The Economist

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The Russians who will take on Putin

China's brainy new team

How to teach gifted children

When astronomers write haiku

Epic ail

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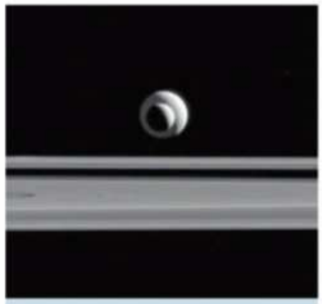

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The world this week

Politics

Xi Jinping tightened his grip on power in **China** by promoting allies to top government jobs. Wang Qishan, who has led Mr Xi's crackdown on corruption, was made vice-president, a hitherto ceremonial position that may now be beefed up to oversee relations with America. Liu He, Mr Xi's economic adviser, was named as one of four deputy prime ministers and given the brief of supervising the People's Bank of China and other regulatory bodies. The PBOC, in turn, will be headed by Yi Gang, another new appointment, who, like Mr Liu, has studied in America.

China's aircraft-carrier entered the **Taiwan Strait** again. This was probably as a show of defiance to America, which has angered Beijing by passing a law that encourages contacts between American and Taiwanese officials. Taiwanese ships tracked the vessel.

The diplomatic effort to ease tensions on the Korean peninsula continued apace. Moon Jae-in, the president of **South Korea**, held open the possibility of three-way talks with America and **North Korea** if a summit planned for April between the South and North is productive. Meanwhile, the Pentagon announced that South Korea and the United States will resume joint military exercises that were postponed during the Winter Olympics.

Myanmar's president, Htin Kyaw, resigned with immediate effect. Rumours have swirled for months that he is in poor health. Htin Kyaw was the country's first civilian president since the early 1960s and is a confidant of Aung San Suu Kyi, who is the de facto head of Myanmar's government, even if the president is constitutionally in charge.

A suicide-bomber targeted crowds at a shrine celebrating the Persian new year in Kabul, **Afghanistan's** capital, killing at least 31 people.

Out of captivity

Most of the 110 **Nigerian** schoolgirls who were recently abducted by Boko Haram in the town of Dapchi were freed. The government insists that it did not pay a ransom for their return. The jihadists warned the girls' parents not to put them back in school.

Dozens of **African** leaders signed an ambitious free-trade deal. All 55 members of the African Union negotiated the agreement, but 11 did not sign, including Nigeria, the continent's largest economy.

For the first time **Israel** admitted to bombing a suspected nuclear reactor in **Syria** in 2007. Binyamin Netanyahu, the prime minister, said the attack showed that Israel will prevent its enemies from developing nuclear weapons.

Turkey captured the northern Syrian region of Afrin after a two-month battle with **Kurdish** fighters. Meanwhile, Syrian government forces took back more territory in besieged Eastern Ghouta, the last rebel stronghold near Damascus.

He's gone

Pedro Pablo Kuczynski resigned as **Peru's** president after 20 months in office. The country's congress was threatening to impeach him based on evidence that a company he founded had worked with Odebrecht, a Brazilian construction company that bribed officials across Latin America. He had served as finance minister and prime minister in an earlier government that awarded contracts to Odebrecht. Mr Kuczynski will be succeeded by the vice-president, Martín Vizcarra.

Tens of thousands of **Brazilians** protested against the execution-style murder of Marielle Franco, a left-wing city councillor in Rio de Janeiro. Ms Franco, who was black and gay, had accused the police of abuses and was a critic of the decision by Brazil's government to put the army in charge of security in the state of Rio.

America toughened sanctions against **Venezuela's** authoritarian regime. It added four current and former officials to the list of 49 whose American assets are frozen. Donald Trump signed an executive order barring Americans from buying or selling the petro, a crypto-currency issued by Venezuela's government. Only the most risk-hungry investors were buying it in the first place.

Cruel and unusual punishment

The sacking of **Andrew McCabe** at the FBI, where he was deputy director until January, was seen by many as an attempt to discredit him as a witness in Robert Mueller's investigation into Russian meddling. Mr McCabe was on paid leave and was fired for an alleged lack of "candour" in dealings with the media. He had been the target of much of Donald Trump's invective. Last December the president tweeted that Mr McCabe was "racing the clock" to retire with a full pension. He was sacked 26 hours before he was due to receive that pension.

Congress hurried yet again to pass a bill that would avoid a government **shutdown**.

The suspect behind several explosive devices, mostly contained in packages, that left two men dead and injured several other people in or near **Austin**, Texas, blew himself up during a police chase. Police are investigating the motive.

Quelle surprise

Vladimir Putin easily won a fourth term as **Russia's** president, taking more than 77% of the vote. However, there were widespread allegations of stuffed ballot-boxes, and the main opposition candidate, Alexei Navalny, was not allowed to stand. Despite this, Mr Putin was congratulated by Donald Trump and by Jean-Claude Juncker, president of the European Commission.

Nicolas Sarkozy, a former president of **France**, was placed under formal investigation as part of a probe into allegations that he received millions of euros in illegal election funding from the regime of the late Libyan dictator, Muammar Qaddafi.

In **Slovakia**, the government headed by Robert Fico collapsed in the face of widespread protests over the murder of a journalist who was investigating government corruption.

British and European Union negotiators approved the details of the **Brexit** transition proposals that were agreed in December. Britain will formally leave the EU in March 2019, but be bound by its regulations until the end of 2020. During the transition trade deals can be negotiated with other countries. But the Irish border question remains unresolved; the "backstop" solution that keeps Northern Ireland in the EU customs union is in the document, for now. In Britain Leavers said the deal betrayed the fishing industry, and threw fish into the River Thames outside Parliament in protest.

Business

Facebook was embroiled in a crisis over its privacy policies, after it emerged that data on 50m users had been harvested from an app for psychological tests and then shared with **Cambridge Analytica**, a political data-mining firm. Cambridge Analytica allegedly used the data to create voter profiles during the 2016 presidential election in America, enabling the Trump campaign to craft messages to potential supporters. Facebook banned the app in 2015. It said it had been "deceived" and promised to tighten up its rules on data. Politicians in America and Britain called for tighter regulation of social media. Facebook's share price swooned.

Market capitalisation
$trn

Source: Thomson Reuters

Investors worried about **Alphabet**, the parent company of Google, being caught up in any regulatory blowback about data privacy also sent its share price down. That helped **Amazon**, which has seen its share price rise by a third since the start of the year, pass Alphabet to become the world's second-most-valuable listed company. Amazon is worth $770bn (still some way behind Apple, at $870bn).

The European Commission proposed levying a 3% tax on revenues of big **technology companies**, such as Google and Facebook, that operate in Europe, but have "little or no physical presence" in the region. The proposal is an interim measure and requires unanimity among the EU's member states to be adopted.

Amid strong demand, **Dropbox** raised the price of its IPO on the NASDAQ exchange to between $18 and $20 a share, from the $16 to $18 it had initially announced.

Blockbuster trial

The district court in Washington, DC that will decide the fate of **AT&T's** proposed $85bn takeover of **Time Warner** started proceedings in the case. AT&T argues that Facebook, Amazon, Apple, Netflix and Google (the FAANGS) have completely transformed the relationship between content providers and distributors, and that it needs to buy Time Warner and its stable of broadcast programming to stay in the game. The Justice Department is challenging the deal on antitrust grounds, an unusual move given that the merger is a vertical one, combining two businesses that do not compete directly.

Salesforce, the world's fourth-largest software company, made its biggest acquisition to date by agreeing to buy **MuleSoft** in a deal valued at $6.5bn. MuleSoft provides a platform for businesses to integrate data from the cloud as well as from in-house servers.

The **Federal Reserve** raised the range for its benchmark interest rate by a quarter of a percentage point, to between 1.5% and 1.75%. The Fed signalled that rates may increase more than expected over the medium term because of the strengthening economy, but stuck to its expectations of two more rate rises this year.

Britain's inflation rate fell sharply, to 2.7%, but wages grew by 2.6%, the fastest pace in nearly two-and-a-half years.

Lloyd's reported an annual pre-tax loss of £2bn ($2.6bn), its first since 2011. Lloyds, an insurance market based in London, was hit by £4.5bn in claims related to natural disasters in 2017, including the worst hurricane season in years, earthquakes in Mexico and wildfires in California.

A tragic first

A **driverless car** being tested by Uber killed a **pedestrian** in Tempe, Arizona. It is not the first fatal collision involving autonomous cars, but it is the first accident resulting in the death of a pedestrian. Police and federal safety agencies launched investigations, and Uber suspended all driverless testing. Critics raised concerns that safety has been compromised in the rush to get autonomous vehicles on the road. Many American states allow testing but require a person to be in the car, as happened in this instance, in the event that anything goes wrong.

Ivan Glasenberg, the boss of Glencore, said that Western carmakers were falling behind China in stockpiling supplies of **cobalt**, one of the key elements in the batteries that power electric cars. Glencore has signed a contract to provide a Chinese firm with a third of its cobalt output over the next three years. Mr Glasenberg suggested he was prepared to sell Glencore's cobalt mines to China if the price was right, and warned that China would use the material to boost its own electric-vehicle industry.

Let us pay

The Church of England decided to give parishioners the choice of making **contactless payments**. Faster ways of paying for events like weddings and christenings may appeal to younger people, who tend to be less keen on cash. But offerings in the aisles have yet to move with the times. A collection plate passed among worshippers is still quicker than a debit card.

For other economic data and news see Indicators section


THE WIDEST
RANGE OF PLUG-IN
ELECTRIFIED VEHICLES.
768 SBG
643 DEG
980 MCP
382 HSD
iPERFORMANCE


The Ultimate
Driving Machine


Josef Höger, detail from "View from garden towards the ruins and Liechtenstein Castle at Mödling," 1844
© LIECHTENSTEIN. The Princely Collections, Vaduz–Vienna
VALUES WORTH SHARING
"Our family invests for the long-term – since 1136."
H.S.H. Prince Philipp von und zu Liechtenstein, LGT Chairman since 1990
LGT
Private Banking
lgt.com/values

Epic fail

The social-media giant faces a reputational crisis. Here is how it and the industry should respond

LAST year the idea took hold that Mark Zuckerberg might run for president in 2020 and seek to lead the world's most powerful country. Today, Facebook's founder is fighting to show that he is capable of leading the world's eighth-biggest listed company or that any of its 2.1bn users should trust it.

News that Cambridge Analytica (CA), a firm linked to President Donald Trump's 2016 campaign, got data on 50m Facebook users in dubious, possibly illegal, ways has lit a firestorm (see United States section). Mr Zuckerberg took five days to reply and, when he did, he conceded that Facebook had let its users down in the past but seemed not to have grasped that its business faces a wider crisis of confidence. After months of talk about propaganda and fake news, politicians in Europe and, increasingly, America see Facebook as out of control and in denial. Congress wants him to testify. Expect a roasting.

Since the news, spooked investors have wiped 9% off Facebook's shares. Consumers are belatedly waking up to the dangers of handing over data to tech giants that are run like black boxes. Already, according to the Pew Research Centre, a think-tank, a majority of Americans say they distrust social-media firms. Mr Zuckerberg and his industry need to change, fast.

The addiction game

Facebook's business relies on three elements: keeping users glued to their screens, collecting data about their behaviour and convincing advertisers to pay billions of dollars to reach them with targeted ads. The firm has an incentive to promote material that grabs attention and to sell ads to anyone. Its culture melds a ruthless pursuit of profit with a Panglossian and narcissistic belief in its own virtue. Mr Zuckerberg controls the firm's voting rights. Clearly, he gets too little criticism.

In the latest fiasco, it emerged that in 2013 an academic in Britain built a questionnaire app for Facebook users, which 270,000 people answered. They in turn had 50m Facebook friends. Data on all these people then ended up with CA. (Full disclosure: *The Economist* once used CA for a market-research project.) Facebook says that it could not happen again and that the academic and CA broke its rules; both deny doing anything wrong. Regulators in Europe and America are investigating. Facebook knew of the problem in 2015, but it did not alert individual users. Although nobody knows how much CA benefited Mr Trump's campaign, the fuss has been amplified by the left's disbelief that he could have won the election fairly.

But that does not give Facebook a defence. The episode fits an established pattern of sloppiness towards privacy, tolerance of inaccuracy and reluctance to admit mistakes. In early 2017 Mr Zuckerberg dismissed the idea that fake news had influenced the election as "pretty crazy". In September Facebook said Kremlin-linked firms had spent a mere $100,000 to buy 3,000 adverts on its platform, failing at first to mention that 150m users had seen free posts by Russian operatives. It has also repeatedly misled advertisers about its user statistics.

Facebook is not about to be banned or put out of business, but the chances of a regulatory backlash are growing. Europe is inflicting punishment by a thousand cuts, from digital taxes to antitrust cases. And distrustful users are switching off. The American customer base of Facebook's core social network has stagnated since June 2017. Its share of America's digital advertising market is forecast to dip this year for the first time. The network effect that made Facebook ever more attractive to new members as it grew could work in reverse if it starts to shrink. Facebook is worth $493bn, but only has $14bn of physical assets. Its value is intangible—and, potentially, ephemeral.

If Mr Zuckerberg wants to do right by the public and his firm, he must rebuild trust. So far he has promised to audit some apps, restrict developers' access to data still further, and help people control which apps have access to their data.

That doesn't go nearly far enough. Facebook needs a full, independent examination of its approach to content, privacy and data, including its role in the 2016 election and the Brexit referendum. This should be made public. Each year Facebook should publish a report on its conduct that sets out everything from the prevalence of fake news to privacy breaches.

Next, Facebook and other tech firms need to open up to outsiders, safely and methodically. They should create an industry ombudsman—call it the Data Rights Board. Part of its job would be to set and enforce the rules by which accredited independent researchers look inside platforms without threatening users' privacy. Software is being developed with this in mind (see Science section). The likes of Facebook raise big questions. How does micro-targeting skew political campaigns? What biases infect facial-recognition algorithms? Better they be answered with evidence instead of outrage.

The board or something like it could also act as a referee for complaints, and police voluntary data-protection protocols. Facebook, for example, is planning to comply worldwide with some of the measures contained in a new European law, called the General Data Protection Regulation. Among other things, this will give users more power to opt out of being tracked online and to stop their information being shared with third parties. Adherence to such rules needs to be closely monitored.

Thumbs down

Tech has experience of acting collectively to solve problems. Standards on hardware and software, and the naming of internet domains, are agreed on jointly. Facebook's rivals may be wary but, if the industry does not come up with a joint solution, a government clampdown will become inevitable.

Facebook seems to think it only needs to tweak its approach. In fact it, and other firms that hoover up consumer data, should assume that their entire business model is at risk. As users become better informed, the alchemy of taking their data without paying and manipulating them for profit may die. Firms may need to compensate people for their data or let them pay to use platforms ad-free. Profits won't come as easily, but the alternative is stark. If Facebook ends up as a regulated utility with its returns on capital capped, its earnings may drop by 80%. How would you like that, Mr Zuckerberg? ■

Egypt's election

No choice

The inevitable winner of Egypt's farcical election should at least obey the constitution

THE election in Egypt, which begins on March 26th, will have two candidates. One is Abdel-Fattah al-Sisi, the president, an ex-military man who seized power in a coup in 2013. The other is Moussa Mustafa Moussa, whose party fawningly supports Mr Sisi and who refuses to take part in a debate with the president because that would be disrespectful (see Middle East & Africa section). The election, in other words, is a farce.

