yield on Italian two-year bonds, negative as recently as May 15th, leapt to almost 1% on May 28th. It carried on climbing the next day, touching 2.73%, the highest since 2013, before retreating. Ten-year yields also rose, if less spectacularly. Yields on German Bunds, Europe's safest government bonds, declined.

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Share prices tumbled. Banks in Italy, holders of €600bn of government bonds, were hit hardest. UniCredit, the country's biggest, fell by 9.2% and Intesa Sanpaolo, the number two, lost 7.2% on May 28th and 29th. Other European banks' shares were also roughed up. The worries rippled across the Atlantic. The S&P 500 index slipped by 1.2% on May 29th, with banks again leading the way down. The yield on ten-year Treasury bonds fell from 2.93% to 2.77%, the biggest drop since the day after Britons voted for Brexit in June 2016.

So far, this adds up to a nasty bout of the jitters rather than full-blown panic. Italy's two-year bond yield is far below the 7.6% it hit in November 2011, at the depths of the euro zone's previous crisis. The effect on the euro area's other problem members has been limited—even though yields in Greece, Portugal and Spain, where the prime minister faces a confidence vote on June 1st, reached their highest this year on May 29th.

Foreigners are also unlikely to have suffered much direct harm from the fall in bond prices (the corollary of rising yields). Although Italy's huge public-debt market gives it a decent weight in global bond indices, foreign investors, knowing a bad bet when they saw one, had cut back. Analysts at Deutsche Bank calculate that between the second quarter of 2015 and the third quarter of last year foreign investors other than banks cut their Italian holdings from €473bn to €250bn. Deutsche's Torsten Slok adds that the exposure of banks outside Italy has fallen by almost half since 2009, to €133bn.

Nor has the run-up in yields yet threatened the sustainability of Italy's debt. On May 30th Italy sold a total of €5.6bn-worth of five-, seven- and ten-year bonds at yields of 2.32%, 2% and 3% respectively. Granted, that is dearer than in the recent past, but it is well below the average coupon of 3.4% on its existing stock of debt. And the longish average maturity of its bonds, around seven years, gives it breathing space. Alberto Gallo of Algebris, an investment firm, estimates that yields would have to be at least 4-4.5% for several months before higher coupon payments would make debt unsupportable. That is not unimaginable, but is some way off.

One reason for that is the backing of the European Central Bank (ECB)—ironically, a bugbear of the Italian populists. Under its quantitative-easing programme, which has held down borrowing costs across the euro area, the ECB has bought €340bn-worth of Italian bonds; it holds around a sixth of the stock. In effect, it has been a willing buyer as foreigners have quit.

Yet none of this means that markets could not turn against Italy with greater violence—if, say, a populist government undid recent reforms, opened the fiscal taps or picked a fight with bureaucrats in Brussels or Frankfurt. Although the biggest banks are now in decent health (or getting there), they own lots of government bonds. One bank, Monte dei Paschi di Siena, is still in intensive care. The bad-loan burden, though reduced, remains heavy.

Departure from the euro area would be unthinkable costly—for both Italy and the zone. As when Argentina abandoned dollar parity at the start of 2002, the value of Italians' bank deposits would plunge. Italy is not Greece (see [article](#)), in that it is in far better shape. But it is not Greece, too, in that it is much, much bigger. In 2012 Mario Draghi, the ECB's president, quelled the crisis that looked likely to destroy the currency club by saying that the ECB would do “whatever it takes to preserve the euro”.

If liquidity dries up the ECB can conduct “outright monetary transactions”—buying a government's bonds on secondary markets—although it has not used the scheme yet. But this scarcely gives Italy a free pass. It is intended for extreme circum-

stances. As Mr Draghi's deputy, Vítor Constâncio, who was due to leave office on May 31st, told *Der Spiegel*, a German magazine, this week, such help comes with strings. A government has to request it and be in an adjustment programme agreed on with European institutions. Greece has been labouring under a similar regime. Italy's populists are unlikely to volunteer.

This article appeared in the Finance and economics section of the print edition under the headline "Tragedy or farce?"

Rebuilding the ruins

A critical task for the Greek economy enters a new phase

Greek banks have begun to reduce their enormous pile of bad loans

Print edition | Finance and economics May 31st 2018

OF THE €57.7bn (\$68.2bn) of loans that Piraeus Bank, one of Greece's four dominant lenders, had on its books at the end of March, €20.5bn were more than 90 days overdue. A further €11.7bn were also deemed unlikely to be repaid. In all, at the end of 2017 Greek banks carried €95.7bn of such non-performing exposures (NPEs)—at 43.1% of loans, the heaviest burden in Europe. Still, the pile was €13bn smaller than at its peak in March 2016. The banks plan to reduce it by €30bn this year and next.

Dealing with bad loans to business—around 60% of NPEs, mostly to small firms—is the most daunting part of this monumental job. It means resetting the balance-sheet of much of Greece's economy, from restaurants to manufacturing. But a new phase of this task is under way, with the first sale of secured commercial loans. On May 29th Piraeus said it had agreed to sell Amoeba, a €1.45bn bundle of loans to around 180 borrowers, to Bain Capital Credit, which has previously bought bad debts in Italy and Spain. The collateral, comprising about 1,700 properties, is mainly in big cities. Other banks have been watching keenly. Alpha Bank, another of the four big banks, is weighing a similar sale. Bankers and investors say Amoeba has helpfully spawned an ecosystem of buyers and advisers.

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Clearing away the NPE rubble and renewing lending are both vital. GDP shrivelled by a quarter in 2010-13 and then stagnated for three more years. Though it is growing once more, at 1.4% in 2017 and maybe 2% in 2018, it is scarcely roaring back. Write-offs and sales have accounted for most of the reduction in NPEs, though “cures” (as borrowers return to health or simply find the cash) have ticked up too. Sales have mainly been of unsecured consumer debt, for a few cents on the euro. In October Eurobank, another leading lender, sold a €1.5bn portfolio to Intrum, a Swedish specialist, for about €40m. In March Alpha shed €3.7bn of loans to Norwegian-owned B2Kapital Greece for €90m.

Selling business loans is harder. Though provisions already cover half of NPEs, and collateral notionally covers the rest, banks and loan-buyers must still discern which indebted businesses are viable and which not, and what collateral is truly worth. Debtors may owe money to more than one bank, and different parts of a property (parking space, storage areas) may have been pledged separately. Bankers reckon that 25% of defaulters are “strategic”—that is, they can pay but won't, believing foreclosure will never come.

Lately online public auctions of foreclosed commercial and residential properties have also begun. Up to 20,000 pieces may go under the e-hammer this year. Banks are buying a high proportion themselves—at Piraeus, 80%—but at least sales are happening. Protests prevented physical auctions last year. E-auctions have smoked out some strategic defaulters: perhaps a fifth of properties put up for sale have been pulled when borrowers found the money or asked to restructure the debt.

At the top of the scale Pillarstone, a turnaround specialist owned by KKR, a private-equity giant, is taking on a few large, troubled companies. It is overhauling Famar, a drugmaker, and is close to deals with Alpha and Eurobank to reshape Notos, a department-store chain, and Kallimanis, a frozen-seafood firm. Banks have also set up a forum to tackle companies owing money to more than one lender.

Among other positive signs, all four banks boast healthy capital ratios and came through stress tests by the European Central Bank (ECB) this month without being required to raise more equity. They should soon be weaned off ECB emergency funding, which by April was down to €10.2bn, from €86.7bn in mid-2015. Deposits that gushed out in the crisis have begun to flow back.

Yet much of the masonry is far from firm. Leonidas Fragkiadakis, chief executive of National Bank of Greece, the other big bank, resigned on the eve of the stress tests, having fallen out with his board. Private-sector deposits, at €120bn, are still 45% lower than at the end of 2009. Tens of billions are stashed in homes—even buried in gardens—or abroad.

Despite changes in the law intended to speed up bankruptcies, procedures are still “a mess”, believes Stathis Potamitis of PotamitisVekris, a law firm in Athens. The statute is too complicated for small firms, he says. Many new “out of court” workouts will in fact require judges' rulings because the state, often the biggest creditor, will object to banks' plans. And Greece lacks specialised courts: a judge can rule on a divorce one day and a foreclosure the next. Last year, according to Creditreform, a debt-collection group, Greece saw just 120 company insolvencies. Similarly-sized Portugal had over 6,000.

The terms of Greece's graduation from its third bail-out programme, due in August, also matter. Yannis Stournaras, the central bank's governor, argues that the government should ask for a precautionary credit line from the European Stability Mechanism, as insurance against a sharp rise in borrowing costs (which would feed through to banks). The left-wing government vehemently disagrees, preferring to rely on building a cash reserve.

Even if banks fulfil their plans, they will still have €65bn of NPEs—a ratio of 35%—at the end of 2019. Theodore Kalantonis, the head of Eurobank's troubled-assets division, says the “biggest question” is how lenders will come up with a new plan after that, to bring NPEs closer to the European average. “Can we do it? The answer has to be yes. But it will not be easy.”

This article appeared in the Finance and economics section of the print edition under the headline “Rebuilding the ruins”

Turkish baroque

Turkey's central bank has streamlined its fight against inflation

Bond markets and foreign investors have forced the president, Recep Tayyip Erdogan, towards a more orthodox monetary policy

Print edition | Finance and economics May 31st 2018

THE baroque era in Turkish architecture lasted deep into the 19th century, leaving behind lavish buildings, such as the Lily Mosque in Istanbul and waterside pavilions that seem to float on the Bosphorus. The baroque period in Turkish monetary policy will last until June 1st, when the central bank will simplify its equally ornate monetary-policy framework. It will henceforth rely on a single interest rate (the one-week repo rate), which it will raise to 16.5%. This will supersede a jumble of interest rates (see chart) that has left the Turkish currency perilously close to submersion.

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Turkish baroque mingled Western and Ottoman styles. The country's fussy monetary policy also reflects competing influences. Its central bank wants to stabilise the lira and quell inflation, which remains in double digits, far in excess of its 5% inflation target. On the other hand, the president, Recep Tayyip Erdogan, is eager to sustain the economy's furious pace of growth (7.3% in the last quarter of 2017, compared with a year earlier) and to defy the usurious claims of what he calls the "interest-rate lobby". According to the well-trained technocrats dotted throughout Turkey's policymaking apparatus, higher interest rates would help stabilise the economy, curbing excessive spending and luring back the foreign capital on which the country relies to finance its current-account deficit (5.6% of GDP in 2017). According to Mr Erdogan, however, higher interest rates do not curb inflation, but cause it.

In apparent deference to Mr Erdogan, Turkey's central bank has long refrained from raising the one-week repo rate, which had served as its monetary mainstay. Instead it increased the cost of borrowing from a more obscure facility, the late-liquidity window, which lends to banks that have run short of money at the end of the day. It also forced banks to turn to this expensive window for a larger share of their funding. In this way, it surreptitiously increased their average cost of borrowing.

In recent weeks, however, it became impossible to appease both Mr Erdogan and increasingly demanding bond markets. As American Treasury yields, the dollar and oil prices began to rise, foreign investors began to doubt Turkey's commitment to keeping its imbalances in check. Any policy move big enough to convince the markets would also be stark enough to antagonise Mr Erdogan.

For a frightening week, it looked as if Mr Erdogan's sensitivities would prevail. But the more he bullied the central bank, the more the markets bullied him. The lira slid by over 12% in the two weeks before May 23rd, when the central bank finally decided to raise interest rates by three percentage points, followed five days later by its decision to simplify policymaking.

The new interest rate of 16.5% is almost six percentage points above Turkey's rate of inflation. Foreign investors will now be asking themselves how long the central bank can persevere with its tightened stance, and whether it will raise rates again if the lira's weakness or oil's strength further threatens price stability. Other emerging markets have shown great persistence in the fight against inflation. Russia has kept its interest rates more than three percentage points above inflation for more than two years; Brazil has done so for more than four. By mid-2016, even the IMF called on Russia's central bank to relent.

As a sign of Turkey's commitment for the long haul, its simplification of monetary policy may be as important as its tightening of it. The reform shows that the central bank is no longer trying to accommodate competing objectives. India sent a similar message when it began clarifying its inflation-fighting goals in 2014 and adopted formal inflation targeting in 2015.

Even before Mr Erdogan intruded so clumsily on its independence, the Turkish central bank was known for monetary intricacy. Unlike other central banks, it often let market rates wander quite far from its target. And its overnight deposit and lending rates, which establish a floor and ceiling for interest rates, were often positioned "asymmetrically", with one further from the target rate than the other. It felt that adding gratuitous uncertainty to interest rates would deter speculative inflows of capital. Its new framework abandons this asymmetry. Turkey has many problems. But the need to deter inflows of capital is no longer one of them.

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Puzzle pieces

There is madness, but perhaps also method, in America's trade policies

President Donald Trump is seeking to renegotiate NAFTA and slap tariffs on steel, aluminium, cars and Chinese products—all at the same time

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DIVINING meaning in the Trump administration's trade announcements is a thankless task. No sooner does a policy seem settled than it is thrown up in the air once more. On May 23rd, days before a scheduled meeting with the European Union and Japan on a joint trade strategy and in the middle of talks to revamp the North American Free-Trade Agreement (NAFTA), it began an investigation into whether car imports are a threat to America's national security. On May 29th, days after tariffs on imports from China were supposedly put on hold, official word came that tariffs on \$50bn of Chinese imports would be imposed "shortly" after June 15th. Barring a last-minute change of heart—which would not be the first—as *The Economist* went to press the administration was expected to announce tariffs on steel and aluminium imports from the EU from June 1st. Whether America's partners in NAFTA, Canada and Mexico, would also be hit was unclear.

The chaos is partly the consequence of President Donald Trump's mercurial temperament, and the fact that he is served by advisers who disagree with each other. Steven Mnuchin, his treasury secretary, seems more interested than, say, Peter Navarro, his trade adviser, in avoiding a trade conflict with China. It may also be an attempt, in the style of "The Art of the Deal", to throw negotiating counterparties off-balance and cow them into submission—and perhaps to convince companies abroad that exporting to America is too risky.

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But hidden in the muddle there is also a grim logic. Mr Trump, and at least some of his trade advisers, believe that when one unorthodox trade move has knock-on consequences, the solution is not to rethink it, but to follow it with another.

The investigation announced by the Department of Commerce on May 23rd, into whether imports of cars and car parts threaten national security, is illustrative. The suggestion is absurd, and if the conclusion is that they do, it would make a mockery of the global rules-based system of trade. But the administration would be able to apply whatever tariffs it liked to auto imports while staying within the letter, if not the spirit, of American law.

Tariffs of 25% on cars and car parts, as Mr Trump apparently wants, would be disastrous for Canada's and Mexico's car industries, though American buyers of cars and parts would suffer too. (Around 56% of the light vehicles sold in America in 2017 were assembled in the country, and 22% in Canada and Mexico together.) On May 24th Justin Trudeau, Canada's prime minister, wearily told Reuters that the decision to target cars was connected to the NAFTA negotiations. It seems unlikely that the move will do anything to encourage Canadian and Mexican negotiators to settle quickly—the Department of Commerce hearings will take months. But it will increase America's leverage as it tries to reshape NAFTA's rules on cars in ways it has already signalled.

The NAFTA talks are stalled over the conditions a car must satisfy in order to qualify for tariff-free trade within the bloc. American negotiators want more demanding national-content requirements, and a rule that at least 30% of a car be made by workers earning above a high wage threshold. But they have woken up to the possibility that carmakers that find the proposed rules too burdensome might simply ignore them and pay the non-NAFTA tariff of 2.5%. That would become far less feasible if the tariff were to rise tenfold, with NAFTA members exempted.

A stiff tariff on auto imports might also seem to fulfil other objectives of American trade hawks. Mr Trump seems convinced that the EU's 10% tariff on car imports violates the spirit of reciprocity, and that Japan treats American car companies unfairly in other ways, such as subjecting them to onerous inspections (there is no tariff on cars entering Japan). If these other countries are unwilling to lower their trade barriers, then a tariff would at least shut out their exports. If NAFTA producers are excluded from any restrictions, then they could even find themselves with a large tariff preference in the American market, which would help offset any extra burdens imposed by the new deal.

If this is the strategy, then carmakers elsewhere should be worried. Cars are the most traded product in the world by value, according to the MIT Observatory of Economic Complexity. And America is the world's largest importer. In 2017 cars made up 41% of the value of Japan's goods exports to America, and 14% of the EU's.

Some companies, including Ford, GM and Honda, already assemble most of the cars they sell in America within its borders. But other manufacturers seem more exposed to a 25% non-NAFTA tariff, including Mazda, BMW and Daimler, which produce more than 60% of their American sales outside NAFTA, estimates Barclays, a bank. Whether with imports of steel, aluminium and cars, or the bilateral relationship with China, at some point the Trump administration may decide to show the world that it is not bluffing.

This article appeared in the Finance and economics section of the print edition under the headline "Puzzle pieces"

Small is beautiful

The number of new banks in America has fallen off a cliff

One brave soul in Texas shows that it can still be done

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THE single-storey main branch of the Texas Hill Country Bank, in Kerrville, sits at the back of a tired shopping centre, in the shade of a six-storey Wells Fargo building. When Roy Thompson, the chief executive, was hired (from Wells) in 2012, three years after it opened, he ran a radio ad campaign to alert locals to its existence. It asked listeners to help a mother (his) to find her child (Roy himself), who had gone missing after joining a community bank.

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If Mr Thompson had shared the fate of many small-town bankers, he would have remained missing. Since 2012 more than 2,000 American banks have closed (see chart). Almost all were small, operating in the shadows of big banks with big budgets for marketing, technology and regulatory compliance. For the same reasons, almost no new banks have opened. Before the crisis the Federal Deposit Insurance Corporation (FDIC) approved hundreds of bank charters each year. Since 2009 there have been only a dozen in total.

So sudden has been the stop that the FDIC is seeking to encourage new banks to open. In 2017 it published "A Handbook for Organisers of De Novo Institutions". It has held seminars on how to set up a bank in seven cities. But few would-be bankers have heeded the call. Only 12 applications for banking licences are pending.

West Texas is a shining exception. Texas Hill Country has grown steadily since it was founded in 2009. Though Kerrville residents still come up to Mr Thompson in the street to declare him found, in reality they all know where, and who, he is. On a tour of town he explains who owns this lumber yard, that car-repair shop, the other medical centre—he has provided them all with financing, or else hopes to.

Texas Hill Country was the creation of J. Bruce Bugg, a tax lawyer who put himself through college with jobs in banks. In 1989, aged 29, he bought a bank and sold it at a profit. In 2007 he returned to the business, founding the Bank of San Antonio, followed by Texas Hill and, last year, the Bank of Austin. In the 1980s many Texan banks had been taken over after a previous financial crisis. After the crisis of 2008, distant headquarters closed branches and turned away staff. Banks were "inviting their customers out the door", says Mr Bugg—and he was there to scoop them up.