Why, then, should Egyptians bother to vote? Mr Sisi's big claim is that he has restored order. In 2011 mass protests led to the overthrow of Hosni Mubarak, a dreary despot. The next year Egyptians elected Muhammad Morsi of the Muslim Brotherhood, who tried to grab dictatorial powers and put his Islamist chums in charge of practically everything. He failed only because then-General Sisi toppled him. All this upheaval sent investors and tourists fleeing. Mr Sisi, who won an election in 2014, deserves credit for taking painful steps to stabilise the economy, such as cutting subsidies and devaluing the Egyptian pound. Without his firm hand, his supporters say, Egypt might have turned out like war-torn Iraq, Syria or Libya.

The fact that some other Arab countries are doing worse does not mean Mr Sisi is doing a good job, however. He oversaw the massacre of hundreds of Mr Morsi's supporters, and the jailing of tens of thousands of dissidents. Serious candidates who wanted to run against him were arrested or bullied into dropping out. Those journalists who have not been locked up are barred from asking Egyptians basic questions, such as "Who will you vote for?"

Freedom will follow prosperity, says the president. But he is unlikely to bring much of either by the time he is mandated to leave office in 2022. Only after blowing through tens of billions of dollars of aid from the Gulf did Mr Sisi pursue economic reforms—and then under pressure from the IMF, which bailed Egypt out in 2016. He is still throwing money at wasteful megaprojects, such as a dubious new capital in the desert, while Egypt's schools and hospitals crumble. The army is muscling into even more areas of the economy, crowding out private firms. Mr Sisi's vow to cut red tape has come to little.

As the largest Arab state, Egypt matters. That is why the West has lavished alms and arms on it, and overlooked its leaders' abuses. But donors' billions have not bought stability. Islamic State continues to attack churches and mosques and behead civilians in Sinai. A third of young Egyptians have no jobs. The police and security services routinely torture the innocent. This is a recipe for more upheaval one day in the future.

Not another Mubarak

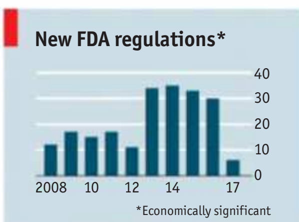
Egyptian voters deserve a real choice. Alas, they will not get one. (And indeed, many are so fed up with turmoil that they say they prefer the predictable rule of a strongman to the messiness of democracy.) Given that Mr Sisi is sure to win, there are several things he can do to ease the tensions that threaten to rip Egypt apart. He could order the army to put more effort into fighting terrorists and less into dodgy money-making. He could help non-crony businesses grow and hire by tackling corruption and red tape. The IMF and other donors should twist his arm to pursue such reforms.

Most important, Mr Sisi should overrule his most sycophantic supporters, who want to amend the constitution to let him run for a third, fourth or fifth term. Perpetual dictators bring stagnation and repression, not peace. Consider Mr Mubarak's 30-year reign—and the way it ended. Egypt needs a system that allows the transfer of power from one leader to the next without violence. The constitution lays one out. Mr Sisi should obey it. ■

The FDA's new course

Faster Drug Approvals

America's drug regulator is focused on speeding medicines to market. Good



REGULATORS can be both a help and a hindrance to the medical industry. A strong regulator increases confidence in drugs and devices, reassuring payers and patients alike. That explains why the Chinese drugs regulator recently adopted tougher standards. Yet rules can also impose too great a burden on firms, slowing innovation and reducing competition.

The head of America's Food and Drug Administration (FDA), Scott Gottlieb, has spent his first year in office tilting the balance away from rulemaking and towards efficiency. Some criticise Mr Gottlieb, who once worked in the industry, for still being its accomplice. Instead, he should be applauded. Nobody expects the FDA to solve America's messed-up health-care system, but its goal—of making it cheaper and easier for promising drugs to reach patients—is a step in the right direction (see Business section).

One thing Mr Gottlieb has been doing less of is issuing new regulations, which have dipped to a two-decade low. Instead, he has concentrated on two broad areas that will help the development of therapies and medicines. The first is to adapt the FDA to new technologies. There is a clinical revolution in such areas as gene therapy and printed organs. The FDA is keen to harness the potential of new technologies, whether that ▸▸

means using information from wearables in drug trials or enabling faster approval for new digital therapeutics.

The second focus has been on getting more drugs to market. The agency has approved a record number of generic drugs in the past year. By increasing the amount of competition, the idea is to bring the price of copycat drugs down. The profits of Indian generics firms, which have been making hay in the American market, are expected to suffer as a result.

Under Mr Gottlieb, the FDA is also doing its best to limit the extraordinary burden of introducing new drugs. The average cost of bringing a new medicine to market has jumped to $2bn, up from $1.2bn in 2010. After repeated expensive failures, many firms have cut funding for treatments for neurodegenerative diseases such as Alzheimer's.

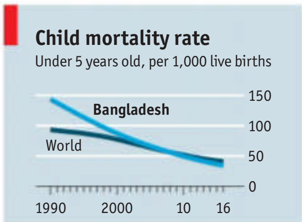
In response, the FDA wants to find ways to accelerate clinical trials. It is also looking at lowering the standard of efficacy, though not safety, which is required to approve certain treatments. Instead of having to demonstrate that long-term outcomes, such as cognitive function for dementia, are improved, a drugmaker might have to show only an improvement in a biological proxy for the disease, such as the presence of toxic proteins in the brain. This approach is already in place for cancer drugs. Its wider adoption ought to encourage innovation.

Inevitably, accelerating the path to market for pharma firms involves a trade-off. It may well be better to give people the option of a treatment in five years whose efficacy is known with 80% certainty than to wait 20 years for one with 99% certainty. But the shift increases the risk that money will be spent on new drugs that end up being no more effective than existing ones. This risk is particularly high in America, where the idea of paying for medicines on the basis of their actual performance is seen as an affront to patient choice. To get the benefit of faster innovation while minimising the risk of unnecessary spending, that attitude has to change. The FDA is doing its bit to speed innovation. But buyers of drugs need to do more to tie payments to health outcomes. The reality of paying too much for any new medical technology that does not work well is that there is less to spend on the things that do. ■

Sanitation and hygiene

Now wash your hands

Lessons from a poor country about how to see off disease



FOR adventurous travellers, it is merely an embarrassing nuisance. But among poor people diarrhoea is a killer. As many as half a million children are thought to die every year from enteric diseases, including cholera and dysentery. Repeated infections also weaken them, laying them open to attack from other killers such as pneumonia. Diarrhoea can even change a population's appearance. One reason Indian children are shorter than sub-Saharan African children from families of similar means is that they fall sick more often.

So it is delightful to report that one of Asia's poorest countries, Bangladesh, is making huge progress against this scourge (see Asia section). In one part of the country with particularly good data, deaths from diarrhoea and other enteric diseases have fallen by 90% in the past two decades. Along with a far-reaching vaccination programme and steady economic growth, that has helped drive down the number of childhood deaths. In 1990 the under-five death rate in Bangladesh was 54% higher than the world average. Now it is 16% lower.

In a country with more than 160m inhabitants, this represents a vast decline in human misery. And Bangladesh's success holds lessons for other poor countries that are trying to beat back disease. The first is that cheap, simple, imperfect solutions are often good enough.

In an ideal world, with limitless cash and universally good governance, everybody would drink chlorinated water out of taps and flush their sewage through pipes into treatment plants. In the real world, however, you can go a long way with half-measures. Bangladeshi villages are studded with small pit latrines and tubewells for water. Most are built by the householders themselves, or by labourers whom they pay out of their own pockets. Although the tubewells are often alarmingly close to the latrines, that seems to be fine. Researchers have found that germs do not travel far underground. What matters is having lots of water pumps and lots of toilets. The more convenient they are, the more people will use them.

A second lesson is that hardware is not enough—the software of human behaviour is just as important. Bangladesh's neighbour, India, has subsidised and built a great many latrines. Despite that effort (and although the country is roughly twice as wealthy as Bangladesh per head) many Indians continue to defecate in the open. Bangladesh's government and charities have built latrines, too, but they have worked harder to stigmatise open defecation. Often they install latrines for the poor and then prod richer folk into following their example. A new, surprising, finding is that this works better than expecting people to copy their social superiors.

Many lives have been saved by parents doing something simple. Beginning in the 1960s American military doctors and researchers in Dhaka developed a therapy for acute diarrhoea—a sweet, salty oral rehydration solution. This is now dirt cheap and widely available. At the last count, fully 84% of Bangladeshi parents with stricken children fed it to them (only a third saw a doctor). Thinly populated African countries are struggling to match that. One promising idea is to distribute the sachets along with Coca-Cola—which gets everywhere.

Bog standard

The simplest message is about the importance of basic hygiene. Bacteria often live on people's hands, and multiply on food. A mother in a poor country who hand-feeds cool porridge to her infant can introduce many more germs than the nipper would get from drinking water from a tap. Randomised controlled trials in Bangladesh and elsewhere have shown that teaching mothers to wash their hands and reheat food can wipe out most bugs. The training is cheap. The benefits, in disease avoided and lives saved, are enormous. ■

Putin's next term

The struggle for Russia

Vladimir Putin is at the height of his power. But the struggle over what comes next is just beginning

THE ballot-stuffing, blatant and in full view of the cameras, only underlined Vladimir Putin's impunity. The official result on March 18th gave him 77% of the vote, on a turnout of almost 70%. But the unofficial one would not have been very different. The election was not a genuine exercise of choice so much as a ritual acknowledgment of who holds power. After 18 years, Mr Putin is not just the president but the tsar.

As important as last weekend's vote, however, is the struggle to come. That will be over the future of Russia. And, as impregnable as Mr Putin looks, it begins today.

The gun has fired

Mr Putin cannot legally run again for president in 2024. Drawing on a mix of persuasion and brutal repression, he could force through changes to the constitution to let himself stand again, as Xi Jinping has just done in China. Or he may retire from his daily duties instead, as Deng Xiaoping did, in the hope of exerting power from behind the scenes. But then again, if Mr Putin starts to show a lack of resolve or cunning he could find himself pushed aside at the end of his term.

Already the elites in Russia are jockeying for position. The outcome is highly uncertain. At worst, the country could yet embrace an even more extreme form of the nationalism that has defined the politics of Mr Putin. He portrays Russia as assailed by enemies, and argues that it has nothing to learn from foreign ideas like human rights and open democracy. That view has already fuelled a new cold war and led to rows over manipulated elections and political assassinations abroad. In Crimea, Ukraine and Syria it fuelled real wars.

But there is an alternative. A rising elite in its 30s brought on, in part, by Mr Putin himself yearns for Russia to be a more "normal" country. For them much about his rule is archaic. They cringe at his conservative agenda, his traditional values, Orthodoxy and isolation.

This new generation will play a central part in shaping what comes after Mr Putin's next term. Our briefing this week describes its members, who range from regional governors and businesspeople to independent politicians. They have their differences and their rivalries, naturally, but they also have more in common with each other than they do with the elders who are their bosses. They tend to see the end of the cold war in the 1990s not as Russia's loss, but as a victory for common sense. Well-travelled and informed, they do not suffer from the inferiority complex that led Mr Putin's generation to copy the West and, later, lash out against it. Their parents grew up with shortages and measure success in terms of money. They take material comfort for granted. Having watched as public life has been corrupted by Mr Putin's lies, propaganda and graft, they see the benefits of rules, laws and transparency.

During the next six years of Mr Putin's presidency, this elite will assert itself in every walk of life. Think-tanks and journalism increasingly reflect their ideas. Six of Russia's 85 governors are under 40. Mr Putin has started installing young technocrats in the Kremlin and government ministries.

He may hope that the technocrats' loyalty will preserve his legacy. But Russia lacks the institutions that transfer power peacefully from one leader to the next. A departing leader cannot be confident that he and his family will be safe. A new leader cannot use the debased currency of elections to establish his legitimacy. Thus, even those Mr Putin favours may well end up rejecting him, rather as he consolidated his position by rejecting his predecessor, Boris Yeltsin, who first brought him to power.

There is no guarantee that the coming generation will succeed in making Russia more normal. Russian history is shot through with failed attempts to find a settlement with the West—in which the country has veered between aspiration and hostility. The fortress mentality that Mr Putin has fostered has instilled feelings of jealousy, resentment and victimisation. The main opposition leader, Alexei Navalny, who was barred from last weekend's election, has said that his biggest enemy is not Mr Putin and his cronies, but the debilitating conviction among ordinary Russians of their own powerlessness. If the security services attempt to exploit fear in order to cling to their privileges and their power, the Russian people may behave as their willing accomplices.

It's everyone's business

The struggle for Russia will be determined inside Russia. But the West has a part to play. It is worth remembering how the Soviet Union was undermined not just by the military might of the West, but also by its economic, cultural and moral appeal. It took decades for communism to crumble, but today's Russia is economically weak and Mr Putin has a greater need to derive legitimacy from conflict at home and abroad.

Even as the West targets him and his cronies with sanctions and protests at his aggressions, it therefore needs a counter-narrative for the Russian people. The aim should be to remain engaged with ordinary Russians while containing Mr Putin's aggression, just as Western diplomats distinguished between the Soviet regime and its citizens. Even as the Kremlin restricts Russian contact with the West, the West should encourage it.

That will not be easy. It is hard to punish Mr Putin without alienating all Russians. Cultivating the new elite could justify a purge by their enemies. And the West is less of a model than it was. Disillusion with the European Union and strife in America over the presidency of Donald Trump, which Mr Putin does his best to foment, have tarnished the West's appeal.

This week Mr Trump played into that weakness when he uncritically congratulated Mr Putin on his re-election, without raising Russia's abuses at home and abroad. That was a mistake. The message that might is right only frustrates the rise of more open young Russians and justifies the repressive instincts of their opponents. This is bad not only for Russians but also for everyone else. Andrei Sakharov, a Russian Nobel prize-winning humanist and nuclear physicist, put it best. A country that violates the human rights of its own people, he argued, cannot be safe for the outside world. ■

The American-heart land

We read Lexington's column on Emmanuel Makender, one of the first "Lost Boys" from Sudan to come to America in 2000, with great interest (March 3rd). We are Emmanuel's "American parents". Our family will never forget the day we picked up Emmanuel at the airport. Our overwhelmed hearts imbued with fear, wondering what in the world were we thinking when we said we would welcome a refugee into our already child-filled home?

I am not sure who was the most scared. The Lost Boys huddled in the middle of the circle, or the group of host families surrounding them. Our fears were quickly dispelled when Emmanuel came home. Our kids showed their new "brother" how light switches work, how to turn on a faucet and a host of other amazing inventions, including the telephone, hot-water heater, a computer, and Emmanuel's favourite, a hot shower.

We helped Emmanuel through school, with homework, studying for vocational tests, getting his first job, opening a bank account, wiring money to Sudan. A group of families in our church helped him with things both small (clothes, shoes, home-baked goodies) and large (several families contributed towards the down payment on Emmanuel's first home a few miles from our house).

But we can honestly say that Emmanuel gave us more than we ever gave him; a deeper appreciation for perseverance amid suffering, resilience amid disappointment, industriousness amid opportunity and love amid hateful violence.

So now, 18 years later, Emmanuel is still smiling. His photo is on a shelf next to those of our other six children. We talk regularly. I joke, "Emmanuel, you drive a nicer car than me." He smiles and admits, "it is true." Lexington concludes that refugees "make the country stronger, as well as better." That is true indeed.

STEVE AND LOIS KROGH
West Chicago, Illinois

Long memories

Bagehot's column on the incoherence of the government's policy of a post-Brexit "global Britain" was excellent (March 17th). But one factor not mentioned that may further undermine Britain's hope that it can trade alone is its legacy in its former colonies and other emerging-market countries. My family has strong connections with Indian businesses, and we are told time and again that Britain left India much poorer at the end of the Empire. When I was researching in China six years ago, a fair chunk of my interviewees, who were all graduates of the London Business School, reminded me bitterly that the British burnt down their Imperial Summer Palace in 1860.