Today, the Bank of San Antonio no longer counts as small, with \$800m in assets. Return on equity is more than 12%. Texas Hill has \$117m in assets and return on equity is a still-respectable 8.9%. Their success meant Mr Bugg was easily able to raise money for the Bank of Austin, which is on track to be profitable soon. Half of its 120 shareholders were keen enough to show up for its first annual meeting on May 15th.

Small banks, as new banks inevitably are, face great challenges. But they are easing. Regulations tightened after the crisis have been loosened for smaller institutions. The cost of technology is falling. The Bugg banks' electronic spine is from Jack Henry & Associates, a provider of IT services to financial institutions. Its share price has risen six-fold since the crisis.

And new banks also have advantages, Mr Bugg contends: no bad assets, demoralised employees or outmoded technology, plus strong local connections. Each of his three banks is separately capitalised with local shareholders—businesspeople who act as ambassadors. Each is managed by an experienced escapee from a large bank, who, through stock options, can own up to 5% of the institution they lead. The model Mr Bugg is developing has no patent. Community banking may be due a revival.

This article appeared in the Finance and economics section of the print edition under the headline "Small is beautiful"

Buttonwood: Lessons from Las Vegas

In investing, as in poker, following rules works best

What market participants can profitably learn from the World Series of Poker

Print edition | Finance and economics May 31st 2018

AT THE annual World Series of Poker, which begins this week in Las Vegas, the main event is the no-limit Texas hold 'em tournament. In the course of two weeks of gruelling knock-out play, several thousand players are whittled down to just two, playing "heads-up" for one of the WSOP's coveted bracelets.

In last year's final hand, both players had pushed all their chips in, with five shared cards yet to be dealt. Scott Blumstein, who held Ace-Deuce, was a big underdog against Daniel Ott, who held Ace-Eight. With one card to come, Mr Blumstein's hand had not improved. His chances had narrowed to 7%. Of the remaining 44 cards, only one of the other three deuces could give him victory.

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The cards—and thus the odds of winning or losing—were known to both players, because they had already committed all their chips. Poker is not usually like this. Winning depends not only on your cards but on the unseen cards held by other players, on your ability to deceive them by your betting policy and on their ability in turn to deceive you. Fear and greed induce errors. In short, there is uncertainty. All this is also true of investing. The truly talented are able to read complex situations to their advantage. But there are ways for the less gifted to succeed—in both poker and investing.

They can start by being aware of the ludic fallacy. This is how Nassim Nicholas Taleb, an author, refers to the belief that risk in financial markets can be calculated as if it were a game with known odds. If you throw a pair of fair dice, you cannot know how they will land. But you do know some things. There are 36 possible pairs of numbers. Some totals are more likely than others. There are six ways to throw a seven, for instance, but only one way to throw either a two or a 12.

It is tempting to think that investing is like this—that the risks are calculable in advance. They are not. Investment returns are highly uncertain and irregular. Extreme events, such as market crashes, are more frequent than you would expect if dice games were your model of the world. After repeated rolls, dice throws fit a pattern that is known beforehand. In markets, almost anything can happen.

That is also true of poker. Each player has to live with uncertainty: about the cards opponents hold; about their betting strategy; about their understanding of your betting strategy; and even their grasp of the game. Emotions come into play. Players fold winning hands because an aggressive bluff makes them fear losing. And players call bets with losing hands out of greed for a big pot. The best players, like the best investors, seem to thrive on uncertainty. They look for betting patterns or for "tells" (expressions or hand movements) that betray the strength or weakness of an opponent's hand. They make uncertainty work for them. They find spots where a big bluff is hard for an opponent to call.

For the rest of us, says Aaron Brown, a quantitative analyst and author of "The Poker Face of Wall Street", a sound principle is to settle on a basic strategy and stick to it. In poker that means choosing in advance which starting hands you will play in each table position and deciding how you will bet should those hands improve when the shared cards are dealt.

The policy also works in investment. A simple strategy is to allocate a fixed portion of your wealth to different assets—half in a broad index of stocks, say, and half in bonds—and to "rebalance" every so often so that the weights are kept constant. An advantage is that you will automatically sell assets that have become dearer and buy assets that have become cheaper. "It turns out that any simple fixed-weight allocation works well," writes Andrew Ang, of BlackRock, in his book, "Asset Management".

Though simple in principle, a rules-based approach is difficult to follow in practice. It is hard to stay disciplined when your opponents in poker repeatedly draw the improbable cards they need to beat your strongest hands. A player is said to be "on tilt" when frustration at bad luck leads him to abandon his strategy. Investors are prone to similar sorts of errors when things go against them. "Having a non-stupid strategy and sticking to it will leave you better off than most people," says Mr Brown.

Bad luck is part of the game. The best you can do is to try to make the right decisions given the inevitable uncertainty. In the final hand of the WSOP main event last year, Mr Ott made the right decision when he called Mr Blumstein's bet. The odds favoured him. And they continued to until the moment when the dealer turned over the final card—a deuce.

Economist.com/blogs/buttonwood

This article appeared in the Finance and economics section of the print edition under the headline "Lessons from Las Vegas"

A worn-out trade deal

Rwanda refuses to remove tariffs on imports of used clothing

The Trump administration wants the African nation to remain open to imports of clothing donated to charities in rich countries

Print edition | Finance and economics May 31st 2018

IN A market in Kigali, Rwanda's capital, a cacophonous auction is under way. Sellers hold crumpled T-shirts and faded jeans aloft; traders shout and jostle for the best picks. Everything is second-hand. A Tommy Hilfiger shirt goes for 5,000 Rwandan francs (\$5.82); a plain one for a tenth of that. Afterwards, a trader sorts through the purchases he will resell in his home village. The logos hint at their previous lives: Kent State University, a rotary club in Pennsylvania, Number One Dad.

These auctions were once twice as busy, says Félicité Mukaruranga, a trader. But in 2016 Rwanda's government hiked import duties on a kilo of used clothes from \$0.20 to \$2.50. Now she struggles to break even. The traders are not the only ones who are unhappy. Exporters in America claim the tariffs are costing jobs there. In March President Donald Trump warned that he would suspend Rwanda's duty-free access to American markets for its apparel after 60 days if it did not back down. That deadline expired on May 28th without Rwanda shifting its position.

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The dispute tugs at the threads of a trade that knits together charity and business, gift and profit. Globally, about \$4bn of worn clothes crossed borders in 2016. The share from China and South Korea is growing, but 70% still come from Europe and North America. Most go to Asia, eastern Europe and Africa, the largest market. The trade clothes the poor and creates retail jobs. But governments worry that cast-offs undercut their fledgling industries. Imports are banned or tightly restricted in 41 countries, from South Africa to India.

A complex supply chain begins with people like Elizabeth Forsythe, stuffing a bag of old clothes into a donation bin in north London. She assumes that they will end up in a charity shop. But in most rich countries the supply of used clothing far outstrips demand. Less than half of donations are sold locally. Most of the rest are sold to exporters. In Britain a tonne of textiles from a bin fetches £170-315 (\$225-420). At Savanna Rags, in Mansfield in the English Midlands, 500 tonnes of old clothes glide along conveyor belts each week. The workers, mostly eastern European immigrants, sift items into categories depending on the market, such as "childrenswear" and "Asian clothing", transforming a jumble of fabric into plastic-wrapped bales.

In Africa, these motley bundles are a valuable commodity. Men's clothes are pricier, since fewer arrive. American pieces are often too large and have to be resized by tailors. No matter. "A person would rather buy second-hand from America, instead of buying a new Chinese product," says Nelson Mandela, a Ugandan trader with a suitably second-hand name. Shoppers complain that new Asian clothes damage easily and look like uniforms, without variety. Hucksters sometimes dunk Chinese imports in dirty water to pass them off as used ones from Europe.

Some suspect that high-quality, unworn clothes are smuggled into bales as a way for the rich world's clothing industry to offload samples and unsold items. "It's just a form of dumping," says Belinda Edmonds, the executive director of the African Cotton and Textile Industries Federation, an industry body.

Second-hand imports now dominate African markets. Researchers at the Overseas Development Institute, a British think-tank, reckon that Tanzania imports 540m used items of clothing and 180m new ones each year, while producing fewer than 20m itself. African manufacturing is weak for many reasons, from clumsy privatisations to crumbling infrastructure. But second-hand imports are a major culprit, according to a paper in 2008 by Garth Frazer of the University of Toronto. He estimated that they accounted for half of the fall in employment making apparel in Africa between 1981 and 2000.

Spinning wheels

Loose fibres blow around the idle machines at UTEXRWA, a textiles and garment factory in Kigali. The plant operates at 40% of capacity and employs 600 workers, down from 1,100 in the 1990s. It is hard to compete, sighs Ritesh Patel, its manager, when a used T-shirt sells for the price of a bottle of water. Instead, the company specialises in uniforms for police, soldiers and security guards, which cannot be bought second-hand.

Even so, says Mr Patel, higher tariffs have not helped much. "The big challenge is not second-hand clothes or Chinese clothes," he says. "It's buying power." Although the government is promoting "Made in Rwanda" products, firms like UTEXRWA cannot produce cheaply enough for most local consumers. Zips, dyes and synthetic fibres are sourced from other continents. A new garment-maker has opened in a special economic zone, cutting and sewing Chinese-made fabrics. But it mostly sells abroad. Where nascent industry shows promise, as in Ethiopia, it is often export-led.

Rwandan apparel exports currently enter America under the African Growth and Opportunity Act (AGOA), which eases market access for African countries. The threatened suspension would hurt, but not very much. Last year Rwanda sent a mere \$1.5m of apparel to America. Nor, with 12m people, is it a big market. America is more concerned about Kenya, Uganda and Tanzania, which all planned to phase out second-hand imports before yielding to American pressure.