These negative beliefs and attitudes can matter in business, and are widespread.

MAUREEN GAZELEY
London

Mr Buffett has still got it

Schumpeter claimed that Warren Buffett's Berkshire Hathaway is "enough of a conundrum to perplex even the world's greatest value investor" (March 10th). Yet Berkshire is run with the taxable shareholder in mind. Its practice of acquiring companies at purchase-price discounts and holding them forever produces enormous cumulative deferred taxes. By reinvesting the resulting capital, rather than paying dividends, shareholders are spared the related taxes. Even if Berkshire only beat an index fund by one point, it would be the clearly superior investment after tax.

Moreover, and contrary to Schumpeter's assertions, Berkshire avoids competitive takeovers that stoke premiums, rarely pays much more than market value, and very often obtains a purchase-price discount precisely because, as noted, many "families and entrepreneurs are happy to pass on their crown jewels" to Berkshire's stewardship.

Nor do the ages of Mr Buffett and Charles Munger, the vice-chairman, produce a "conundrum." The company boasts dozens of exemplary leaders with proven track records in acquisitions and capital allocation. Schumpeter has joined a long list of critics declaring that Warren Buffett has lost his touch, from the mid-1970s to the present day.

PROFESSOR LAWRENCE CUNNINGHAM
George Washington University
Washington, DC

Sober arguments

The market for non-alcoholic drinks has indeed been long ignored ("Only the beer gets drunk", February 17th). Yet the trend towards sobriety continues. A poll from YouGov showed that 3.1m Britons attempted Dry January this year and 72% of those who took part are likely to maintain lower levels of drinking six months after. Demographically, 16-24 year olds drink less than any other age group.

But the marketing of low-alcohol versions of beer and wine is wrong. Simply watering down or removing alcohol from the staple offerings of beer and wine reinforces the perception that drinking alcohol is the desirable norm. It shows a lack of understanding of the positive reasons why people choose to forgo alcohol. The brands that can come up with exciting propositions that aren't defined solely by their lack of alcohol will be the winners in this new market. A non-drinker is far more likely to champion a product made with their tastes in mind, and not just promoted as "booze-free booze".

LUKE D'ARCY
UK President
Momentum Worldwide
London

As an accidental teetotaller, the problem isn't so much the availability of choice; it is mixing those who do drink with those who don't. Since I quit drinking I have been amazed to find how little even practised tipplers need to drink before their conversation becomes repetitive and their ability to listen deteriorates. It takes just two drinks. Of any kind. Then it's, "You're not listening to me, it's like this".

What we need are abstinence crèches in pubs, areas where teetotallers can meet other non-drinkers and don't feel wildly out of whack with one's drinking companions. I shall hang on to my pints of lime and soda.

LUCY SAUNDERS
London

Russia's one-track record

While spring cleaning, I came across *The Economist* from July 26th 2014. Your leader on Russia, "A web of lies", was particularly prescient given recent events. Your chilling portrayal of Vladimir Putin spreading falsehoods to whip up support at home and blunt any Western response was spot-on. You recognised that Russia's propaganda campaign is to sow doubt on all sources of information: "In a world of liars, might not the West be lying, too?" If this had been heeded by politicians perhaps your other prediction would not have come true. If the world "does not stand up to him today, worse will follow".

BRANDON DUNCAN
San Francisco

On behalf of righteous cephalopods everywhere, I must express my indignation. The cover cartoon for the February 24th issue of Vladimir Putin's invasive octopus was a sucker punch right in the tentacles.

MICHAEL SINGER
Rockville, Maryland

Letters are welcome and should be addressed to the Editor at
The Economist, The Adelphi Building, 1-11 John Adam Street, London WC2N 6HT
E-mail: letters@economist.com
More letters are available at:
Economist.com/letters

European Commission

PRINCIPAL ADVISER (reserved for Croatian nationals)

Directorate-General for Education, Youth, Sport and Culture, Brussels COM/2018/10377

The Directorate-General for Education, Youth, Sport and Culture (DG EAC) is responsible for shaping European policy in these key areas. Its mission is to foster excellent and equitable education systems across schools and higher education, support the mobility of researchers, stimulate synergies between education, research and innovation, champion culture as a catalyst for innovation, promote cultural diversity, maximise the potential of youth and increase their active participation through sport. In particular, DG EAC oversees the strategic implementation of three flagship European Union programmes: Erasmus+, Creative Europe and the Marie Skłodowska-Curie Actions.

Your responsibilities:

- To provide the Director-General with strategic advice and guidance across the portfolio, particularly its international dimension;
- To reinforce the synergies between policies and programmes, ensure policy consistency, promote common values and inclusive society;
- To enhance the EU's attractiveness in these areas, promote international outreach, foster cultural co-operation and capacity building in third countries and strategic partnerships around the world.

Your skills:

- A strong background in European public affairs and/or international relations;
- Deep understanding of policymaking, innovation and international co-operation in education, youth, sport and culture;
- Proven ability to develop strategies, set objectives and targets, coordinate, prioritise and measure effectiveness.

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

Please consult the Official Journal C 105 A of 20 March 2018 for the detailed vacancy notice as well as the eligibility and selection criteria.

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

The closing date for registration is **16 April 2018, 12 noon Brussels time.**

Chief Economic Advisor

States of Jersey

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Find out more at **www.gatenbysanderson.com/job/GSe41344**
For an informal, confidential discussion, contact **Ella Milward Hamylton** on **020 7426 3376** or **Michael Dobson** on **020 7426 3968**.

Closing Date: Monday 23rd April 2018

GatenbySanderson

Nomination d'un membre sur le fichier d'experts du Mécanisme indépendant d'inspection du Groupe de la Banque africaine de développement

Le Mécanisme indépendant d'inspection (MII) a été créé en 2004 par le Conseil d'administration du Groupe de la Banque africaine de développement et est devenu opérationnel en 2006. Le mandat du MII est de répondre à des plaintes introduites par des personnes, qui sont ou craignent d'être touchées par les effets néfastes d'un projet financé par le Groupe de la Banque, en raison du non-respect des politiques et procédures de la Banque. Le MII répond à ces plaintes par la résolution de problèmes et/ou la vérification de la conformité. De plus, en vue d'améliorer la connaissance institutionnelle sur les questions de vérification de la conformité et de résolution de problèmes, le MII offre des services de conseil à la Banque. Il est administré par l'Unité de vérification de la conformité et de médiation (BCRM) avec à sa tête un Directeur, et un personnel techniques et administratif. La vérification de la conformité est faite par les membres du Fichier d'experts et la résolution de problèmes par le personnel de BCRM.

Le MII a donc établi un fichier d'experts qui comprend trois membres extérieurs. Ceux-ci sont nommés par les Conseils d'administration pour un mandat non renouvelable de cinq ans, sur recommandation du Président. Ils travaillent à temps partiel au sein de Panels de vérification de conformité autorisés par les Conseils d'administration du Groupe de la Banque africaine de développement ou le par le Président selon le statut du projet en question. Le Panel rend compte de ses observations et recommandations aux Conseils d'administration du Groupe de la Banque pour des projets approuvé par ces Conseils ou au Président pour des projets en en cours de traitement. Les experts du MII procèdent également à des vérifications de la conformité ad hoc préétablies chaque année pour s'assurer de la conformité des projets aux politiques et procédures de la Banque. Les candidats intéressés peuvent trouver plus d'informations sur les Règles et Procédures du MII sur: **www.afdb.org/irm**.

Les candidatures au poste de membre sur le fichier d'experts du MII sont suscitées chez les experts/consultants individuels ressortissants des pays membres du groupe de la Banque Africaine de Développement, ayant une excellente maîtrise orale et écrite de l'une des langues officielles de la Banque (anglais et français) et une bonne connaissance pratique de l'autre.

Le candidat ou la candidate qui sera jugé(e) satisfaisant(e) doit démontrer un sens avéré de l'indépendance et de l'intégrité; une formation universitaire pertinente et solide (au moins un diplôme de DEA; DESS ou de Master 2, ou de préférence un Doctorat d'Etat), avec une expérience pratique dans le domaine du développement, notamment sur les questions environnementales, sociales, économiques et juridiques applicables aux secteurs public et/ou privé; une vaste expérience en matière de vérification de la conformité, et une aptitude à accomplir ses fonctions et attributions de manière impartiale.

Pour de plus amples informations sur les fonctions et attributions, ainsi que les termes et exigences du poste, les candidats intéressés sont priés de visiter la page Carrières/Postes vacants du site web de la Banque **https://www.afdb.org/fr/about-us/careers/**

Les candidats doivent soumettre leur formulaire d'historique personnel et CV complet en ligne **sur le site de la Banque https://www.afdb.org/fr/about-us/careers/** au plus tard le **le 31 mars 2018**.

Appointment of a Member of the Roster of Experts of the Independent Review Mechanism of the African Development Bank Group

The Independent Review Mechanism (IRM) was established by the Boards of Directors of the African Development Bank Group in 2004 and become effective in 2006. The mandate of the IRM is to respond to complaints of people who are or likely to be adversely impacted by a Bank financed project due to non-compliance with the Bank Group policies and procedures. The mechanism handles the complaints through problem solving and/or compliance review. Also, for the purpose of enhancing institutional learning regarding problem-solving and compliance review matters, the IRM provides advisory services to the Bank. The IRM is administered by the Compliance Review and Mediation Unit (BCRM) headed by a Director, assisted by professional and support staff. Compliance review is undertaken by the IRM Roster of Experts, while problem – solving is carried out by BCRM.

The IRM's Roster of Experts comprises three (3) individual experts, each serving a fixed term of five years. The experts are appointed by the Boards of Directors upon the recommendation of the President. They work on part time basis, and sit in Independent Compliance Review Panels authorized by the Boards of Directors of the Bank Group or the President, depending on the status of the project. The Panels report their findings and recommendations to the Boards of Directors for projects approved by the Boards, and to the President for projects under consideration for financing by the Bank Group. The IRM experts also undertake annual spot-checks to ensure projects compliance with Bank's policies and procedures. Interested applicants can find more information about the IRM Operating Rules and Procedures on **www.afdb.org/irm**.

Applications for the position of a member of the Roster of Experts of the IRM are invited from individual experts/consultants who should be a national of a member state of the African Development Bank Group and have excellent command of both oral and written of one of the Bank's official languages (English and French) and a good working knowledge of the other.

The applicant to be selected should demonstrate integrity and ability to act independently; have relevant, solid and broad academic background (minimum Master Degree, preferably PhD) with practical experience in development, particularly in environment, social, involuntary resettlement, economics, and legal issues in the public and/or private sector fields. They must have experience in compliance review and be in a position to act with impartiality in the accomplishment of their duties.

Further information on the function of IRM Expert, responsibilities as well as the requirements of the post, can be obtained from the Bank Website at: **http://www.afdb.org/en/about-us/careers/**.

Applicants should submit their personal history form and full CV **on the Bank website**: **https://www.afdb.org/en/about-us/careers/** by no later than **31 March 2018**.

Gorbachev's grandchildren

MOSCOW

Vladimir Putin's election victory does not mean that there is no hope for Russia. A new generation has different priorities

KONSTANTIN CHERNENKO, the general secretary of the Communist Party, died on the night of March 10th 1985 at the age of 73. As red flags trimmed with black ribbons went up in every city in the Soviet Union, Mikhail Gorbachev rushed to an emergency meeting of the Politburo in the Kremlin. That meeting put Mr Gorbachev in charge of the funeral committee—and thus, by extension, of the Communist Party and the country. Chernenko was of the generation that had risen through the ranks under Stalin. (And he was the third general secretary to die in less than three years, in what was memorably dubbed a "hearse race".) After him, the party elders all felt that a younger, more dynamic leader was needed to rejuvenate the Soviet system and ensure its survival.

It was not until four the next morning that Mr Gorbachev returned to his dacha. As he and his wife walked the snow-covered paths of its garden, he summed up the mood of the elite and the country: "We just can't go on living like this." Nor did they. Mr Gorbachev gave individual livelihoods and well-being—the "human values", as he put it—precedence over state or class interests, launching new policies of *glasnost* (openness) and *perestroika* (restructuring), and bringing the cold war to a close.

The Soviet system could not keep going without deception and repression. Unwittingly and unwillingly, Mr Gorbachev brought about its end. What followed, however, was not the miraculous emergence of a "normal" country as many had hoped, but a decade of turbulence, economic decline, rising crime and social breakdown, and Mr Gorbachev got the blame. As he said years later, "It is my grandchildren's generation who are benefiting from *perestroika*. They are more confident, freer, they know that they must rely on themselves."

Alexander Gabuev was born on the day Chernenko died. He is one of those "grandchildren". Now 33, he is the chief China expert at the Moscow Carnegie Centre, a think-tank. Fluent in English, Mandarin and German, he criss-crosses the world briefing government officials. In his spare time, between playing tennis and drinking rum cocktails in a Moscow bar, he cultivates a network of young experts and policymakers to thrash out "actionable ideas" of how to reform the country when they come to power. "We need to be ready," he says.

Olga Mostinskaya and Fedor Ovchinnikov are a few years older than Mr Gabuev. Ms Mostinskaya, 36, is a politician born into a family of diplomats. She spent ten years as an interpreter working directly for Vladimir Putin, Russia's president, before resigning in 2014 "out of repugnance". The war in Ukraine and the annexation of Crimea were only the last straw, she says. Three years later she was elected to a local council in Moscow on a pledge to "empower, inform and engage" her voters.

Mr Ovchinnikov, also 36, grew up in a family of journalists in Syktyvkar, near the Arctic Circle. He was a teenager when Mr Gorbachev, trying to raise money for his foundation, appeared in a Pizza Hut commercial with his ten-year-old granddaughter: "Because of him, we have opportunity!" a young man in the advert tells a disgruntled old-timer. A decade later, Mr Ovchinnikov used that opportunity to launch a pizza place in Syktyvkar. His firm, Dodo, now has 300 outlets in Russia, as well as one in Britain and two in America.

Regeneration

Belonging to a generation involves more than proximity of dates of birth. As Karl Mannheim, a German sociologist, wrote in 1928, a meaningful generation is also forged by the common experience of a trauma that becomes central to its identity. Contemporaries become a generation, he argued, only when "they are potentially capable of being sucked into the vortex of social change."

Mr Gabuev, Ms Mostinskaya, Mr Ovchinnikov and other Russians are part of a new generation of Russian elite who share the European values declared by Mr Gorbachev around the time of their birth and ▸▸

Top left clockwise in illustration: Alexei Navalny, Olga Mostinskaya, Alexander Gabuev, Fedor Ovchinnikov, Ksenia Sobchak are traumatised by their reversal 30 years later. A significant and vocal group, they are imbued with a sense of entitlement and have the potential and desire to complete Russia's aborted transition to a "normal" country. Whether they get a chance to do so depends on many factors, including their determination and the resistance of the system embodied by Mr Putin's rule.

The new generation define themselves by their difference from their "fathers" as well as some similarities with their "grandfathers". Gorbachev's grandchildren recognise in each other a dissatisfaction with the aggression, degradation and lies that underpin Mr Putin's rule. He presides over the sort of power structure that Douglass North, an American political economist, has called the "natural state". In this, rents are created by limiting access to economic and political resources, and the limits are enforced by "specialists in violence". In Russia these are the *siloviki* of the assorted security and police forces, serving the system as they did in Soviet times.

That system is not about to crumble. But the rise of a new generation—especially one which, through quirks of demography, is large (see chart)—matters in Russia. "Every new group coming to power has always declared a break with the previous one," wrote Yuri Levada, a prominent Russian academic, "blaming it for every possible sin. A demonstrable rejection of predecessors has been the main way for leaders of a new generation to establish themselves in power, regardless of whether they carried on or changed the means and style of governance."

Lacking strong civil institutions, Gorbachev's grandchildren look to their peers for definition, for their place in society and, as Mannheim would have it, in history. But so do their opponents, the disenfranchised nationalists who are similarly dissatisfied with the corruption and cynicism of Mr Putin's rule. The difference, at least for now, is that the nationalists lack leadership and resources and are overshadowed by the Kremlin's own rhetoric.

Only one winner

The presidential election on March 18th showed, on the face of it, little prospect of any change. With television and the bureaucratic powers of the state at his beck and call, Mr Putin was re-elected with 77% of the vote. The result reflected the status quo and was hardly surprising. Many civil servants and factory workers were cajoled into voting by their bosses, and driven to the polls. Thanks to pre-election thuggery, Mr Putin faced no serious challenger. Boris Nemtsov, the most credible liberal politician of Mr Putin's generation, was murdered three years ago, shot beside the wall of the Kremlin. Alexei Navalny, the most plausible candidate of the new generation, was barred from standing in December after the Kremlin engineered fraud charges against him.

"This is not an election," said Igor Malashenko, who helped Boris Yeltsin keep the presidency in 1996. "It is a theatre performance directed by the Kremlin." But he still thought it mattered. That is why he ran the campaign of Ksenia Sobchak, a 36-year-old socialite-turned-politician. Her father was the first democratically elected mayor of St Petersburg and once Mr Putin's boss. She stood on the Kremlin's sufferance. It used her as a spoiler for Mr Navalny, who is 41. But while the Kremlin used her, she hoped to use it to build a platform from which to move into real, as opposed to Potemkin politics. For both Ms Sobchak and Mr Navalny an appeal to a young generation is central to their politics.

Ms Sobchak's strategy was the opposite of Mr Navalny's. Once he had been barred from standing, he called for a boycott of the election to undermine its legitimacy. He accused Ms Sobchak of helping Mr Putin by taking part. Though blocked from standing, he managed to dominate the election agenda. Many young people are thought to have abstained, though it is hard to tell whether this was because of apathy or a rejection of Mr Putin.

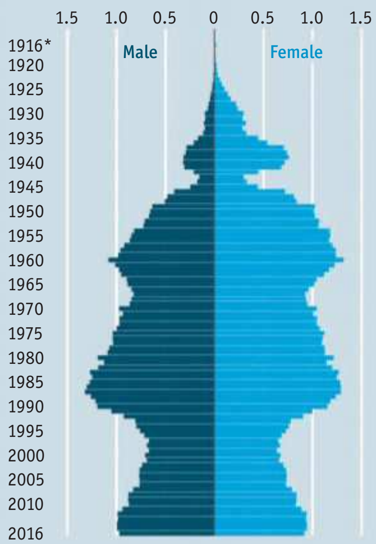
As polling stations in Moscow closed, Ms Sobchak, who in the end got only 1.7% of votes, went to Mr Navalny's headquarters blaming him for refusing to back her. He pushed her away, noting that her loss was a measure of his success. She looked deflated; Mr Navalny, off camera, uncorked the champagne. "We have created a new opposition in a place where it was impossible," he said.

If the election was a ritual, it was still important. Giving Mr Putin another six years would "mark the arrival of the post-Putin era", argued Ivan Krastev and Gleb Pavlovsky, two political analysts, in a recent paper for the European Council on Foreign Relations, a think-tank. Constitutionally Mr Putin cannot stand in 2024, and from now on political life will be dominated by the question of succession and expectation of his departure. His own survival and preservation of the system he now presides over will be his sole objective.

Mr Putin has seen crises of succession before—one brought him to power. As a young KGB officer he served the ossified leaderships of Chernenko and Leonid Brezhnev. Their generation had grown old in power in part because it had won it young. Stalin's purges meant that by 1940 around half the party elite was under the age of 40.

Births of a nation

Russia, population by year of birth, m



Source: Russian Federal State Statistics Service

*And earlier

Who remembers the sixties?

The generation that followed identified themselves as *shestidesiatniki*—the men of the 1960s. Soviet victory in the second world war gave them confidence in their country. The 20th Congress of the Communist Party, at which Nikita Khrushchev denounced Stalin, gave them their political inspiration. Many of their spiritual leaders were children of old Bolsheviks killed in the purges. They had a sense of being both entitled and required to put the country back on the course of true socialism—this time with a human face. Those hopes were crushed when Soviet tanks rolled into Prague in 1968. They had to wait until 1985 for their chance.

The Brezhnev generation stayed long in power; the men of the 1960s did not. Mr Gorbachev was gone by 1991. Yeltsin, his contemporary and successor, was not part of that generation ideologically and surrounded himself with men who were 25-30 years his junior. The children of the 1960s men, the last Soviet generation, declared their fathers bankrupt both financially and intellectually. Socialism with a human face died with the Soviet economy.

The alternative was capitalism, which Soviet propaganda had portrayed as a cutthroat and cynical system in which cunning and ruthlessness mattered more than integrity or rules, and where money was the only measure of success. The new elite did not abandon that view. Those with power and connections acquired the material attributes of Western life. They could not buy its institutions, rules or norms—but they were not interested in trying.

Meanwhile millions of people in the first post-revolutionary decade of the 1990s felt disoriented, robbed of social status and savings. This was cynically and successfully exploited by Mr Putin. Yeltsin had promoted him as a man who, although of the next generation, would protect the wealth and safety of the elite. But Mr Putin consolidated his power by rejecting Yeltsin's legacy and demonising the 1990s. His first symbolic gesture was the restoration of the Soviet anthem, which Yeltsin had abandoned. This was quickly followed by real changes, including suppression of freedom of speech and redistribution of assets and rents.

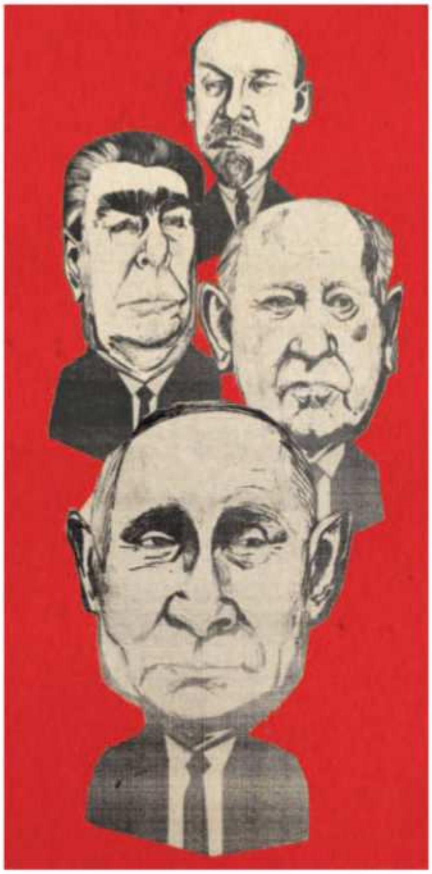
Mr Putin has become the patron of a cohort of young technocrats in order to manage, and survive, the next generational shift. He wants these young men (as they are for the most part) to provide some economic modernisation while not upsetting the system or provoking social unrest. And he wants their continued deference and loyalty as he moves from father figure to grandfather. Today six regional governors, two ministers and 20 deputy ministers are in their 30s. Yet, politically Mr Putin needs these technocrats to preserve a system in which entitlements, privileges and rents are allocated not according to law or merit but by access to resources and by position in the social hierarchy. This system of "conditional" property rights has allowed Mr Putin's friends and cronies to put their children into positions of wealth and power.

The son of Nikolai Patrushev, the secretary of the National Security Council and former chief of the FSB, heads a state-owned bank. The son of Sergei Ivanov, another former KGB officer and old friend of Mr Putin, is the head of Alrosa, a state-owned firm which mines more diamonds than any other in the world. The son of Mikhail Fradkov, a former prime minister and intelligence service chief, heads a private bank which is the staple of the military-industrial complex. Many children of Mr Putin's friends and cronies hold senior positions in Gazprom, Russia's gas monopoly, or own firms that depend on its contracts. All of them enjoy positions and wealth thanks largely to their family names.

Yet this also makes them vulnerable to political changes that come with generational shifts. Russian elites have endlessly tried to establish unconditional property rights for themselves. Andrei Zorin, a historian at Oxford University, sees this yearning for institutions that can guarantee both physical security and the transfer of wealth across the generations as one of the main reasons that Russian elites have sought to emulate Western Europe.

Those who oppose

For all the difference in their tactics, Mr Navalny and Ms Sobchak share a vision of Russia as a normal European country subject to the rule of law. As a populist who comes from outside the system, Mr Navalny appeals to people alienated by the elites. He demands retribution and a complete overhaul of government, with those now in power barred from office. Ms Sobchak, who is far closer to the beneficiaries of Mr Putin's rule, promises a change without exposing the elite to reprisal. Justifying



this halfway house, she says "Everything in this country belongs to these people. Billions of dollars, the army and security services, the largest companies. They can lose it only if there is a social explosion and even then they will probably fight to the last bullet. But Putin does not want to be a Qaddafi."

This realism reflects the view that, even among the children of the elite, there is an appetite for change. Dmitry Gudkov, a 37-year-old opposition politician whose coalition won a majority in more than a dozen local councils in Moscow, is also the son of a former KGB lieutenant-colonel, says: "The children [of the elite] are feeling uncomfortable in the shadow of their parents. They don't want to be associated with all this obscurantism, self-isolation and anti-Westernism. They don't want to risk their businesses now by speaking out in public, but they are constantly sending us signals that they are on our side." Mr Gudkov and Ms Sobchak are now forming a party together.

The loyalists who have come of age under Mr Putin, and benefited from his patronage—the cadre from which he draws the technocrats whom he hopes will shore up the system—credit him with rebuilding the state. But they, too, see change ahead. As Mr Pavlovsky puts it, they "want to make [the system] inhabitable". But so did Mr Gorbachev when he came to power.

This interest in making or managing change, rather than simply benefiting from it, is relatively recent. In the 2000s Gorbachev's grandchildren seemed apolitical. Soaring incomes, the opening of IKEA stores and a mushrooming of cafés, bars and nightclubs in Moscow were not taken as an achievement of the state, for which they should be grateful, but as a norm which they took for granted. They saw the end of the cold war not as a loss, but as part of becoming a normal country.

Mr Putin (and his circle) had a complex relationship with the West, coloured both by features of his generation and his service in the KGB. "As part of the last Soviet generation he longed for Western comforts and goods. As a KGB officer, he was instilled with an idea of the West as an enemy," says Natalia Gevorkyan, Mr Putin's biographer. The result was a *ressentiment* mixture of jealousy and inferiority which fuelled anti-Americanism.

To Gorbachev's grandchildren, by contrast, the West was just a place where they went. They did not crave its material attributes because they already had them. What they wanted were its institutions and rights. While older liberals lamented their lack of politics and public life, they were cultivating their urban space, with its parks, bike lanes and food courts. This shaped their expectations and sensibilities more than political statements. The presidency of Dmitry Medvedev, a place-holder installed by Mr Putin in 2008, fitted stylistically with this urban modernisation.

The new generation had no great enthusiasm for Mr Medvedev's politics, but they liked the fact that he loved his iPad (Mr Putin prides himself on never using the internet). As rumours of Mr Putin's return to the Kremlin began to swirl, though, Mr Medvedev started to become something more—a figurehead for a modernisation which he was not really enabling, but from which Mr Putin's return would be a step back. When in September 2011 Mr Medvedev announced a pre-arranged job swap with Mr Putin, who had sat out one presidential term as prime minister, frustration boiled over.

Old style, new style

A rigged parliamentary election in 2011, which a few years earlier would have gone unnoticed, triggered protests in Moscow and other big cities; hundreds of thousands of people took to the streets. Mr Navalny galvanised the movement using social networks. The young, including the previously apolitical elite, joined in. Ms Sobchak, once known only as an it-girl and star of reality television, stood in front of a crowd and declared, "I am Ksenia Sobchak and I have much to lose."

In anger, Mr Putin turned his back on the young and the educated, appealing instead to older members of the working class and public-sector workers and unleashing nationalist and traditionalist rhetoric that infringed on the urban elite's style and private space. "It was my breaking point," Ms Sobchak says now, "they started taking away what we already had." Andrei Sinyavsky, a writer jailed for anti-Soviet propaganda, quipped after emigrating to France in the 1973 that his "differences with the Soviet regime were purely of a stylistic nature". The new generation increasingly defines itself by such stylistic differences, rather than through any sort of political cohesiveness. But style in Russia often becomes politics.

Gorbachev's grandchildren have never had to worry about being left penniless and that means they are less bothered about money. Success in the 1990s meant having a chauffeur, shopping in London and eating at $200-a-head restaurants. To be cool today is to use car-sharing, attend a public lecture about urbanism or make your own way around India. "I prefer cycling around Kaliningrad to going by car," says Anton Alikhanov, the city's 31-year-old governor. "And I don't understand why investors want to put money into building another three floors of a house, instead of increasing the value of their properties by cultivating public space."

Value judgments

Many care instead about what they can accomplish professionally rather than what they can get and about what they share, not what they own. They do not envy Mr Putin's cronies who live behind high fences, fly on private jets and have built special rooms for their fur coats. They ridicule them.

They hate the propaganda of state television, which for a long time was one of the main instruments of social control. It now irritates people more than the stagnating economy, according to Lev Gudkov of the Levada Centre, a think-tank. They live online in a world of individual voices. They speak a direct language. Hence the success of Yuri Dud, whose YouTube interviews of people with something to say, be they politicians, actors or rappers, are watched by millions. These are neither pro- nor anti-Kremlin but are simply outside the system. There was a similar striving for sincerity in the early 1960s when a plain, living language seemed an antidote to Soviet bombast. It is another thing Mr Gorbachev's grandchildren and the men of the sixties have in common.

Mr Gorbachev drew his support from a vast number of scientists and engineers who had time and skill but lacked prospects. Today, the demand for change is coming from an army of young entrepreneurs who want a system regulated by rules and open to competition. For people like Mr Ovchinnikov, business has become a form of activism. Openness is both his core business principle and selling point.

Mr Ovchinnikov turned Dodo's growth into something resembling a reality television show through a blog called Sila Uma (Brainpower). Both investors and customers watched Dodo deliver both pizza and profits in real time. "We wanted to prove that you can be honest and transparent in Russia." Within a few years Dodo, largely crowdfunded through the internet, employed 10,000 people. Mr Ovchinnikov and others like him treat transparency not as a risk, but as a way of protecting themselves from the system.

"There are two parallel countries," Mr Ovchinnikov says. "There is a country of smart and energetic people who want to make it open and competitive. And there is another country of security servicemen who drive in black SUVs extorting rents." The two clashed when, earlier this year, Mr Ovchinnikov was accused of pushing drugs after the staff of one of his pizza joints in Moscow reported finding drugs in a lavatory that had, in fact, been planted by criminals with police protection apparently in order to extract a bribe or ruin his business. Mr Ovchinnikov gave his side of the raid through social media and the story went viral. It was picked up by Mr Navalny who mentioned it in one of his YouTube videos. A few weeks later the prosecutors backed off.

That will not always be the case. Part of North's logic of the "natural state" is that when rents get scarce the role of violence goes up. Many young Russians see a job in the security services as the only social lift available. A recent survey found that more than 75% of people under the age of 30 find a security-service job attractive and 50% would like their children to have one. And which way the spooks turn will affect Russia's future. Many FSB officers are apparently in "suitcase" mood, ready to switch sides if necessary. But some are more ideological, and therefore more dangerous.