Meanwhile, exporters of used clothes in the rich world, like Savanna Rags, have other worries. Fast-fashion retailers churn out poorer-quality clothes, which do not survive long enough to be worth reselling. Sorting is moving to India, Pakistan or

the United Arab Emirates, where wages are lower. Skittish consumerism and ruthless competition have long underpinned the used-clothing trade. They may now be unravelling it.

This article appeared in the Finance and economics section of the print edition under the headline "Worn out"

Free exchange: Power is money

If wages are to rise, workers need more bargaining power

Stronger unions, better training and more housing in expensive cities might all help

Print edition | Finance and economics May 31st 2018

“IT’S just not going to happen,” said Troy Taylor, the boss of a Coca Cola bottling company, when asked at a recent Federal Reserve event whether he foresaw broad-based wage gains. His remarks (unlike the fizzy drinks he sells) were unsweetened. But experience suggests he may have a point. In most rich countries, real pay has grown by at most 1% per year, on average, since 2000. For low-wage workers the stagnation has been more severe and prolonged: between 1979 and 2016, pay adjusted for inflation for the bottom fifth of American earners barely rose at all. Politicians are scrambling for scapegoats and solutions. But addressing stagnant wages requires a better understanding of the relationship between pay, productivity and power.

In the simplest economic models, productivity is almost all that matters. Workers are paid exactly and precisely in accordance with their contribution to a firm’s output. Were they paid less, rival employers could profit by luring them away with higher pay, and wages would be bid up until they came into line with productivity. Firms paying more than workers contribute would be losing out for no reason.

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This sort of view suggests a few ways to improve workers’ lot. Governments could pursue policies that would help workers move from low-productivity jobs to high-productivity ones, for instance. That might mean investing in education and training, or removing obstacles to relocation or moving from one employer to another, such as high housing costs in places with productive companies, or laws that enforce non-compete clauses in job contracts. When productivity-boosting strategies are not enough to do the trick, a government’s best option is to top up low pay as efficiently as possible. Economists favour wage subsidies, such as Milton Friedman’s proposed negative income tax, which influenced the design of America’s earned-income tax credit. Such subsidies encourage people to stay in work in order to qualify, and do not make workers more expensive and thus discourage hiring. They are also simple to administer.

But it has long been clear that wage-setting is more complicated than the simplest models allow. Growth in pay is linked to growth in productivity, as Anna Stansbury and Lawrence Summers noted in a paper last year. But other influences seem to depress wages. Thus labour productivity rose by 75% in America from 1973 to 2016, while average pay rose by less than 50% and median pay by just over 10%. A direct link between pay and productivity would imply that raising the minimum wage would automatically cut employment, as those workers who had been paid according to their contributions suddenly became overpaid (and, shortly thereafter, unemployed). But no such clear, negative relationship shows up in the data.

The reason, economists reckon, is power. New hires generate a surplus, reflecting the fact that both worker and firm expect to gain from the transaction. Wage bargaining is a negotiation over how to split this surplus. If firms have the upper hand, because a new job is harder to find than a new worker, employers capture most of the surplus, creating a gap between the value created by workers and what they are paid. A rise in the minimum wage could then boost pay without reducing employment by redistributing some of this surplus, leaving a firm with a smaller gain than before, but a gain nonetheless.

There is good reason to think that power imbalances play a big part in the rich world’s wage stagnation. Product markets have become more concentrated, meaning that fewer firms account for a larger share of output. That increases companies’ power in labour markets, since workers are less able to find alternative employment or to pit rival employers against each other in a bidding war. In a recent paper Suresh Naidu, Eric Posner and Glen Weyl estimate that this rise in firms’ power may reduce labour’s share of national income by as much as a fifth. They argue that one way to help struggling workers might be to use antitrust policies to make product markets less concentrated and more competitive.

A complementary approach would be to increase workers’ power. Historically, this has been most effectively done by bringing more workers into unions. Across advanced economies, wage inequality tends to rise as the share of workers who are members of unions declines. A new paper examining detailed, historical data from America makes the point especially well. Henry Farber, Daniel Herbst, Ilyana Kuziemko and Mr Naidu find that the premium earned by union members in America has held remarkably constant during the post-war period. But in the 1950s and 1960s the expansion of unions brought in less-skilled workers, squeezing the wage distribution and shrinking inequality. Unions are not the only way to boost worker power. More radical ideas like a universal basic income—a welfare payment made to everyone regardless of work status—or a jobs guarantee, which extends the right to a government job paying a decent wage to everyone, would shift power to workers and force firms to work harder to retain employees.

Strong bad

Economists are unlikely to cheer such proposals. A broad jobs guarantee would transform society in unpredictable and costly ways. And unions look like monopoly sellers of labour—cartels, intended to leech rents from society as a whole. But the powerful unions of the post-war decades did not stop productivity growing much faster than advanced economies have since managed. And it was during that period that growth in real pay most closely tracked growth in labour productivity, as the

simplest economic models reckon it should. More empowered workers would no doubt unnerve bosses. But a world in which pay rises are unimaginable is far scarier.

This article appeared in the Finance and economics section of the print edition under the headline "Power is money"

Evolution

The history of big-headedness

Evolution

A history of big-headedness

How humans got their brains

Print edition | Science and technology May 31st 2018

“HOW the human got his brain” is probably the most important “Just So” story that Rudyard Kipling never wrote. Kipling did not ignore people in his quirky take on evolution. Two of his tales describe the invention of the alphabet and the invention of letter-writing. But he took for granted the human brains behind these inventions, which are three times the size of those of humanity’s closest living relatives, the great apes, and are thus as characteristic of people as trunks are of elephants or humps are of camels.

This week, though, sees the publication of two studies which, added together, form an important paragraph in the story of the human brain. Both concern a version of a gene called *NOTCH2*, which has been known for some time to be involved in embryonic development. Both point to an event in the past which changed the activity of this gene in the evolutionary line that leads to modern people. And both are supported by experiments which suggest that the change in question is crucial to the emergence of the big brains which distinguish human beings from all other living animal species.

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The two studies, which were carried out independently, are published in *Cell*. One was by a team led by David Haussler, a bioinformatician at the University of California, Santa Cruz. The other was directed by Pierre Vanderhaeghen, a developmental biologist at the Free University of Brussels, in Belgium.

Dr Haussler stumbled on his discovery while comparing the development of the brain’s cortex in human beings and in macaques, a type of monkey. He and his colleagues found in humans what appeared to be several previously undiscovered versions of *NOTCH2*, alongside the established one. The new genes, which they refer to as *NOTCH2NLs*, were absent from their macaques and—as a search of genetic databases showed—from all other living animals except chimpanzees and gorillas. In these two great apes there were two *NOTCH2NL* genes, but they seemed to be inactive. The difference between apes and humans is that in the human line one of these *NOTCH2NLs* has now become active, and has multiplied to create three versions, known as *A*, *B* and *C*.

Crucially, this *A*, *B*, *C* pattern is replicated in the DNA of two extinct species of human, Neanderthals and Denisovans. By looking at minor differences between the various *NOTCH*-related genes in the three human species and the two great apes, the researchers were able to estimate when the active *NOTCH2NL* arose: 3m-4m years ago. That is when, according to the fossil record, the craniums of mankind’s ancestors started expanding.

To follow up this discovery Dr Haussler created what are known as organoids (specifically, brainoids), which are *in vitro* replicas of developing brains, made in this case using mouse cells. He used these to test the effects of adding or deleting his newly discovered genes. In the absence of *NOTCH2NL*, the organoids developed normally. With it added, stem cells in the organoid which would otherwise have generated new neurons divided instead to create more stem cells. The result, when those stem cells did eventually turn into neurons, was more neurons than normal, and thus a bigger organoid. In effect, *NOTCH2NL* had generated a larger brain.

Encouraged by this discovery, Dr Haussler and his colleagues performed one further test, with the co-operation of real human beings. These were people with macro- or microcephaly (unusually large or small brains). After testing the DNA of each of these volunteers, the team found that *NOTCH2NL*, though present in people with larger than average brains, was absent from those whose brains were abnormally small—confirming the suspicion that it is involved in the hypertrophication of human brains.

Cogito ergo sum

Unlike Dr Haussler, who came across his initial result serendipitously, Dr Vanderhaeghen set out from the start to find genes that are unique to people, are directly responsible for creating new brain cells in the cortex, are active and are specifically working to encourage the development of stem cells into neurons. The needle that emerged from this haystack of demands was the same set of *NOTCH2NLs* that Dr Haussler’s team had lit upon. Seeking confirmation of the genes’ function, Dr Vanderhaeghen introduced them into mouse embryos and found that the number of stem cells in the embryos’ brains was thereby increased. He then repeated the experiment using stem cells taken from human fetuses and got the same results as Dr Haussler’s team had observed in their organoids. Sure enough, *NOTCH2NLs* encouraged stem cells to proliferate without turning into neurons, increasing the total number of neurons generated.

Taken together, these two studies suggest that *NOTCH2NL* has played a crucial role in the tale of “How the human got his brain”. They do not, however, answer the question of why this happened. Mutations occur all the time. It is improbable that this was the first occasion in history something like *NOTCH2NL* has arisen. For *NOTCH2NL* to have prospered in the way that it did, natural selection would have had to have favoured it. Big brains, in other words, must have been useful in the context in which the mutation occurred.

What that context was is unclear. Though it is hard for human beings to contemplate the idea that big brains could ever be undesirable, small-brained animals do perfectly well without them. And big brains are expensive to maintain. Some calculations suggest humans could not afford them calorifically without the invention of cooking—a process that liberates otherwise indigestible nutrients. Humans now dominate Earth, but that was not true for most of the 3m-4m years since active *NOTCH2NL* arose and brain hypertrophication began. Until 10,000 years or so ago, when agriculture was adopted, humans were rare.

The ultimate cause of human brain expansion thus remains unknown. Tool-making is one explanation. A more intriguing theory is that human brains are the equivalent of brightly coloured plumage in birds, permitting the sexes to show off to each other what good mates they would make. Yet another idea, the Machiavellian-intelligence hypothesis, is that big brains enable people to manipulate others to their own advantage—a trick that the invention of language would also assist. Nor need manipulation be malevolent. Collaboration is also a form of manipulation.

These ideas are not, of course, mutually exclusive. Any or all of them may be correct. Whether human beings are big-brained enough to decide between them and thus complete the missing “Just So” story remains to be seen.

This article appeared in the Science and technology section of the print edition under the headline “The history of big-headedness”

Conservation

Australia's coral barrier reef keeps dying and coming back

But can it do so again?

Print edition | Science and technology May 31st 2018

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THE Great Barrier Reef, which runs for 2,300km along the coast of Queensland, is one of the icons of environmentalism. Conservationists constantly worry that human activity, particularly greenhouse-gas-induced global warming, will harm or even destroy it. Such fears are not foolish, but they do reflect a view of the reef's permanence that is at variance with the truth. For, a mere 10,000 years ago, the coral-covered seabed that now forms the Great Barrier Reef was dry land—a fact lamented in the songs, tales and dances of indigenous people living along the coast, which speak of homelands being drowned by incoming waters.

The reality of the Great Barrier Reef's existence is that it is a movable feast. Reef-forming corals prefer shallow water so, as the world's sea levels have yo-yoed during the Ice Ages, the barrier reef has come and gone. The details of this have just been revealed in a paper published in *Nature Geoscience* by Jody Webster of the University of Sydney and her colleagues. The authors examined cores drilled through the reef in different places. They discovered, as the chart shows, that it has died and then been reborn five times during the past 30,000 years. Two early reefs were destroyed by exposure as sea levels fell. Three more recent ones were overwhelmed by water too deep for them to live in, and also smothered by sediment from the mainland. The current reef is therefore the sixth of the period.

The barrier reef's ability to resurrect itself is encouraging. But whether it could rise from the dead a sixth time is moot. The threat now is different. It is called bleaching and involves the tiny animals, known as polyps, which are the living part of a reef, ejecting their symbiotic algae. These algae provide much of a polyp's food, but also generate toxins if the temperature gets too high, in which case the polyp throws them out. That causes the coral to lose its colour.

Polyps can tolerate occasional bleaching, but if it goes on too long, then they die. In the short term, therefore, global warming really does look a serious threat to the reef. It would, no doubt, return if and when the sea temperature dropped again. But when that would be, who knows?

This article appeared in the Science and technology section of the print edition under the headline "A great survivor"

The sunk-cost fallacy

Another's wasted investment is as disturbing as one's own

Ball-game theory

Print edition | Science and technology May 31st 2018

THAT human beings often continue to pour money into bad projects because they have already invested in them and cannot bring themselves to lose that investment is well known. Indeed the sunk-cost fallacy, as this phenomenon is called, is frequently cited as an example of people failing to behave in the “rational” way that classical economics suggests they should.

Though the exact psychological underpinning of the sunk-cost fallacy is debated, it might reasonably be expected to apply only when the person displaying it also made the original investment. However a study published recently in *Psychological Science* by Christopher Olivola of Carnegie Melon University suggests this is not true. In making decisions, people may also take into account the sunk costs of others.

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Dr Olivola was led into his investigation by a thought experiment of the sort sometimes conducted by physicists. His imagined experimental subject had just received, as a present from a well-intentioned aunt, a gaudy and uncomfortable jumper. He asked himself whether the putative subject would be more likely to wear the jumper if he also knew that his aunt had made significant sacrifices to buy it, and he suspected that the answer would be “yes”.

Having experimented reflectively on himself, he decided to try something like it on other people. He recruited volunteers and posed them similar hypothetical questions, though not involving aunts.

In his first experiment he asked 602 people to imagine that they had obtained a front-row ticket to a basketball game but that a terrible storm on the day of the game meant travelling to watch it would be cold, slow and potentially hazardous. Participants were also told that it was too late to exchange the ticket or to give it to someone else. They were then asked to imagine either that they had obtained the ticket for themselves or that a friend had obtained it, but because of an unexpected work-related trip could not attend and had therefore given it to them. They were also asked to imagine either that they or their friend had obtained the ticket free, or had paid \$200 for it. Armed with all this information they were then asked whether they would go to see the game live or stay at home and watch it on television.

As sunk-cost theory predicts, those told they had paid for the ticket themselves opted to attend the match, rather than watch it on TV, more often than those told they had obtained it free. Intriguingly, though, this was also true of those told they had been given the ticket, if they were told as well that the ticket had originally cost money rather than being a freebie. Moreover, similar results obtained in other experiments Dr Olivola conducted, involving imaginary tennis-club memberships, movie-watching and chocolate cake.

Oooo! It's lovely!

A possible explanation for these results, and also for Dr Olivola's own intuitive response to the aunt problem, is that social signalling is involved. In all cases the gift was supposed to have come from a close social connection (either a friend or a relative), so part of the act of using it was to show appreciation for its receipt. The costlier the gift, the more appreciation a donor might expect to be demonstrated, which was consistent with what he found.

To double-check the role of social connection, however, he decided to conduct one final round of experiments. In these the putative gift was supposed to have come not from a bosom buddy but rather from a casual acquaintance or a stranger. To his surprise, the effect was often stronger with these people than it was with friends and relatives.

What is going on here is obscure. Perhaps exaggerated gratitude towards acquaintances and strangers is a way of turning them into friends. All told, however, Dr Olivola believes he has demonstrated that the sunk-cost phenomenon shapes human behaviour much more broadly than was previously thought. Yet more evidence, then, that *Homo sapiens* and *Homo economicus* are different species.

This article appeared in the Science and technology section of the print edition under the headline "Ball-game theory"

AIDS

HIV+ volunteers are bequeathing their organs to a new project*Studying the virus in every tissue is crucial to eliminating it***Print edition | Science and technology** May 31st 2018

MUCH of the medical research conducted on HIV, the virus that causes AIDS, looks at patients' blood. This is no surprise. Blood is both easy to collect and easy to preserve. But HIV is not confined to the bloodstreams of those infected by it. It is found in almost all of their bodily tissues. In the view of Davey Smith, a virologist at the University of California, San Diego (UCSD), focusing only on the metaphorical "trees" of the blood is therefore a mistake. It misses the "forest" of the other organs.

Inspired by similar programmes in cancer research, Dr Smith therefore set up, in July 2017, a project called "Last Gift". This seeks HIV-positive volunteers who are terminally ill for some other reason and asks them to bequeath their tissues for cryogenic preservation and subsequent study. So far, five people have signed up, two of whom have died. Dr Smith hopes for 20 more over the next four years.

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The crux of Last Gift's operation is speed, because HIV's genes and proteins start to degrade within four hours of a patient's death. An autopsy team is therefore always on call to attend a volunteer's deathbed, collect samples from his organs and bring them back to a laboratory at UCSD for cryogenic preservation. The team take specimens of brain, spinal cord, lungs, heart, kidneys, liver, spleen, muscle, bone marrow, adrenal glands, thyroid, lymph nodes, genital-tract tissues, foreskin and intestine.

That HIV can hide in such solid tissues has been known for years. It is a retrovirus, meaning that it integrates its genes into its host's DNA. Once integrated in this way it can remain dormant indefinitely. The resulting reservoirs are the main barrier to eradicating it from someone's system. Existing drugs control viral replication, but cannot affect dormant, integrated viral genes. If someone stops taking those drugs it requires only a small leak from one of the reservoirs to bring the infection roaring back. Dormancy, moreover, makes HIV invisible to the immune system. Understanding viral dormancy in solid tissues is thus important.

Even though they have only two sets of tissues to work with at the moment, Dr Smith and his colleagues have already made discoveries. They have, for example, recorded surprisingly high levels of live (as opposed to dormant) virus in the brain, the spleen and the liver. They have also documented disparities in the levels of live virus within and between these organs.

They are especially interested in epigenetic modifications of cells taken from their volunteers' organs. Such modifications, which serve to regulate the activity of genes, are chemical alterations of a cell's DNA and of the proteins in which that DNA is packed. The team hope to spot epigenetic patterns that will both give away those cells which are infected and help explain how HIV genes in a cell's nucleus are activated and deactivated.

Another area of specific concern is how HIV replicates in the gut. Most new particles of the virus are produced in immune-system cells called T-lymphocytes. And most of the human immune system resides in the intestines, where it deals with pathogens ingested by mouth that have not succumbed to the acidity of the stomach. Understanding what is going on in the intestines is thus crucial to understanding the way the infection sustains itself once it has become established.

The need for speed means Last Gift is, at the moment, necessarily confined to volunteers living in, or close to, San Diego. But Dr Smith is hopeful that his method will be replicated elsewhere. His team are already sharing data with researchers at the University of California, San Francisco, who might one day start their own version of the operation. And scientists from three other American universities, and also the National Institutes of Health, have expressed interest in partnerships. That is to be welcomed. Any true cure for HIV infection will involve flushing the virus out of its solid-tissue hidey-holes. Knowing what is really going on in those hidey-holes is therefore essential.