Last autumn, young FSB officers in a unit called the "Service for the Protection of Constitutional Order and the Fight Against Terrorism" arrested several anarchists and left-wing anti-fascists, accused them of trying to "destabilise the political situation in the country" and subjected them to torture and humiliation. As one victim was told as he was tasered: "You must understand, an FSB officer always gets what he wants." Social-media profiles of some of those officers revealed their ultra-nationalist views. None of them has been charged or dismissed.

The impunity that the security services have gained under Mr Putin has reversed Mr Gorbachev's main principle: individual life and human values take precedence over the purposes of the state. Gorbachev's grandchildren want those values back. "The current state system is not only incompetent. It is immoral," says Mr Gabuev. "A state should be a service, not an idol."

Vote for change

The young elite is resentful of pretence, simulation and cynicism—the staples of the current system. Instead they crave convictions and ideas. This was one reason why many Russians refused to cast a ballot on March 18th. Neither Mr Gabuev nor Mr Ovchinnikov saw any point in going to the polls. Ms Mostinskaya, by contrast, did. "Participation gives you a right to act in the future," she says. Rather than backing one of the candidates, she spoiled her ballot paper by scribbling on the top: "One day, even if not now, all this will change." ■

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Children in care

From cradle to court

BRISTOL

The state is taking more children from their parents than at any time since the 1980s

NOBODY in the courtroom looks glad to be there. Not the social worker, nor the barristers, nor the judge, and certainly not the mother with learning difficulties who is about to have her baby taken from her. She was neglected by her own mother, an alcoholic, and raised partly by foster carers. "I had a horrid life," she tells the court. Now she is struggling to look after her own baby. The official solicitor, who represents people who lack mental capacity, neither supports nor opposes the council's case. The baby will be put up for adoption; the mother will have no further contact, save for a letter twice a year. "I wish you well," says the judge. "I'm very sorry that's the outcome." The hearing lasts 50 minutes.

Since the English courts lost the power to sentence people to death in 1965, arguably the most invasive ruling judges can make is the removal of a child from his or her parents. For much of the 20th century, judges used this power often. But the number of cases fell sharply in the 1980s and early 1990s as policymakers began to argue that families should be kept together.

Now the pendulum has swung back. English councils are asking judges to make more care orders than at any time in the past three decades. In the last fiscal year they made 134% more such requests—mostly to place children with foster parents, and sometimes to adopt them—than they did ten years ago (see chart). More than 100,000 children were in the care of the state at some point last year, more than half of them because of abuse or neglect. Comparative data are sparse, but Britain appears to foster more children than most rich countries; it adopts far more domestically born children than the European average, though fewer than America.

Are more children in need of protection than before? The child homicide rate, one grisly measure of welfare, has been falling. And the number of children indicated by councils as being at risk of physical or sexual abuse has dropped in most years since 1995. Yet the number listed as being at risk of neglect (the main reason why children are removed from their parents) or emotional abuse, has risen. Anthony Douglas, head of Cafcass, a government agency that represents children in care cases, thinks the rise in care orders is a "very good thing", since it means more children are being removed from "deeply traumatic" situations.

Safe or sorry?

England, court applications for care orders

'000

Source: Cafcass

Some argue that deep spending cuts since 2010 have made it harder for the poorest families to cope. Whereas councils are required to provide emergency child-protection, they have no duty to teach parenting skills or to offer respite care or other services that could help to stop struggling parents from becoming neglectful ones. As their funding has been cut, many councils have pruned such programmes. About 1,800 centres for children and young people have closed since 2010, claims the Association of Directors of Children's Services, a group of social workers. Some councils that have maintained spending have managed to buck the trend of rising care orders. In Leeds the number of care applications has fallen by 7% over the past decade, which the council attributes to the fact that it has continued to fill social-worker vacancies and keep children's centres open.

Yet an alternative interpretation of the national rise is that it does not reflect growing need so much as greater risk-aversion among social workers. Failure to take vulnerable children into care has resulted in some highly publicised tragedies. The London borough of Haringey was blamed for failing to prevent the death in 2007 of Peter Connelly, a toddler known in court as "Baby P", who suffered more than 50 injuries over an eight-month period. In 2008 Haringey's director of children's services, Sharon Shoesmith, was sacked (unfairly, a tribunal later found). The next year, care applications across England rose by 36%.

The government has responded to cases like Baby P's by encouraging teachers and police officers to make more referrals to social services. Today nearly one in ten children in England is referred for assessment each year. There is a danger that a bogged-down system will make mistakes. ▸▸

The risk-prediction model councils use for such assessments was introduced in 1988. A study that year of 10,000 families suggested that, under the model, 97% of parents whom the system would have flagged as potential abusers did not go on to harm their children (meanwhile, the system failed to highlight the risk posed by 17% of parents who later did).

Inspections of the council departments responsible for making the decisions do not inspire much faith. Nearly two-thirds of social-services departments were given the lowest two ratings (out of four) in their most recent inspection by Ofsted, the regulator, according to an analysis by the Social Market Foundation, a think-tank. Those councils taking more children into care tended to score worse. Only six of the 20 councils with the biggest increases in care orders won a "good" or "outstanding" billing, compared with a dozen of the 20 councils with the greatest decreases.

Happier families

Some believe the system needs an overhaul. In most cases parents do not dispute that they have neglected their child. The role of the court, then, is to balance options: would the child be better off with their parents or in care? "You're gazing through a crystal ball," one social worker says. "To do that in an adversarial court is just ridiculous."

A big flaw is that social workers must juggle two sometimes contradictory functions. They begin as a family's helper but can morph into the chief witness against them. The adversarial system is also expensive, since the state pays for barristers for the council and the parents.

In Scotland cases are heard by a jury-like panel of volunteers. In Denmark the social worker submits a report to be evaluated by a panel of experts, politicians and a judge. Only the parent has legal representation and their child may be removed only if four of the five panellists agree. Yet barristers argue that such invasive cases require skilled legal experts on all sides.

More pragmatic reformers champion the broader take-up of two innovative schemes. One is Pause, which runs in 18 of 152 English councils and aims to prevent mothers who have already lost one child to social services having subsequent children taken away. Nearly a quarter of mothers in care cases have previously lost a child, and sometimes several (in one instance, eight children were taken in turn from the same mother). Women on the Pause scheme use long-acting contraceptives for 18 months, while receiving counselling and support to meet their housing or educational needs. The scheme's advocates argue that this leaves them better able to care for any children they may later choose to have.

Because Pause was piloted only in 2013, it is still too early to tell whether it is effective in the long term. But an evaluation last year by the Department for Education found that it had prevented at least 21 pregnancies among its initial cohort of 125 women. That alone will save councils at least £1.2m ($1.7m) a year, it calculated.

A second initiative is family drug-and-alcohol courts, which 22 councils offer to addicted parents as an alternative to care cases. Parents see a judge fortnightly for six months for "therapeutic" rather than adversarial hearings. According to a report by Lancaster University in 2016, 37% of parents kept their children after going before such courts, compared with a quarter after conventional hearings.

At one drug-and-alcohol court, a mother arrives for her first hearing, cradling one nine-month-old twin in her arm as she pushes the other in a pram. Everyone sits in a semicircle. The judge tells the mother to picture herself at the school gate in five years' time, on her children's first day at school. "It's not an unrealistic dream, is it?" he asks. "It is your right and we should be very careful before stopping a mother or father having that right. Work with us and make it happen." ■

The Brexit negotiations

A fishy transition

The biggest worry about the planned transitional period is that it is too short

AGAINST a backdrop displaying the text of Britain's draft withdrawal agreement, colour-coded to show areas agreed and yet to be tackled, Michel Barnier, the European Union's Brexit negotiator, and David Davis, Britain's Brexit secretary, announced a transition deal on March 19th. It was hard even for the ebullient Mr Davis to hide the fact that Britain had agreed to a "status quo" transition period, in which it will maintain most obligations to the EU while losing its voting rights. At least business was pleased that there will be no cliff-edge exit next March—assuming, that is, the two sides are able to reach some kind of Brexit deal.

What was striking was the acquiescence of most pro-Brexit Tory MPs. Jacob Rees-Mogg, who once likened a status-quo transition to being a vassal state, said Britain had rolled over without even getting its tummy tickled. But he and his allies still gave Theresa May's government the benefit of the doubt. In effect, they value the prize of Brexit next March so highly that they will accept almost any terms for it. This should reduce their influence on Mrs May in the remaining negotiations.

Sold down the river

One awkward concession concerned fish. Many Brexiteers say they were promised that Britain would take back full control of fisheries next March. Even Michael Gove, the minister in charge, admitted to being disappointed that this has proved impossible. Britain will now stay in the EU's common fisheries policy until the start of 2021. Scottish Tories are especially upset. Several said they could not sell such a betrayal to their constituents, and 14 MPs wrote to Mrs May urging her to reject the transition and threatening to vote against a Brexit deal later this year if she does not.

For all their protests, including sending a fishing boat up the Thames to Parliament, Mrs May is bound to accept the transition at the EU summit that was meeting as we went to press. She has no choice. Fishing is too small an industry to jeopardise a future Brexit deal. Just as in 1973, when Britain first joined the club, it is likely to be sacrificed for the greater good, however loudly trawlermen howl.

The real concern about the transitional deal is not about vassaldom or fish. It is the transition's short duration. Mrs May had asked for a deal lasting "around two years"; some ministers openly hoped for longer. Yet Mr Barnier is offering just 21 months, to the end of 2020. Trade experts doubt that a comprehensive trade deal of the sort that Mrs May wants can be negotiated, let alone ratified, that quickly. And the text of the transitional deal leaves it unclear whether an extension will be legally possible, let alone politically so.

A big problem is that Mrs May has wasted so much time since triggering the Article 50 withdrawal process last March, not least by holding a general election last June. A majority of the Commons Brexit committee is calling for an extension of Article 50's two-year deadline. The home affairs committee similarly says more time is needed to ensure continuing co-operation on justice and domestic security. Time, or rather the lack of it, has become one of Brexit's most pressing concerns. ■

Northamptonshire goes bust

Red faces at a true-blue council

NORTHAMPTON

Relentless government cuts are as much to blame as mismanagement

THE glossy new offices of Northamptonshire County Council suggest an organisation on the up. Opened last October at a cost of £53m ($75m), One Angel Square looks more like the base of a tech giant than a local bureaucracy. Purple and lime-green walls spice up the open-plan workstations and obligatory atrium.

In fact the council is distinctly down on its uppers. Last month it was declared, in effect, bankrupt. A stop was put on all new spending except on vulnerable people, the first time this had happened to a council for nearly 20 years. On March 15th an official report recommended that the council should be dissolved, such is the magnitude of its failure. This prompted the resignation of Heather Smith, its Conservative leader. One Angel Square is to be sold, as part of an economy drive that will also close 21 of the county's 36 libraries.

After years of being taunted by the Tories for the spendthrift antics of loony-left councils, it is payback time for Labour. Jeremy Corbyn, the party's leader, floored Theresa May at prime minister's questions on March 21st by asking whether the collapse of Northamptonshire was the fault of "Conservative incompetence" at a local level, or at a national level. In truth the episode exposes elements of both, and some fear that it will not be the last such case.

The government-commissioned report is scathing about the financial shenanigans in Northamptonshire. Budget management was "an exercise of hope rather than expectation"; the council's approach was "sloppy, lacking in rigour and without challenge". The rot set in after a damning inspection of children's services in 2013, where failures have so far cost £60m to put right. Most services were subsequently outsourced in an innovative "Next Generation" model, to save money, but this was poorly implemented.

Circling the wagons, the county's seven Tory MPs have strongly backed the report, and its recommendation that two new unitary authorities should be set up to replace the county council. Others, though, argue that by blaming councillors for the disaster, the report lets the government off lightly. Jim Harker, the Tory leader of Northamptonshire until 2016, called it a "whitewash". Simon Edwards, head of the County Councils Network (CCN), a lobby group, agrees that it "glosses over" the government's role. The relentless cuts in central government support for local authorities, he argues, have contributed as much as anything to Northamptonshire's demise.

Since 2010 all councils' budgets have been savaged. Central government funding for local authorities has fallen by about half since 2010. County councils have suffered most. The CCN calculates that county councils will see a 93% reduction in their biggest government support grant from 2016 to 2020; by the end of the decade they will be receiving an average of £161 per person, whereas the figure for London boroughs, for example, will be £459. Matt Golby, acting leader of Northamptonshire, estimates that since 2010 it has lost £390m, cumulatively, from its budget.

Meanwhile, demand for services has risen. Northamptonshire's population of over-65s grew by 12.5% in 2013-16, the fastest rate in the country, increasing the pressure on social care. The county has also added 16,000 school places since 2010. These are mostly funded centrally, but local government still has to pick up a tab.

Northamptonshire compounded its problems by freezing its council tax, already low, for three years. To make ends meet, it dipped into its reserves. The National Audit Office has warned that other councils are doing the same, a practice that is not "financially sustainable". It estimates that a tenth of all councils with responsibility for social care could empty their reserves within three years if they carry on spending at the rate they did in 2016-17.

What happens next in Northamptonshire is up to the communities secretary, Sajid Javid. He could send in commissioners to turn the council round. In the longer term, however, Mr Golby argues that politicians must acknowledge the "massive impact" of austerity, and agree that the country needs a "fundamental review of government funding of local councils". ■

Prolific offenders

Stuck on repeat

A growing share of offenders have dozens of crimes to their name

ON FEBRUARY 12th Patrick Ryan was sentenced to 12 months in prison for two counts of public disorder. He had been drunkenly ranting on a tram in Manchester about how everyone hates the Irish. At the hearing, the crown court judge noted that the defendant had been a "persistent public nuisance". In his 62 years Mr Ryan has racked up more than 500 offences.

Mr Ryan is an extreme example of a growing trend. The share of offences in England and Wales committed by those with more than 15 previous convictions or cautions increased from 13% in 2007 to 25% in 2017. A recent analysis by the Ministry of Justice (MOJ) shows that petty crimes like theft are the most common among prolific offenders. As a result, they do short stints in and out of prison. The median length of their most recent time in custody is about six months, and the average gap between offences just over two years.

Experts do not know exactly what is behind the shift. One explanation may be that police officers are choosing to pick up more serious and repeat offenders, rather than other criminals, says Harvey Redgrave of Crest Advisory, a consultancy. More crime exists than police forces can deal with, so they must be selective when picking their targets.

Another factor is that those convicted are more likely than before to serve time. Judges and magistrates have lost confidence in community service and dish out more prison sentences as a result. In 2007 community sentences were the most common form of punishment for serious crimes, making up 35% of the total. By 2017 that had fallen to 20%, as immediate prison sentences became more popular. An MOJ study found that community sentences led to less recidivism than custodial ones, when the type of crime is accounted for.

Prison sentences are getting longer, too. ▸▸

Second helpings

Newspapers

Blue top

A freesheet overtakes the Sun to become Britain’s highest-circulation paper

“RETURNS are a very big part of my psyche,” admits Ted Young, the editor of *Metro*. He measures his success by the piles of papers that remain at the end of the day; only the best front pages, like those when David Bowie and Prince died, produce no returns. “I can’t stand seeing free newspapers left over,” he adds. Thankfully for Mr Young, they are becoming a rarer sight. Figures released this month showed that *Metro* now has the largest circulation of any British newspaper, with 1.5m copies handed out every weekday.

It is a symbolic moment in the decline of Britain’s rumbustious popular press. In 1931 Stanley Baldwin, then leader of the opposition, complained that newspapers increasingly aimed at “power, and power without responsibility—the prerogative of the harlot through the ages.” By and large, they achieved it in the following decades. At its apex in 1994, the *Sun* sold 4.3m copies a day, many to swing voters. It was not afraid to throw its weight around: “IT’S THE SUN WOT WON IT,” boasted its front page after John Major, its preferred candidate, won the general election in 1992.