This article appeared in the Science and technology section of the print edition under the headline "Parthian shots"

Munching into orbit
A rocket that devours itself

A new way to launch small satellites

Print edition | Science and technology May 31st 2018

IT TAKES a lot of oomph to launch a satellite into space. Typically, the payload represents only about 5% of the mass of a rocket as it leaves the launch pad. The rocket's motors account for some of the rest, but the bulk of it consists of the propellants (the fuel and oxidant that react to produce the thrust required to reach orbit) and the gubbins needed to handle these propellants (tanks, pumps, valves, piping and the bodywork that contains them). The gubbins are not only expensive in themselves, but their mass also requires extra fuel to lift. Things would be more efficient if the gubbins could be dispensed with and a rocket designed that consists of only payload, motor and propellants.

This is exactly what those behind what they call the "autophage" rocket hope to achieve. This team, a group of researchers led by Patrick Harkness of Glasgow University, in Britain, and Vitaly Yemets of Oles Honchar Dnipro National University, in Ukraine, is designing a rocket that has a body made of a rigid cylinder of fuel and oxidant. At launch, the engine will sit at the base of this cylinder, but by the time the craft reaches orbit, it will have gobbled its way up towards the top, consuming the rocket's structure on the way. That will save on launch weight, and thus on fuel. And, as they report in the *Journal of Spacecraft and Rockets*, Dr Harkness and Dr Yemets have now carried out the first static test-firing of such a rocket's motor.

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Self-evidently, the design they propose requires both fuel and oxidant to be solid. Solid-fuelled rockets are common in military applications, such as intercontinental ballistic missiles, but are less frequently employed for launching satellites because their thrust is hard to regulate. Like firework rockets (themselves solid-fuelled), once the metaphorical blue touchpaper has been lit, the fuel burns as it will. Liquid-fuelled rockets are preferred as satellite launchers because their thrust can be tuned by changing the flow of propellant to the motor. That makes it easier to position a payload into orbit correctly. But Dr Harkness and Dr Yemets think that their self-consuming design can overcome this difficulty, too.

The fuel for the motor is a hollow cylinder made from polypropylene, a plastic hard and strong enough to form a rocket's outer casing. The middle of the cylinder is filled with a powdered mixture of ammonium perchlorate and ammonium nitrate, the oxidants. For their test firing, the researchers used a hydraulic ram to drive the cylinder into a preheated engine. Here, it made contact with a specially designed vaporisation surface, heated in order to turn both fuel and oxidants into gases and pierced by holes designed to collect the gases separately and channel them into a combustion chamber, where they mixed and burnt. To start the process, the vaporisation surface had to be warmed to its operating temperature by a gas burner (this would be done electrically in an operational model), but once the system was up and running, vaporisation and combustion became self sustaining. And, by varying the rate at which the propellant tube entered the engine, it was possible to control the amount of thrust developed.

A real rocket would, of course, have no ram to feed in the fuel. But Dr Harkness hopes Newton's laws of motion will deal with that. Though the prototype under test is not yet powerful enough to make this work properly, the idea is that the acceleration of the motor will push constantly against the inertia of the propellant cylinder, forcing the cylinder against the vaporisation surface and causing it to be consumed. That process, moreover, is capable of regulation by using some sort of throttle to slow the cylinder's feed-in speed, permitting control of the amount of thrust developed in a way not possible for a normal solid-fuelled rocket, in which the fuel burns *in situ*.

The autophage design Dr Harkness and Dr Yemets have come up with is not, in truth, likely to worry those who use large liquid-fuelled rockets to launch heavy satellites. The way rockets scale up means that freedom from gubbins is more valuable for small craft than big ones. But a small solid-fuel rocket fitted with an autophage engine might prove an ideal launcher for the growing number of small satellites being sent into space. Dr Harkness thinks such a vehicle could even be designed to launch an individual CubeSat, a type of satellite that has a volume of a litre and a maximum weight of 1.33kg.

At present, most CubeSats are taken up in batches alongside other payloads on big, liquid-fuelled rockets, and even Rocket Lab, a firm that has recently started offering dedicated CubeSat launches, uses liquid propulsion. A solid-fuel rocket would, though, be easier to handle than one full of liquid so, though a working autophage rocket is still several years from production, a launch vehicle that eats its way into space looks an attractive idea.

This article appeared in the Science and technology section of the print edition under the headline "Munching into orbit"

A dystopian prophecy

We and us

We and us

An eerie dystopian prophecy by a disillusioned Bolshevik

Yevgeny Zamyatin's parable looked forward to climate change and surveillance culture

Print edition | Books and arts May 31st 2018

We. By Yevgeny Zamyatin. Translated by Clarence Brown. Illustrated by Kit Russell. *The Folio Society*; 240 pages; £36.95.

IT IS the 26th century and humans have become “Numbers”—automatons who prioritise efficiency over freedom. They are watched by menacing drones, which hover above the OneState’s streets. The Bureau of Guardians eavesdrops on conversations to ensure productivity. Walls encase the metropolis, keeping at bay undocumented people and an unruly environment.

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One of these Numbers, an engineer named D-503, is building the INTEGRAL, a spaceship designed for galactic imperialism. He has been ordered to spread the OneState’s ideology to other planets, colonising resources and perhaps workers. But a dangerous condition festers within him. In a world of conformity and mechanical obedience, he develops an antiquated faculty that has long been thought extinct. Improbably, D-503 acquires a soul.

This plot may sound like something out of HBO’s “Westworld” or Margaret Atwood’s “The Handmaid’s Tale”, but it is much older. This is the world of “We”, a novel written by Yevgeny Zamyatin in 1921. Little-known today, Zamyatin influenced some of the most celebrated authors of the 20th century. George Orwell used “We” as a blueprint for “Nineteen Eighty-Four”. Aldous Huxley’s “Brave New World” follows a similar arc to Zamyatin’s story. Writers such as Anthony Burgess, Kurt Vonnegut and Ayn Rand were in his debt, as are more recent novels by Kazuo Ishiguro and Octavia Butler that take up his inquiry into utopia and its shortcomings.

But “We”—recently republished with an introduction by Ursula Le Guin—is more than an academic curiosity. Zamyatin’s bleak vision was forged in the ferment after the Russian revolution; but, with its prophetic reflections on climate change and surveillance culture, it is as relevant today as it was a century ago.

A hair’s breadth of time

“We” was written between the fall of the Russian empire and the rise of the Soviet Union. It both caricatures the autocracy of tsarism and anticipates Bolshevism’s descent into tyranny. The hero, D-503, resembles Zamyatin himself, looking back at life as if in a funhouse mirror.

As an engineering student in St Petersburg at the turn of the century, Zamyatin had thrown himself into revolutionary politics. He was first arrested in 1905, shortly after tsarist troops detained Leon Trotsky and other leaders of the Petersburg Soviet. Zamyatin had left socialist pamphlets under his bed and nitrocellulose, an explosive, on his windowsill (alongside his staples of sugar and salami). His Bolshevik comrades disposed of the evidence, saving him from execution, but he was sentenced to three months in solitary confinement for his activism.

In prison, Zamyatin began writing in code, hiding his insubordination in plain sight. Released in March of 1906 and exiled to his childhood village of Lebedian, he found Russia in a state of upheaval after the previous year’s revolution. The authorities were preoccupied, and he sneaked back into St Petersburg to continue his studies. A decade later, during the first world war, the Russian government sent Zamyatin—by then a respected engineer—to Newcastle in England. A German flotilla had blocked Russia’s access to the Baltic, but with the proper technology, a channel could be cut through the White Sea and Arctic Ocean. Zamyatin supervised the construction of icebreaking ships. Already an aspiring author, he satirised England in his off hours.

He returned to Russia in 1917, when the October revolution was under way. He arrived in tweeds, smoking a pipe; friends nicknamed him “the Englishman”. Zamyatin’s politics, however, remained fiercely independent. He had become disillusioned with the Bolsheviks, whom he accused of “stealing the honourable title of socialists and democrats”. In 1922 he was arrested again, after censors intercepted invitations to publish “We” in Berlin and Paris. Fortunately he had befriended Maxim Gorky, the godfather of Socialist Realist literature, who personally appealed to Stalin for leniency. Zamyatin was eventually permitted to leave for exile in Paris.

When Orwell reviewed “We” in 1946, the novel had been published in English, French and Czech, but it would not appear in the Soviet Union until 1988, during *glasnost*. In Orwell’s view, the book targets “the implied aims of industrial civilisation” as a whole, rather than any particular society. Still, he notes the stark resemblance between the OneState and Stalinism, with its cult of personality, rapid industrialisation and political repression. But to modern readers, other aspects of Zamyatin’s multifarious parable will seem more relevant.

Something has gone wrong with nature in the OneState. Storms have become stronger and more frequent, requiring the erection of an “Accumulator Tower” to prevent lightning damage. Plants are growing uncontrollably. To safeguard industrial production, a Green Wall is built to isolate the city from the countryside—“unknown and terrible” jungles filled with yellow-eyed beasts and irradiated creatures. To maintain the status quo until the INTEGRAL can explore new planets, Guardians gather intelligence with hidden microphones and “spy tubes”. A resistance movement arises among the Numbers, who communicate in code to avoid detection, like Zamyatin in his prison cell.

In some ways, the OneState looks less far-fetched now than it must originally have seemed. Lightning strikes in America could increase by 50% over the next century as a result of climate change. As sea levels rise, dikes have been proposed to protect low-lying cities, much like Zamyatin’s Green Wall. Spaceships like the INTEGRAL are no longer the stuff of science fiction. Elon Musk has built his SpaceX rocketry company on the dream of colonising Mars. Meanwhile, revelations about data collection and privacy have popularised encrypted messaging applications such as WhatsApp and Wickr.

These have spooked autocrats in Russia and elsewhere. In the run-up to Vladimir Putin’s latest inauguration, a Moscow court attempted to block Telegram, a similar service, after the company refused to provide access to private communications. The Kremlin may have been trying to stave off the sort of protests that caught it off guard in 2011. Zamyatin foresaw such surges of dissent, too. At the end of “We”, D-503 attends the annual re-election of the OneState’s Benefactor. For as long as anyone can remember, the vote has always been a unanimous “yes”. Not this time.

All this took the hundredth part of a second, a hair’s breadth of time. I saw a thousand hands shoot up—‘opposed’—and come down.

A revolution has begun. After his exile, though, Zamyatin’s own activism was confined to his articles, stories and plays. On his deathbed in 1937, as another terrible war loomed, he could not have known how prescient his novel would come to seem. Today reading “We” is like opening a time capsule, sent from the past with a plea for the present. To peer into Zamyatin’s future is to see modernity’s reflection gazing darkly back.

This article appeared in the Books and arts section of the print edition under the headline “We and us”

In the shadows of war

In “Warlight” Michael Ondaatje explores the murky aftermath of conflict

A beguiling new novel from the author of “The English Patient”

Print edition | Books and arts May 31st 2018

Warlight. By Michael Ondaatje. Knopf; 304 pages; \$26.95. Jonathan Cape; £16.99.

A CHARACTER in “Warlight”, Michael Ondaatje’s seventh novel, remarks that “Wars don’t end. They never remain in the past.” Not in England, anyway, where the mythology of the second world war has shaped and distorted the nation’s identity. A quarter-century ago, the Sri Lankan-born Canadian writer won global acclaim with “The English Patient”. With subtlety and grace, that novel clouded the legends of conflict in Egypt and Italy in doubts as dense as a Western Desert sandstorm. Now Mr Ondaatje, who spent his teenage years in London, returns to Britain’s war and its immediate aftermath.

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“Warlight” unfolds after 1945 in a bomb-ravaged city that, although victorious, “still felt wounded, unsure of itself”. Nathaniel, the narrator, is a junior British intelligence officer. From the vantage-point of the late 1950s, he looks back to Blitz-wrecked London and seeks to understand the “omissions and silences” that haunted his disrupted childhood. His father, an executive with Unilever, apparently left for a post in Singapore. Rose, his beloved but elusive mother, also vanished—to work undercover, the reader grasps by increments, in the “unknown and unspoken world” of the secret services.

Already shaped by this “family of disguises”, Nathaniel and his rebellious sister Rachel grow up in the care of louche informal guardians who make a murky living “on the edge of the law”. Known by nicknames such as “the Moth” and “the Pimlico Darter”, these memorable hustlers move their “shifting tents of spivery” through the hotels and bombsites of London in a time of “fewer rules, less order”. Nathaniel, and Mr Ondaatje, relish these underworld adventures.

A fledgling spy, Nathaniel learns to be “a caterpillar changing colour” to survive. Meanwhile the novel glances at the chaos of post-war Europe, where Rose operates in the shadows. Score-settling between armed factions, notably in Yugoslavia, persists despite Germany’s surrender, as “acts of war continued beyond public hearing”. Yet an “almost apocalyptic censorship”, which British intelligence abets, hides this (largely forgotten) bloodshed. There is, Nathaniel reflects, “so much left unburied at the end of a war”.

Mr Ondaatje illuminates this rubble-strewn landscape from angled sidelights. Lyrical but oblique, his prose matches a mood of mystery and suspicion that tantalises, if occasionally frustrates, the reader. With Nathaniel, he shows the child observer as a kind of secret agent, piecing together baffling fragments picked up from the hidden lives of adults. As more of Rose’s career in espionage becomes visible, along with the clandestine stunts of the Moth and his pals, “Warlight” also explores the English talent for camouflage and deceit: “the most remarkable theatrical performance of any European nation”.

Still, those arts of subterfuge that win a war may ruin the peace. A colleague of Rose’s in the twilit fellowship of spies reads a classified report about the state of continental Europe, which finds that “nothing has moved into the past and no wounds have healed with time”. That verdict, “Warlight” suggests, applies on the British side of the Channel.

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Ghosts in the machine

Retro photography is in vogue

As digital images proliferate, artists are making photos the slow, smelly way

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WILLIAM HENRY FOX TALBOT did not set out to be a photographer. He was inspired by friends who made exact drawings using a camera obscura—a dark room with a small hole in one side, which projects an inverted image of the outside view onto the opposite wall. An indifferent draughtsman, Talbot wished that by some trick the drawings could make themselves. By experimenting with chemical-coated paper, he found a way to do just that.

Louis Daguerre's images, imprinted on metal rather than paper, were sharper. Initially, as the two men competed in the mid-19th century, the daguerreotypes he pioneered were more popular. But Talbot's innovation led more directly to photography as it is understood today. Daguerreotypes were unique artefacts; Talbot's calotype was a paper negative that could yield any number of positive copies. Over time his idea led to the development of photography as a form of infinite reproduction.

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Fast forward to the digital age, and people take so many snaps that they clog smartphones and hard-drives. In response, photographers are revisiting techniques from the art's earliest days to produce, once again, arresting and unique pictures from slow, smelly processes.

At Photo London, a fair held in May, Hans Kraus junior, a New York-based dealer in antique photography, curated a display of works by Talbot, his modern disciples and followers of Daguerre. An English artist, Cornelia Parker, has revived Talbot's photogravure process: a sheet of metal is covered in light-sensitive chemicals, then objects are laid directly onto it. Exposure hardens the chemicals, except under the covered parts. Removing the objects and washing the sheet with an acid leaves a kind of engraved plate that can be used to make prints. Ms Parker did that with some glassware Talbot had also photographed, the glass emerging as diaphanous black on a white background.

What was once a retro hobby now accounts for a growing segment of the art-photography scene; Mr Kraus reckons the number of artists experimenting with such methods is rising at an "exponential" rate. Irene Kung, a Swiss artist, begins with the height of modern technology: a digital camera with exceptional resolution. That yields enormous electronic files with exquisite detail, which she manipulates in software and then uses to generate photo negatives. From there, the real fun begins.

Ms Kung and an expert printer lay the negative on a piece of paper coated in ferric, chloroplatinite and chloropalladite salts. The resulting print is bathed in a solution derived (she says with delight) from spinach. The outcome is razor-sharp black-and-white images—in Ms Kung's case, of landmarks such as the Brooklyn Bridge or La Scala opera house in Milan—against a ghostly black background. Each print takes a full day to make, and is slightly different from any other.

By contrast, Vera Lutter uses modern chemistry but the oldest of cameras. In the 1990s she turned the window of her apartment in New York into an eye, drilled a pinhole as a lens and used a huge piece of photographic paper as a kind of retina, creating a modern camera obscura. She thought her experiment would be short-lived, but the subsequent work proved popular. She often builds wooden cameras on-site, favouring industrial and architectural subjects (pictured), though at Photo London Mr Kraus exhibited a serene treescape she made in Cold Spring, New York, rendered eerie by the reversal of black and white.

What all these artists have in common is that, in today's world, their output hardly seems like photography at all. Ms Lutter trained in conceptual art in Munich. Ms Kung began as a painter. Ms Parker makes sculptures and installations; her technique results not in photographs but photograms (the name for images produced by contact between objects and paper). They did not set out to be photography pioneers. But then, neither did Talbot.

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Blood money

The rise and fall of Elizabeth Holmes, Silicon Valley's startup queen

The saga of Theranos highlights the danger of glorifying novice entrepreneurs

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Bad Blood: Secrets and Lies in a Silicon Valley Startup. By John Carreyrou. *Knopf*; 352 pages; \$27.95. *Picador*; £20.

A FEW years ago Elizabeth Holmes, boss of Theranos, dressed up as Queen Elizabeth I for the company's Halloween party. At the time she reigned over Silicon Valley's startup scene. In 2013-15 she raised around \$700m to fund her firm, which had supposedly developed a way to test blood with a single pinprick. Ms Holmes (pictured on next page) was hailed as the next Steve Jobs and the youngest female self-made billionaire in history. At its peak, Theranos claimed a private valuation of \$9bn.

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But the startup throne is precarious. "Bad Blood", an enjoyable book by John Carreyrou, an investigative journalist, charts Ms Holmes's rise and dramatic fall. It was Mr Carreyrou who first raised questions about Theranos, suggesting in the *Wall Street Journal* in 2015 that its testing technique yielded unreliable results. Earlier this year Ms Holmes settled civil charges brought by America's financial regulator, the Securities and Exchange Commission (SEC), of defrauding investors. A criminal inquiry is believed to be in train.

What went wrong? Mr Carreyrou suggests Ms Holmes cared less for patients than about advancing her own interests and personal brand. According to the SEC, she and Sunny Balwani, her deputy (and, says Mr Carreyrou, secretly her boyfriend), misled investors and other corporations about the state of Theranos's technology and sales. These falsehoods lured new partners. For example, Safeway, a grocery chain, and Walgreens, a pharmacy giant, respectively stumped up around \$400m and \$140m to collaborate with Theranos.

Ms Holmes is not the only one implicated in the debacle. It highlights the Valley's propensity to glorify lone, inexperienced entrepreneurs who promise to reshape an industry—and enrich those who spot them early. Ms Holmes's partners and investors desperately wanted to believe that a young woman could get to the top. Her face was plastered on magazine covers, even as she refused to reveal the details of her firm's technology. Too little scrutiny was offered by the older men on her board, who eventually included Henry Kissinger and George Shultz (both former secretaries of state). Mr Carreyrou says the board had been set to sack Ms Holmes in 2008, but she wangled another chance.