Metro is cut from different cloth. Like other tabloids, its stories are pithy and celebrities omnipresent. But unlike the rest, its news is presented without a political slant, and there are no opinion columns. Commuters “don’t want to be picking up something they profoundly disagree with”, explains Mr Young. The result is a less abrasive read. Pages 12 and 13 for instance, are normally dedicated to readers’ musings (“Can commuters stop having their breakfast on trains?” implores Keith, from Brighton). Politicians know they won’t be stitched up. *Metro* was rare in getting interviews with all three main party leaders in last year’s general election campaign.

But it seems unlikely that other newspapers will follow *Metro*’s example. For one thing, because it breaks few stories it fails to conform to ink-stained hacks’ journalistic ideals. For another, market dynamics are pushing paid-for papers in a more partisan direction, says Charlie Beckett, a media expert at the London School of Economics. Remaining readers are more likely than before to expect their newspaper to reflect their political views.

Not that *Metro* will mind. It was launched by the owner of the *Daily Mail* in 1999 only as a defensive manoeuvre to prevent a Swedish firm from starting a similar paper. For much of its life it was “a dirty little thing in the corner” at its parent company, says Adrian Addison, author of a history of the *Mail*. Mr Young admits he is “not going to win a Pulitzer Prize any time soon”. But his newspaper is turning a growing profit and it is now the most-read in the country. A less humble paper would make a big deal of it.

The average stretch for robbery was 33 months in 2006. In 2016 it was 45. Other offences follow the same pattern. And as prison conditions have deteriorated, crime on the inside has spread. Longer, more violent stints may make it harder for prolific offenders to break the cycle, argues Frances Crook of the Howard League, a penal reform charity.

Prisoners are then released to a stretched probation service. Reforms in 2015 meant that those serving less than a year were placed on probation after their release. As a result, they are under more scrutiny and thus more likely to be caught reoffending and hauled back to prison. At the same time, the probation system is struggling to offer basic services to help keep recently released prisoners on the straight-and-narrow. One in ten has no home to go to.

What can reverse the trend toward prolific offending? One option is to send fewer people to prison, as Scotland is doing. Courts there operate on a presumption against sentences of less than three months. Last September Nicola Sturgeon, the first minister, announced plans to extend the notional minimum to one year.

Reliable housing, steady work and strong family ties all help prisoners after their release. But they have to want to go straight too, says one ex-convict from London who had served two spells in jail for drug dealing. His old gang friends, many of whom are still frequently in and out of prison, laugh when he suggests they should clean up their act. He says he was lucky to be approached by Switchback, a charity, which helped him find work and stay out of trouble.

He was also fortunate to break the cycle after only a few convictions. The likelihood of reoffending increases with each new crime. Those with no previous record have a 7% chance of reoffending. For those with over 11 offences, the chance is 50%. By the time people have hundreds of convictions to their name, like Mr Ryan, another stint inside is almost inevitable. ■

What’s the story, northern Tory?

Rise of the Teesside Tories

REDCAR AND STOCKTON-ON-TEES

A Conservative mayor in a Labour heartland tries to transform the region

THE process of making a parmo is not for the faint-hearted. A chicken cutlet is pounded flat, breaded, deep fried, covered in béchamel sauce and a thick layer of cheddar cheese, then grilled. Served with chips it weighs in at 2,600 calories, slightly over the recommended daily allowance for a grown man. It is a hearty snack that Teessiders are proud of inventing. Little wonder Ben Houchen campaigned for the parmo to be given protected status, alongside champagne and feta cheese, during his push to become the region’s mayor.

It worked. A staunch defence of Teesside’s culinary heritage, coupled with a plan to nationalise the local airport and overhaul the police, was enough for the Tory candidate to shock Labour and become the first mayor of the Tees Valley Combined Authority last spring.

Since then Mr Houchen has revelled in his municipal empire, which encompasses 700,000 people and stretches from Darlington to Hartlepool. An avid Brexiteer, he has noisily campaigned for the local port to become a “free port”, with a carve-out from Britain’s customs regime. He controls an investment fund of more than £500m ($700m). Threats of compulsory-purchase orders have been issued to those in his way. “I’m everything that an MP is, but I also have executive power and a big pot of money to do it,” he says.

Two tasks face Mr Houchen, a stocky 31-year-old. The first is justifying the existence of the mayoralty, for which there was little public enthusiasm. Turnout in last year’s

election was only 21%. Agreeing to have an elected mayor meant extra central-government funding, including £59m at the last budget. Andy McDonald, a local Labour MP, labelled it Hobson's choice.

His second task is to turn Teesside more broadly Conservative. The river Tees is the historic border between North Yorkshire, a sea of rural Tory seats, and Durham, which is solid Labour land. In the general election last June, this political levee was expected to break in favour of the Conservatives. All the constituencies in the Tees Valley had voted to leave, one by as much as 70%. Mr Houchen's surprise win a few weeks before, in May, suggested that the Tories' time had come.

But a late Labour surge meant the breakthrough never came. "I never in my wildest nightmares thought Labour would increase their vote," says Simon Clarke, who narrowly won Middlesbrough South and East Cleveland for the Tories for the first time. Mr Clarke's breakthrough was offset by the Tories' loss to Labour of Stockton South, a seat they had held since 2010. The stalemate leaves Teesside resembling British politics at large: a story of reorientation rather than revolution, with neither Labour nor the Tories able to break out.

To end the deadlock, the Conservatives have doused the area with political and financial capital. The chancellor has promised £123m to redevelop 4,500 brownfield acres on the south bank of the Tees. After the collapse in 2015 of SSI, a Thai-owned steelworks that had employed 2,200 people, the area was repackaged last year as the South Tees Development Corporation, under the aegis of the mayor. Although businesses such as the rump of British Steel remain, the area resembles an industrial graveyard with a defunct steelworks as a hulking metal tombstone.

It is here that the mayor's combination of bully pulpit and real powers, such as compulsory-purchase orders, comes into its own. Mr Houchen has a simple message for landowners: "Play ball, or you can sod off." Theresa May, the prime minister, came for the South Tees site's grand opening last year. "I am not blowing my own trumpet," says Mr Houchen, "but I am the Tory in the north with the largest electoral mandate." There are six metro mayors in Britain, compared with 650 MPs. Their relative novelty opens doors to ministers.

Being a Tory mayor in Labour territory has its pitfalls. Mr Houchen must work with five Labour councils, which can be uneasy. Local MPs are sceptical about his plan for the airport, leading to the strange spectacle of Labour politicians—including the shadow transport secretary, Andy McDonald—opposing a Conservative-led plan for public ownership. "The airport is the only thing in this country he [Mr McDonald] doesn't want to nationalise," wails Mr Houchen. But most planned works, such as upgrades to Darlington's railway station, are widely supported. Even the free-port plan is backed by local Remainer MPs such as Anna Turley (who notes that they are allowed in the EU).

Not everyone agrees with the strategy. Dragging heavy industry back to Teesside risks tying the area to its history rather than preparing it for the future, says Paul Swinney from the Centre for Cities, a think-tank. There is a tendency to wallow in the past: the fact that a Teesside firm built the Sydney Harbour Bridge nearly a century ago is mentioned more often than the fact today the area hosts a laboratory 1km underground off the coast at Redcar that is involved in the search for dark matter.

Mr Houchen would not be the first local politician to overpromise. A former mayor of Middlesbrough vowed to turn the area into Dubai-on-Tees. Optimism, however, is what the area needs, says Mr Houchen. Now it his job to justify it. ■

Correction: Last week we said that a cannabis-based medicine, Sativex, delivered a dose of 100 millilitres per spray. We hope no one followed our prescription; the actual dose is 100 microlitres.

Technology and the state

Government by app

Digital innovations are making public services cheaper and more effective

IF LANDING in soggy Britain after a holiday in the sun is not enough to sap the soul, spending an hour queuing at border control does the trick. Eyn, a British startup, hopes to speed things up with a phone app. Passengers use the app to take a picture of their passport, then scan the chip which contains their facial biometrics. Finally, they take a selfie, to ensure the two faces align. Tapping their phone on electronic gates at the airport is then all that's required. Eyn reckons such gates might not even be needed, if sensors prove capable of reading passengers' faces instead. The firm is in talks to test its technology at the border.

Govtech, or digital technology to improve public services, is a relatively new field in which Britain is busy. The amount of venture capital invested in govtech projects in Britain is on a par with that in the rest of Europe combined, according to PwC, a consultancy. Investment in the industry could grow from £6.6bn ($9.2bn) last year to £20bn by 2025, believes Public, which finances govtech startups, including Eyn.

Calipsa, another startup on Public's books, is developing artificial intelligence (AI) to monitor CCTV. Humans struggle to monitor multiple screens at once, with the result that much CCTV goes unwatched. Using AI to spot potential infractions or suspicious behaviour, such as cars in bus lanes or people doing dodgy deals in dark alleys, frees human operators to focus on clips that have already been flagged. It could also cut costs. Calipsa reckons its software could reduce government spending on traffic surveys, for example, by 80%.

Nesta offers an incubation programme connecting startups to government departments. It is working with London councils on a pilot that uses machine learning to pinpoint landlords who are letting property without a licence. Nesta is also involved in a project to develop the use of drone technology in five cities. It says drones could help police to monitor crowds, or even deliver emergency medicine. Drones are already used by fire brigades; some helped to survey for damage at Grenfell Tower after the calamitous fire last year.

Opaque procurement processes have made it hard for startups to win government contracts. The Cabinet Office is working on a service to put startups in touch with civil servants. The government has set up a £20m fund for startups interested in public-sector innovation. Later this year a team in the Government Digital Service will begin work to identify services that could benefit from technology. Andy Street, the mayor of the West Midlands, is offering a £20,000 prize and three-month pilot to startups with ideas for how to improve housing, employment and other areas. The test will be whether such pilots take off.


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C02
118-82g/km
COMBINED MPG
54.3-88.3
Ford

Bagehot | The politics of illusion

The division between "open" and "closed" politics is not as simple as it seems

ONE of the biggest ideas to hit the political world in recent years is that politics is increasingly defined by the division between open and closed, rather than left and right. Openness means support for both economic openness (welcoming immigration and free trade) and the cultural sort (embracing ethnic and sexual minorities). Closedness means the opposite.

This argument, which *The Economist* explored in a cover article a couple of years ago, has recently been reinforced by the launch of a new think-tank, Global Future. Global Future marked its arrival with an opinion poll which suggests not only that the open-closed division is the most salient one in British politics, but that "open" has time on its side. There is a 51-percentage-point difference between the under-45s and the over-45s on the question of whether immigration is a force for good, for example.

Open v closed clearly matters. Donald Trump won by promising to put America first. But Bagehot is reluctant to give it the same force as the old distinction between left and right. The division is too self-serving for comfort. It looks more like ammunition for a political war than dispassionate analysis, and thereby contributes to the polarisation that it claims to diagnose. There are also too many facts that don't fit.

Consider Brexit. Remainers regard it as the quintessential revolt against the open society. Yet some of the most prominent Leavers, such as Daniel Hannan and Douglas Carswell, are classical liberals who regard the European Union as a protectionist bloc that is bent on subsidising inefficient industries. It is true that the UK Independence Party thrived on fears of immigration. But at the height of its popularity it received only 4m votes, whereas 17m voted to leave. A poll of 12,000 Leavers found that their main motive, cited by 49%, was democratic self-government. By their own lights they were voting against a closed elite in favour of open and accountable government.

The most obvious problem with the open-closed theory is that the divide is so slippery. Few people support entirely open societies—it would be perverse to allow Ebola victims to cross borders unimpeded. By the same token, few people advocate becoming a hermit kingdom like North Korea. Nor are open and closed necessarily opposites. Having a strong border can make people more open, by giving them a sense that they can manage openness. Historically, most of the world's great centres of commerce have been walled cities. Constantinople, the crossroads between east and west, boasted not just a formidable wall but an outer and inner harbour.

And different forms of openness and closedness don't always go together. Jeremy Corbyn, the Labour leader, is open when it comes to transgender rights and immigration, but closed when it comes to foreign companies owning British utilities, or trade unions operating closed shops. Many Brexiteers are the opposite.

The biggest problem with the open-closed divide, however, is that open people often aren't as open as they think—indeed, they are open in so far as it serves their interests and no further. The young cosmopolitans celebrated by Global Future are closed when it comes to giving a fair hearing to social conservatives. Try opposing gay marriage in a college bar and you will discover the meaning of Herbert Marcuse's phrase "repressive tolerance".

This is even clearer in economics, where open people cluster in industries that have been less affected by globalisation than manufacturing. Steelworkers have been upended by competition from China. Public-sector bureaucrats have not been touched. Supposedly open people have also protected themselves from competition by constructing a wall of licences, restrictions and other barriers to entry. The post-1979 deregulation of the economy was one-sided. Working-class closed shops, such as that of the printworkers, were broken, while professional closed shops, notably for barristers, were left to thrive.

Academics like to think of themselves as open to their core. But academia is rife with restrictive practices. The most highly prized commodity in academic life is tenure—that is, the right to an income for life whatever happens to the world. University towns have some of the strictest planning laws around, so that insiders see the value of their most important asset soar. Academic publishers make their profits by rolling several sorts of rent-seeking together. They get free content because academics have to publish to get tenure, and a guaranteed market because academic libraries have to buy their books and journals. Bankers have similar double standards. Critics rightly point out that they are arch-globalists when the market is on the up, but then turn to national governments when it crashes. But the problem runs deeper. Like other industries, finance is rigged from the inside by firms that invest in lobbyists and hire ex-politicians who still wield influence.

The real divide

There is a better explanation of political polarisation than the open-closed split. It is the gap between exam-passers and exam-flunkers. Qualifications grant access to a world that is protected from the downside of globalisation. You can get a job with a superstar company that has constructed moats and drawbridges to protect itself, or with a middle-class guild that provides job security, or with the state bureaucracy. Failing exams casts you down into an unpredictable world of cut-throat competition.

Exam-passers combine a common ability to manage the downside of globalisation with a common outlook—call it narcissistic cosmopolitanism—that binds them together and legitimises their disdain for rival tribes. Exam-flunkers, meanwhile, are united by anger at the elitists who claim to be open as long as their jobs are protected. They are increasingly willing to bring the system crashing down. Talking about open v closed is a double error. It obscures the deeper forces dividing the world, and spares winners by playing down the legitimate concerns of losers. ■

Infrastructure

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BRENNERO AND PUTTGARDEN

Two giant projects should improve links between Europe's north and south

WHEN the Berlin Wall fell, Europe began repairing its sundered east-west transport networks. A revived Paris-Moscow train heralded the new era. Berlin's cathedral-like main station, opened in 2006, became the continent's new hub. But old north-south bottlenecks are back in the spotlight. Of the nine "Core Network Corridors" currently earmarked for EU investment, six are more vertical than horizontal. The centrepiece of this strategy is the "Scandinavian-Mediterranean corridor" from Sweden and Finland, through Denmark, Germany, Austria and Italy to Malta in the south. This programme—jointly funded by the EU and member states—includes railway electrification, port modernisation and the two largest engineering projects on the continent.

The greatest progress has been at the route's northern end. The Oresund link, a 16km road-and-rail, bridge-and-tunnel link from Malmo to Copenhagen that opened in 2000, has knitted the two cities into one region. The next step is to link them to Hamburg with a tunnel bearing two train tracks and a four-lane highway under the Fehmarn Strait ("Fehmarnbelt" in German), explains Lars Friis Cornett, deputy director of the forthcoming Fehmarnbelt project, soon to be the biggest construction site on the continent. This would create a new regional economy dubbed "STRING".