In reality, Theranos's tests were never as sound as the firm claimed. Instead of admitting that the technology was not ready to deploy, Theranos "hacked" a solution, using modified traditional devices from other manufacturers. Perhaps Ms Holmes was adhering to the Valley's spirit of disruption by improvising a fix. That might work for software and internet firms. In the health-care business, the stakes are higher.

The book is especially engaging on Ms Holmes's battle with the author himself. She tried to squelch Mr Carreyrou's initial exposé, going so far as to recruit Rupert Murdoch, the *Journal's* proprietor, as an investor. (He put \$125m into Theranos in 2015, a stake that is now worthless.) Mr Carreyrou is weaker on Ms Holmes's psychology. He never got close enough to her or her confidants to illuminate her motives.

One striking oversight is an examination of her company's origins. Ms Holmes apparently wrote a patent application for a medical device after a year at Stanford University and a summer internship in Singapore. Mr Carreyrou recounts this creation myth without comment. Still, the story and its telling are not over yet. A Hollywood film starring Jennifer Lawrence as Ms Holmes is in the works.

This article appeared in the Books and arts section of the print edition under the headline "Blood money"

Better to have loved

Dispatches from the border between madness and desire

Tales of love and obsession from a psychotherapist's case-book

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The Incurable Romantic. By Frank Tallis. *Little, Brown*; 304 pages; £18.99. To be published in America by Basic Books in September; \$27.

MEGAN was a woman in her mid-40s, with neat, bobbed brown hair. She had been married to an accountant for 20 years. They had no children, and nothing out of the ordinary had ever happened to them—until she developed a tricky tooth problem and had to visit a dentist who specialised in complicated extractions. He operated on her, and when she awoke from the anaesthetic, Megan fell instantly and passionately in love with him.

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She phoned him, wrote to him and waited outside his office and home. Partly to escape the harassment, he moved to Dubai, but her feelings did not waver. She kept a box covered with white cloth, containing things he had touched, such as his business card and an information leaflet about dental health, and would sit next to it with her eyes closed. "It was as though she was—I don't know, praying," Philip, Megan's husband, told Frank Tallis, her psychotherapist. When Mr Tallis asked if Philip objected to this ritual, he recoiled. "I couldn't force her to throw those things away. It would be crushing," he replied. Mr Tallis was touched. "Ordinary, non-pathological love", he observes, "can also be very extraordinary."

"The Incurable Romantic" tells the stories of a dozen of Mr Tallis's patients. Storytelling, he explains, is what really attracted him to psychotherapy. He likes helping people, and the science interests him, but psychotherapy, he says, is "as much about narrative as it is about science or compassion...People are living story books. Talking cures open the covers."

Deranged love is a particularly fertile zone for a storyteller, because—though everybody wants love and nobody wants to be mad—being in love is itself a kind of madness, so the border between sane and insane passion is murky. "The merest spark of sexual attraction can cause a fire that has the potential to consume us. We all share this dormant propensity, which explains why examples of its full expression in the clinic are so arresting and alarming."

Mr Tallis is a gifted storyteller. He practises this art mostly in a series of detective novels, in which a young Viennese psychotherapist and disciple of Freud helps to solve murder cases. In "The Incurable Romantic" he applies a novelist's skill to his clinical material. He asked Mavis, a dowdy, depressed, elderly widow, what she most missed about her husband: "She looked at me through the smudged lenses of her spectacles and answered without hesitation, 'The sex.'" The book is rich not just in memorable, strange characters but in fine, perceptive lines. Of Mavis, Mr Tallis writes: "The numbness of depression is simply pain in another form—like water becoming ice when the temperature drops."

Each case gives him the opportunity to discuss a theme related to his subject. These include the concept of romantic passion, which came to Europe from Arab poetry through the Islamic conquest of Spain; love as the central purpose of life—and thus as a way of staving off intimations of mortality; the intimate relationship between religion and psychosis; and paedophilia. He is unfailingly interesting, except when he writes like a psychotherapist. "Freud", he notes, "employed the term repetition-compulsion to describe an innate tendency to reproduce early traumas in the context of current relationships."

There are few such passages. The psychotherapist is held in check, but so is the storyteller. Mr Tallis rarely tries to force his characters' complexity into neat diagnoses, and he does not attempt a novelist's resolution of their tales. Most of them drift out of his life, leaving both shrink and reader in ignorance of their fates. Yet this is not unsatisfying: Mr Tallis's characters remain sharply, painfully real, their stories as inconclusive, messy and fascinating as life.

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Output, prices and jobs

Output, prices and jobs

Print edition | Economic and financial indicators May 31st 2018

Central banks

Print edition | Economic and financial indicators May 31st 2018

Since the 2007-08 financial crisis, big central banks have carried out asset-purchase programmes to stimulate economic growth and reduce borrowing costs. Government-bond yields have fallen as a result. More than \$9trn of global sovereign bonds were trading at negative rates last summer, according to the OECD. The Bank of Japan now holds over 40% of the country's government debt. Monetary policy has diverged between America and Europe. Whereas the Federal Reserve started to reduce the size of its balance-sheet last year, the European Central Bank intends to continue asset purchases until inflation is close to the target of just under 2%.

Trade, exchange rates, budget balances and interest rates

Print edition | Economic and financial indicators May 31st 2018

The Economist commodity-price index

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Markets

Print edition | Economic and financial indicators May 31st 2018

Lini Puthussery

Treating a mystery

Treating a mystery disease

Lini Puthussery died of the Nipah virus on May 21st

The conscientious nurse from Kerala, in India, was 28

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WHEN the patient was admitted at the end of April, Lini Puthussery was starting her night shift. He was a young man of 26, bearded, and with his hair fashionably swept back from his forehead. His name was Mohamed Sadiq, from Changaroth panchayat. The symptoms were fever and difficulty breathing, which struck her as unusual, even then. But her job was to care for him, so she gave him fluids and paracetamol, changed his sweaty clothes and sheets, and sat up with him all night long.

She had been working seven months on contract at the Perambra Taluk hospital, in the countryside outside Kozhikode (once Calicut). The place had been upgraded from a community health centre a decade ago, but was still short of doctors and specialists. Difficult cases had to go to Kozhikode, 50km away. Not many people filled the beds, but every day 1,000 or so queued at the outpatient counter or at the pharmacy. The noisy crowd still milled there when she arrived for night shifts.

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The journey from her home village of Chempanoda by bus was slow but beautiful, across fresh-flowing rivers, through groves of areca-nut and rubber trees and past wooded hills. The Western Ghats towered to the east and, in the evenings, took the light of the sun. The place was not quite paradise, because from time to time farmers gathered outside the village office to protest when their land was misclassified as protected forest and their claims to ownership were rebuffed. In 2017 a farmer hanged himself there. Yet apart from those things it was a quiet, green place, with her parents, aunts and cousins all close by.

As a daily-wage nurse, she worked flexible hours. That suited her, because she had her two small boys, five-year-old Rithul and two-year-old Sidharth, to look after. Her husband, Sajeesh, had been away for five years, working as an accountant for a small firm in Bahrain. He returned a few times a year, and they spoke every day on the phone. Many Keralans worked in the Gulf. It was more lucrative than staying at home, and meant in Lini's case that they could afford their one-storey brick house, with a small terraced garden, looking over open pasture. They took proud pictures of themselves outside it.

The book of notes

Sajeesh had tried to get a family visa, but Lini hadn't wanted to go unless she could get a nursing job there first. She loved her work too much. Nonetheless she kept dreaming of the Gulf as a magical place, telling Rithul all the time that if he studied well, he could go there like his father. And she would not have minded more money. In her spare time she was busy improving her knowledge, to be eligible for a permanent government nursing job. She had filled a large black hard-bound book with neatly underlined entries in English, rather than her native Malayalam, on diseases and their treatments. Her notes, however, did not seem to cover what Sadiq had.

She and her colleagues called it "the mystery disease". In a few days he had died of it. She cried a lot, not out of fear, but because she had taken such complete care of him. The story came out slowly. Sadiq had gone to clean a disused well with his elder brother Saliah. Their parents had just bought a new house and the brothers, who also worked in the Gulf, had come back to help. The well was deep, and as they went down into it they disturbed so many bats that they gave up the job in horror.

Those bats were the clue. They had either infected the water, or had bitten and infected the mangoes that grew round it. On May 21st officials from the Health Department, the Forestry Department, the Regional Diagnostic Laboratory and the Animal Husbandry Department caught a bat for testing and sealed the well with nets. By then, Saliah and his aunt Mariamma were dead too: not of Japanese encephalitis or some strain of malaria, as the doctors kept guessing, but (it turned out) of Nipah virus, which had appeared only once before in India. It was fatal in 70% of cases.

For the virus to spread between humans, contact had to be intensive and direct. That was exactly what Lini, with her tireless nursing, had provided. On May 16th she felt feverish, but insisted to Sajeesh that she would go to work because "lots of patients are there", as always. When she grew worse, she checked herself into a hospital in Kozhikode and asked to be quarantined. Sajeesh flew back from Bahrain to find her barely conscious. She left him a note, partly in Malayalam and partly in English, which he folded away inside the cover of his phone.

Sajeeshetta, am almost on the way. I don't think I will be able to see you again. Sorry. Please take good care of our children. Poor Kunju [Sidharth], please take him to the Gulf with you. Don't stay single like our father. Plz. With lots of love, Umma

By the end of May the outbreak was not yet contained. At the hospital in Perambra, Lini's colleagues now wore protective coats, gloves and masks. Their patients, however, had fled from the waiting rooms and even from their

beds. In Changaroth panchayat half the houses were left empty. On social media, rumours still swirled. Nipah had not spread from bats. It had come in with migrants. Perhaps—some said—it had even come in from Lini's wonderland of possibility and opportunity, across the Arabian Sea.

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