Why is it necessary? With their tightly interlinked shipping lanes and industrial supply chains, Copenhagen and Hamburg

are already one economy in many senses. But getting between them is a hassle. The land route—taken by hundreds of lorries a day—is a six-hour drive. There is a sea link, but this too is tortuous. After the short run from Copenhagen to the southern Danish coast, the train slows as it enters the port of Rodby. On special rails it enters a ferry alongside the cars and trucks. Passengers disembark and hurry to the on-board shop (alcohol and cigarettes can be sold only in German waters, which account for just 17 minutes of the trip). After an hour the ferry docks at Puttgarden and passengers return to the train, which pulls out onto German tracks and speeds on to Hamburg. The whole journey between the two cities takes four hours, 33 minutes.

The Fehmarnbelt project was agreed on by German and Danish governments in 2007, and endorsed by Danish planning authorities in 2015. Now it just remains for German planners to give it the green light by 2020, when construction is to start. Despite protests, the planners are confident that they will have clearance by next year. Funded by the Danish government, which will recoup its money from toll charges, construction will involve sinking large sections of tunnel units into the seabed; the "Lego principle", Mr Cornett calls it. When completed in 2028, this will be the longest immersed tunnel in the world. With associated road and rail improvements it will cut the Hamburg-Copenhagen train ride to two hours, 40 minutes. Builders expect ▸▸

road traffic across the strait in 2030 to be more than double what it was in 2011.

From Hamburg the immediate journey south is smooth on Germany's autobahns and high-speed train tracks. The southward rail fork via Berlin was accelerated by a recent upgrade of lines through Saxony and northern Bavaria. On December 8th Angela Merkel joined other dignitaries for a train ride of less than four hours from the German capital to Munich, down from more than six hours.

Then, though, the journey slows drastically. From Innsbruck in Austria the train creeps up to the Brenner Pass, through which 40% of all trans-Alpine traffic travels along a narrow, steep shelf that winds along the side of a valley. The train goes so slowly that passengers can observe Alpine flowers peeping through the snow. Not until two hours after leaving Innsbruck, at Fortezza in Italy, does it speed up downhill, snow giving way to vineyards and the plains of the Po valley. The roads are no better: 1m lorries a year travel through the pass and long tailbacks are common.

Hence the impending Brenner Base Tunnel, 40% funded by the EU and the rest by the Austrian and Italian governments, which at 64km from Innsbruck to Fortezza will be the longest in the world when it opens in 2026. It could transform intra-European trade by increasing the daily number of trains through the pass from 240 per day to 591, mostly carrying goods.

From Fortezza the speed picks up thanks to the Italian rail network. Since 2009 sleek Frecciarossa and Frecciargento (red and silver arrow) trains have cut Milan-Naples travel times from eight hours to just over four. But from Naples the investment stops. There is a slow, twice-a-day service to Sicily with a ferry from Salerno, and one a day from Villa San Giovanni. The contrast with Europe's north is stark: the Strait of Messina is half as wide as the Oresund crossing, but a bridge to Sicily has been a glint in politicians' eyes for decades. The island remains too poor for it to be economical to build such a link and run high-speed trains to Palermo, its capital.

That is a reminder to European politicians, who are fretting about the revival of the east-west divide. That rift is about politics, a product of historical happenstance. It is soluble. But the continent's north-south rift is in many ways deeper: it involves intransigent barriers like high mountains and foaming seas, as well as deep cultural and economic differences. In its own way, the Malmo-Palermo express would be as great a political achievement as its Paris-Moscow counterpart. ■

Correction: In our article on young Russians last week ("Meet the Puteens"), we wrote that GDP per person in Russia has risen sixfold since 1999. That calculation reflects the change in current dollar terms, rather than in real rouble terms, which would be the more relevant measure. In those terms, it has nearly doubled. Sorry.

Ireland's abortion referendum

Don't mention the church

DUBLIN

As Ireland prepares to vote, the debate is notably secular

WHEN Ireland first voted on abortion, back in 1983, there was no doubt as to who was behind the push for a full constitutional ban. The Pro Life Amendment Campaign, which persuaded 67% of voters to approve the 8th Amendment to Ireland's constitution, was a coalition of Roman Catholic organisations supported by the pope and his bishops. Rosaries and crosses were proudly borne to its marches and rallies.

Now, 35 years later, as Ireland prepares to vote, in May or June, on a proposed repeal of the amendment, overt Catholicism has all but vanished from the scene. Although the religious affiliations of many activists are, of course, known, contemporary pro-life groups like the Iona Institute, the Pro Life Campaign, the Life Institute, and Save the 8th present themselves as non- or multi-denominational, or simply leave such matters vague.

With good reason. Since 1983 a long series of scandals has battered the church's moral authority. These include the sexual abuse of children by clerics; the confinement of marginalised women in industrial-scale "Magdalene Laundries" (institutions for what were termed "fallen women"); and forced adoptions and undocumented mass burials at "mother and baby" homes.

In the years since then, conservative Catholics have unsuccessfully opposed the legalisation of contraception, divorce and most recently gay marriage, and came out on the losing side in four referendums that they hoped would further strengthen the ban on abortion, for instance by banning travel abroad for one. Patsy McGarry, a veteran religious-affairs correspondent for the *Irish Times*, says the church and its followers are still heavily involved in the new abortion campaign, but are deliberately downplaying religious arguments. "They are trying to appeal to a younger generation that are not so impressed by traditional Irish Catholic values," he said.

But new global forces and methods are moving into the space vacated by traditional Catholicism. This week Save the 8th confirmed that it has hired Kanto Systems, a London-based political consultancy with links to the campaign for Britain to leave the EU, the embattled Cambridge Analytica (a British firm at the heart of a Facebook data row) and Donald Trump's election. In January it was reported that the Pro Life Campaign had hired uCampaign, a conservative American outfit that has produced apps for Mr Trump, the National Rifle Association and Vote Leave in Britain.

On the pro-choice side, the Abortion Rights Campaign has been forced to return a $25,000 grant from George Soros's Open Society Foundations, after a regulator deemed it an illegal foreign political donation. Amnesty International Ireland, also campaigning for repeal, faces the same problem in relation to its own donation. Pro-life campaigners are also believed to have raised funds abroad, mainly in America, but have yet to face any such sanction.

The Transparent Referendum Initiative, a group of tech activists, says that the paid Facebook posts which were a feature of the Brexit and Trump campaigns have now begun to show up in the Irish referendum. Storyful, a Dublin-based consultancy that authenticates online content, says there has been a recent upsurge in suspicious new Twitter accounts that talk about abortion in Ireland. All, so far, oppose abortion, said Storyful's Padraic Ryan. Some of these are linked to overseas accounts pushing far-right, anti-liberal and pro-Trump messages. Others note the appearance of "fake news"—demonstrably untrue claims that the anti-abortionists refuse to repudiate. More such cyber-shenanigans are surely to be expected. ■

No rosaries please

The Russian nerve-gas attack

Chemical paralysis

THE HAGUE

The agency that fights chemical weapons can act only if countries let it

IN THE sort of movie where global agencies are attacked by arch-villains with superpowers, the Organisation for the Prohibition of Chemical Weapons (OPCW) would make a perfect target. Its concrete and glass headquarters sits amid a cluster of high-minded international institutions in The Hague, down the street from the tribunal where Yugoslavia's war criminals were tried and not far from the International Court of Justice. The OPCW has been busy over the past decade, destroying chemical-weapons stockpiles in Libya, Iraq and Syria, for which it won the Nobel peace prize in 2013. But the use of a nerve agent in the attempted assassination of a Russian ex-spy in Britain this month has dragged it into tricky waters.

The mission of the OPCW is to support the Chemical Weapons Convention of 1993, which bars countries from possessing them. (Using them has been illegal since The Hague Conventions of 1899, signed just across town—though that did not stop Germany and Britain from gassing each other's troops during the first world war.) But the OPCW is not an independent enforcement agency. In theory, a country that has ratified the convention can demand an inspection on another signatory's territory if it suspects it of stockpiling weapons, but this has never happened. Instead, the OPCW is called in only when a country agrees to eliminate its stockpiles.

The OPCW's biggest effort to date came in Syria. In 2013, after a series of chemical-weapons attacks by the regime, Russia persuaded its ally to join the convention and eliminate its stockpiles in order to fend off America's threat to attack. The OPCW set up a process in which weapons were transported under Russian and Chinese supervision to Norwegian and Danish ships and destroyed on board an American naval vessel. But, says Derek Chollet, an American assistant secretary of defence at the time, the agency "has no independent coercive power. It is only as powerful as countries allow it to be."

That became clear in 2015, when chemical attacks in Syria resumed months after the OPCW confirmed that all the weapons the country admitted to possessing had been eliminated. The UN Security Council approved joint investigations that let OPCW inspectors return to Syria to find out who was at fault. But Russia disputed the inspectors' conclusion that it was the Syrian government. When the investigations came up for renewal last November, Russia vetoed them. OPCW experts still carry out fact-finding missions in Syria after chemical attacks, but are not allowed to investigate who is to blame.

This week the OPCW sent experts at Britain's request, to provide independent confirmation of the agent used. The British say it was the Russian nerve poison Novichok. Russia's furious denials resemble its attacks on investigators' conclusions in Syria, where it threw up a barrage of unconvincing challenges with little evidence.

Russia cannot block OPCW technical aid. For that it would need the support of two-thirds of the 41 countries on the organisation's executive council. But while the agency's experts may help determine what chemicals were used in the attack, they will not be able to lend their authority to any conclusion on the most important question: who did it? ■

Turkey

Where Uber costs more than a cab

ISTANBUL

In Istanbul, you get what you pay for

COMPETITION between Uber and the taxi industry tends to be fierce everywhere. In Turkey it has turned violent. Over the past month, some Uber drivers in Istanbul, the only Turkish city where the ride-sharing firm operates regularly, have been beaten, and on at least one occasion shot at, by disgruntled cabbies. A union of taxi drivers has taken Uber to court, asking the authorities to block access to its app. (The country has already banned Wikipedia and Booking.com, an online travel agent, as well as thousands of other web pages.) The union's boss recently accused Uber of being part of a "thieving Jewish lobby".

Most of Istanbul's cabbies are perfectly nice people who resort neither to violence nor to anti-Semitism when faced with new market entrants or afternoon traffic. But too many are swindlers, chain-smokers and speed addicts. On a recent trip across town, your correspondent spent 15 hair-raising minutes trying to calm an elderly driver who regularly succumbed to a series of twitches, popped out of his seat and punched his dashboard when overtaking other cars, and impersonated a cannibal at the mention of an African country. He slowed down only after being steered into a chat about his grandchildren.

This partially explains Uber's local appeal. In most places, the company lures passengers mainly by offering low prices. In Istanbul it gets away with charging more than a normal taxi, as much as double for a trip to the airport, by offering cleaner cars and better service.

Uber enjoys a powerful advantage in Istanbul, since its drivers do not have to acquire extortionately expensive cab licences. Since the 1960s, as the city's population has swollen from 2m to 15m, the number of such licences has remained capped at about 18,000. Predictably, their price has rocketed, reaching nearly 1.7m Turkish lira ($430,000) today, more than twice the cost in New York or Paris. Since few cabbies have access to that kind of money, outsiders have stepped in.

Such investors now fear that competition from Uber will drive the licence price down, as it has in other parts of the world, wrecking their investment. But the market may just be big enough for both sides. Some passengers will pay a premium for comfort. Others will pay less, and risk an adventure.

Greece

Dog days for Mr Tsipras

ATHENS

The prime minister's season of trouble

ALEXIS TSIPRAS, Greece's left-wing prime minister, is getting along better these days with his country's big creditors, the EU and the International Monetary Fund. One reason is that Athens is likely to complete its current bail-out programme in August, on time and with funds to spare. Another is that the economy is growing, albeit more slowly than forecast.

But Mr Tsipras is under growing pressure at home. His Syriza party's unlikely coalition with Independent Greeks (Anel), a small populist party led by Panos Kammenos, a blustering right-winger, is in danger of falling apart. Mr Kammenos, the defence minister, opposes Mr Tsipras's efforts to resolve a 25-year dispute over what Greece's poor northern neighbour, officially known as the Former Yugoslav Republic of Macedonia, should henceforth be called. Mr Kammenos has also broken ranks with Syriza over how to handle Greece's latest flare-up with its historical rival, Turkey, a NATO ally with a policy of contesting Greek sovereignty over a clutch of small Aegean islands.

Mr Tsipras may have hoped that some attention could be diverted from these problems. Syriza has launched a parliamentary probe of ten senior politicians, including two ex-prime ministers, Antonis Samaras and Panagiotis Pikrammenos, the current central bank governor and Greece's EU commissioner. The politicians are accused of accepting a total of €50m in bribes from Novartis, a Swiss drugs firm, between 2010 and 2015.

But the scandal has failed to gain traction, after outraged denials by the accused and talk of government influence over the judicial process. The allegations of bribe-taking, according to opposition members of an all-party committee, may even have been faked. They are based on testimony to the anti-corruption prosecutor by three anonymous whistleblowers placed in a witness-protection scheme. "The transcripts [of the whistleblowers' testimony] are not exact. The three apparently didn't witness any bribe-taking themselves," said a committee member.

Mr Tsipras's talk of economic success is also starting to look threadbare. The economy grew last year by only 1.4%, compared with a budget forecast of 2.5%. This year's growth target has already been cut to around 2%.

The prime minister's hopes of a clean exit from the bail-out in August look unrealistic, too. Greece is already committed to lowering the income-tax threshold and making another round of pension cuts in 2019. A deal with the EU on debt-relief measures, due to be wrapped up in June, will include a slew of conditions to keep reforms on track and prevent backsliding.

Some pundits predict that Mr Tsipras will cut his losses and call an election in October, almost a year before his government's term expires. The centre-right New Democracy has a lead of ten percentage points in opinion polls. Whether ND can win an overall majority depends on how many voters smaller parties can woo away from Syriza. Meanwhile, Mr Tsipras's advisers insist their boss is "not a quitter" and that there is still plenty of time to win back disaffected left-wing voters. ■

Israel and the Balkans

Quietly does it

BITOLA

Israel is cultivating new friends in the region

ALTHOUGH it was in use from 1497 to 1943, the Jewish cemetery in Bitola, Macedonia's second city, had long been forgotten. No longer. Not only is the site now being restored and a new memorial built, but on March 11th a couple of thousand people, including Macedonian and Israeli ministers, marched through town to pay homage to the Macedonian Jews who were rounded up exactly 75 years earlier and sent to the death camp at Treblinka. At the same time Israeli developers held a "hackathon", dreaming up ideas for digital memorials with Macedonian fellow geeks. It is typical of the way Israelis are quietly discovering the western Balkans.

Quiet remembrance

Bitola's Jewish cemetery is on a steep hill, and over time its flat tombs became covered by soil. In the past few years 4,300 have been excavated; there could be as many as 10,000. Jews remember Bitola by its Ottoman name of Monastir, but most people in Bitola have forgotten that their down-at-heel town was once a thriving and prosperous place for Jews, Christians and Muslims. "I am trying to use our past," says Maria Geras Dochovska, co-ordinator of the cemetery project. Bitola has been "dying for 100 years". If what she is doing brings interest and investment to the town, she says, "then maybe our young will have a chance to be connected to the world." And perhaps they will stay, rather than emigrate as so many Macedonians are doing. She may be right. Winners of the hackathon will visit Israel and meet people from its thriving tech sector.

In the past decade, whatever most outsiders—the Turks say, or the Russians—do in the region has been accompanied by media fanfare and raucous debate about what they are really up to. Israel's interest, apart from cultivating friendly countries, is more low-key. The Bitola event went unnoticed in the outside world. Even so, according to the Israeli embassy in Belgrade, Israelis have invested or committed almost €1.8bn in Serbia since 2000. Their political consultants are often hired to advise the region's parties during elections.

In Macedonia an Israeli company now trains military helicopter pilots. This year Israel hopes to clinch a deal to sell F-16 fighter jets to Croatia. In 2016 intelligence co-operation thwarted an attack on an Israel-Albania football match. Balkan countries almost certainly receive Israeli intelligence on their jihadists returning from Syria. The number of Israelis coming to the region, mostly for long weekends in Belgrade, was up by 171% last year compared with 2016, in part because they no longer feel comfortable in Turkey.

The leaders of Macedonia, Serbia, Bosnia-Hercegovina and Albania have all been on official visits to Israel. Kosovo's leaders have been lobbying Israel to recognise it. According to Eliezer Papo of Ben Gurion University, academic co-operation, which used to be "non-existent" has exploded. Politically, he says, many western Balkan leaders think Israel is a place to emulate. They consider their countries to be like Israel: surrounded by enemies, but determined to prosper anyway. They mostly pay lip service to the Palestinian cause, but often forget it. Israel and (mostly Muslim) Albania are "natural allies" in the fight against violent extremism, said Edi Rama, Albania's prime minister, on March 4th. From cyber-security to water technology, says Mr Papo, "everyone thinks that there is a lot to gain." But no one wants to make a big fuss about it. ■

Charlemagne | Teddy Macron

There are intriguing parallels between France's president and Theodore Roosevelt

THE American guest in ill-fitting clothes was a curiously bedraggled sight next to his sharp-suited French hosts. But when Steve Bannon took to the stage as the surprise *invité* at the National Front congress in the city of Lille earlier this month, he stole the show. "Let them call you racists. Let them call you xenophobes. Let them call you nativists," declared Donald Trump's former chief strategist. "Wear it as a badge of honour!" As each of his phrases was translated into French, the star-struck audience applauded. Fresh from meeting populists and nationalists from Germany and Italy, Mr Bannon hailed the rise of a global movement and told them: "History is on our side."

In one sense, Mr Bannon chose an odd time to drop in on France. Marine Le Pen's movement, which she now wants to rename Rassemblement National (National Rally), has been in disarray ever since she lost the presidential election last year to Emmanuel Macron and secured only eight parliamentary seats. From Rome to Warsaw, populists remain a potent force in Europe. France's muted FN stands out as something of an exception.

Yet the American's visit to France was a sobering reminder that any relief felt by Europe's liberal democrats at Mr Macron's victory still needs to be tempered. Fully 10.6m French voters backed Ms Le Pen in the presidential run-off. Identity politics have not disappeared. Mr Bannon's appearance in Lille also underlined the global appeal of nativist populism and its long history. Indeed, America's attempts in the 1890s and early 1900s to deal with an earlier version throw up some curious and instructive parallels with France, and Europe, today.

When William Jennings Bryan gave his famous "Cross of Gold" speech at the Democratic national convention in Chicago in 1896, it was more than just an attack on the gold standard. Evoking "the avenging wrath of an indignant people", the Nebraskan former congressman, who went on to become the joint Democratic and Populist presidential candidate, was also decrying "the idle holders of idle capital" and what later became known as trickle-down economics and the plight of the "toiling masses", much as Ms Le Pen does today. Bryan built his populist movement around the little person—the farmers on the prairies—against the east-coast capitalists and their political cronies. Ms Le Pen frames her politics as a campaign for "the forgotten" against the rootless capitalist elite, and to recover sovereignty.

It was Theodore Roosevelt, though, who became president in 1901 at the age of 42, and devised the most effective American response. In his "Square Deal", and later Progressive reforms, the trustbusting TR sought to take on the robber barons, regulate the railroads and smooth the rough edges of capitalism by bringing about social reform. In doing so, he helped to see off the populist threat from Bryan, secured a second term in 1904, and laid the ground for much new thinking about social policy.

The parallels with Mr Macron, who defeated Ms Le Pen at the age of 39, are striking. Like Roosevelt, Mr Macron defines his politics as "progressive", founded his own party to blur political lines and hopes to recalibrate the political balance between what TR called "the doctrinaires of extreme individualism" and those of "extreme socialism" (though Mr Macron is hardly the Progressives' first emulator: America's Bill Clinton, Britain's Tony Blair and Germany's Gerhard Schröder, for example, used to wax lyrical about the "third way" in the 1990s). Where Roosevelt was a conservationist who expanded America's network of national parks, Mr Macron has become a tree-hugger who vows to "make our planet great again". Like Roosevelt, Mr Macron considers his attempt to clean up politics, curb rent-seeking and tame tech titans to be part of an effort to fashion a liberal, market-friendly response to populism that can nonetheless assuage voters' fears.

The resemblances go deeper still. Each president was educated at his country's elite institution (Roosevelt at Harvard; Mr Macron at the Ecole Nationale d'Administration), studied philosophy and particularly Hegel (Mr Macron wrote a thesis on the German philosopher) and is literary-minded (Roosevelt wrote dozens of books; Mr Macron is an unpublished novelist). Like Roosevelt, Mr Macron dislikes cynicism and thinks that talk of *grandeur* can restore national confidence. "We have to be amenable once again to creating grand narratives," Mr Macron says, words that echo a speech made in Paris at the Sorbonne in 1910 by Roosevelt, who declared it "unhealthy" to hold "an attitude of sneering disbelief toward all that is great and lofty".

Prairies versus Pyrenees

Of course, there is plenty to separate the two presidents. Roosevelt, the "Rough Rider", was a one-time cowboy, hunter, and cattle-rancher in the Dakota Badlands who served as a cavalry officer in Cuba during the Spanish-American war; Mr Macron is a tennis-player and skier, of a generation that has never seen active combat. Roosevelt, who took office as a Republican after the assassination of William McKinley, founded his Progressive Party only after leaving the presidency; Mr Macron created En Marche as his vehicle for victory.

Yet the lesson of this parallel is that it takes the menace of populism to prompt the market-friendly centre to rethink some of its tenets. Roosevelt ushered in an era of progressive reform that gave the federal government a greater role in social policy and regulation. Mr Macron thinks populism thrives when people feel their leaders are impotent, in particular against the forces of globalisation. His efforts put him at the centre of a balance. Europe is trying to preserve the existing free-market order, while trying to impose new rules on it, for instance by hitting tech giants with taxes and regulations. It is a hard equation to get right. "France has taught many lessons to other nations," declared Roosevelt in his Sorbonne speech. Its current president's response to populism will test whether this can be another. ■

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Facebook and democracy

The antisocial network

SAN FRANCISCO

A scandal over the use of Facebook's data is a crisis for the company, and reveals much about the erosion of digital privacy

"MY GOAL was never really to make Facebook cool. I am not a cool person," said Mark Zuckerberg, the boss of the social-media giant, in 2014. That has never been more true. His company has spent the past year stumbling through controversies over the peddling of fake news and enabling Russian manipulation of American voters, with various degrees of ineptitude. Then, on March 17th, articles in the *New York Times* and Britain's *Observer* newspaper suggested that a political consultancy, Cambridge Analytica, had obtained detailed data about some 50m Facebook users and shared this trove of information and analysis with third parties, including Donald Trump's presidential campaign. The result is a corporate crisis—and a political reckoning.

Republicans and Democrats alike have called on Mr Zuckerberg and the heads of other tech firms to testify before the Senate. America's consumer watchdog, the Federal Trade Commission (FTC), has also reportedly launched an investigation into Facebook's privacy policies and whether it violated a consent decree of 2011 requiring the social network to notify users about how their data are shared. British MPs have called for Mr Zuckerberg to come before a select committee.

Even Facebook's allies have unfriended it. On Twitter, Brian Acton, a co-founder of the popular messaging app WhatsApp (which Facebook bought for $22bn in 2014), encouraged people to "#DeleteFacebook". News of his post pinged around the internet, including on Facebook itself. Investors, who have forgiven months of bad headlines in light of Facebook's strong financial performance, are growing jittery. Between March 16th and March 21st the firm's share price fell by 8.5%, erasing $45bn in market value. Facebook is still the world's eighth-most-valuable publicly listed firm, but shareholders worry that politicians in Europe and America may impose onerous restrictions on data, suppressing growth.

Help yourself to our data

The Cambridge Analytica scandal reveals Facebook's morphing, porous privacy policies and the company's cavalier approach to oversight. The data on Facebook users were obtained by Aleksandr Kogan, a researcher at Cambridge University, who enticed some 270,000 people to take part in a survey in exchange for a small fee. When those users installed the survey app, they shared details about themselves and—unwittingly—their friends, around 50m Facebook users in all. Surprisingly, before 2015 Facebook's rules allowed the mining of social connections without each user's consent.

What happened next was never permitted by Facebook. Mr Kogan provided these data to Cambridge Analytica, which then allegedly shared them with customers, including Mr Trump's campaign. Cambridge Analytica is backed by Robert Mercer, a Republican donor; Steve Bannon, formerly a top adviser to Mr Trump, used to serve as an executive. (*The Economist* used Cambridge Analytica for a market-research project in the past.)

Although news of Cambridge Analytica's peddling of Facebook data was first reported in December 2015, the social network reportedly did not respond until eight months later, with a letter asking the firm to delete the data. It seems not to have checked that this was done. The lax response is evidence of wider "systemic operational problems", says Brian Wieser of Pivotal Research, who follows the firm.

If reports are to be believed, Cambridge Analytica has a habit of pushing ethical and legal boundaries to gather data. On March 20th Alexander Nix, its chief executive, was suspended after recordings were aired on British television that seem to capture him describing manipulating people for information. Britain's data-protection regulator, the Information Commissioner's Office, is expected to search Cambridge Analytica's offices.

The scandal reverberates through politics as well as the internet. Facebook has built a mammoth advertising business, with sales of around $40bn in 2017, by gathering detailed information about users' identities and behaviour online and then selling access to them. Facebook tracks users not only on its services, including its eponymous social network and Instagram (which it owns), but across the web. Knowing that someone is a dog owner and interested in buying a new lead may ▸▸

not seem controversial. "Microtargeting" someone in order to influence their political views and voting behaviour appears more sinister.

Though political advertising is still a minuscule percentage of Facebook's revenues, perhaps around 3%, it is a growing and lucrative line. Politicians have found that using Facebook can pay dividends. Even without using illegitimately obtained data to boost targeting, the social-media firm offers precise tools to political campaigns, including reaching users on Facebook whose names, phone numbers and e-mail addresses they already have. Facebook also enables campaigns to target voters who show an interest in the same issues or have similar profiles, packaging them into what it calls "lookalike audiences". No other Western company apart from Google has such rich data.

Barack Obama's campaigns were digitally sophisticated and used Facebook to reach prospective voters. Yet Mr Obama got proper permission to obtain data about people's friends and did not microtarget users on an industrial scale, unlike Mr Trump's campaign. Targeting based on Cambridge Analytica's data may have helped Mr Trump win the presidency, although how much cannot be known.

A tepid response

Companies can overcome scandals. Rupert Murdoch, a media mogul, survived a maelstrom in 2011 when it was reported that a newspaper he owned had hacked the phone of a murdered girl, Milly Dowler. Mr Zuckerberg, like Mr Murdoch, has structured ownership of his firm so that he controls super-voting shares, and will probably maintain his power. But there is speculation that some of his lieutenants, including Sheryl Sandberg, could leave in the next year. The head of security, Alex Stamos, is expected to resign.

Mr Zuckerberg's response to the scandal has been modest. He has apologised and promised thorough audits of third-party app developers and steps to make it easier for users to control their privacy settings. Such basic assurances may not be enough to reverse flagging corporate morale and win back the enthusiasm of users. Trust in social media is already low, and Americans have been spending less time on Facebook, in part because so much of what they see online is negative and dubious. Globally, users spent around 50m hours less per day on Facebook in the fourth quarter of 2017, which translates into a 15% drop in time spent year over year, according to Mr Wieser.

As some users turn away, politicians in America and Europe are likely to give Facebook more of their attention. They are scrutinising Facebook's conduct and may propose new laws, especially in the domain of data privacy. In May regulations concerning data protection and user consent will come into effect in Europe. America has historically been weak on data protection, except for specific industries like health care. Overworked regulators have typically responded to reports of misconduct on a case-by-case basis, and the online advertising industry has been trusted to police itself.

Mr Obama was in favour of a consumer-privacy bill of rights, which would give users more control of their online data by requiring user consent. That made little headway because of opposition from the industry. Some politicians may want to revive talk of such a law, especially as Europe strengthens its safeguards. But political reformers seldom have an easy time in America. And, like many others, politicians have come to rely on Facebook. ■

Non-disclosure agreements

Let's not make a deal

WASHINGTON, DC

An attempt to gag White House staff is not just offensive but ineffective

IN THE early weeks of Donald Trump's presidency, the White House was a leaky ship. So Mr Trump seems to have imported a device often used in the private sector, but never before employed in the executive branch: sweeping gag orders covering everything—from secrets to mere gossip—picked up at work. Naturally, a draft agreement has leaked to the *Washington Post*. It suggests that staffers who improperly disclose confidential information would be liable for huge fines, and even bars future novels from mentioning White House work. The scheme, conceived in chaos, has plainly been ineffective in its intended purpose. The administration remains shambolic and sieve-like.

These sorts of non-disclosure agreements (NDAs) are probably both unenforceable and unconstitutional. Because White House staff are employed by the government, their speech is protected by the First Amendment. "Information about public service belongs to the public," says Ben Wizner of the American Civil Liberties Union. "The idea that a president could cut off this vital source of information is anathema to the constitution."

Government employees and contractors who deal with classified or top-secret documents are already bound by NDAs authorised by Congress. The threat of espionage charges usually ensures compliance, but the government can also seize "all royalties, remunerations, and emoluments" resulting from the unauthorised publication of classified materials. Every so often the Central Intelligence Agency uses the proviso to seize the profits of a book by an incautious ex-spook.

The draft NDA from Mr Trump's White House differs by preventing disclosure of "all non-public information" even after he leaves office, and by proposing an eye-watering penalty of up to $10m per violation. The financial penalties are "preposterous", says Alexis Ronickher, a partner at Katz, Marshall & Banks, who has represented whistleblowers. "I've never seen anything like $10m, quite frankly," she says. The final

You didn't hear that from me

text of the NDAs has not yet leaked—the White House has not denied their use, but disputes the dollar amount. That suggests somebody took sensible advice. David Super, a law professor at Georgetown University, says the chances that a judge would enforce such an NDA are nearly nil.

Non-disclosure agreements are increasingly used by political campaigns, which are treated as private organisations legally. Hillary Clinton's presidential campaign in 2008 may have been one of the first (perhaps not coincidentally, that campaign was inept and fractious). A senior official for George W. Bush's and John McCain's presidential campaigns says he did not have to sign an NDA. Nor did Matt Bennett of Third Way, a think-tank, who worked on Democratic presidential campaigns from 1988 to 2004. Today, NDAs seem to be preferred only by fretful candidates. During the campaign of 2016 neither Ted Cruz nor Marco Rubio required them, according to former campaign operatives. All paid staff on Mrs Clinton's campaign signed NDAs as part of their starting paperwork. Mr Trump went the extra step of requiring them of volunteers.

He has kept a campaign pledge to run America's government as he ran his company. In his past life as a litigious businessman-cum-showman, NDAs proved useful. They seem less so now. Stormy Daniels, the porn star with whom Mr Trump allegedly had an affair, has been muzzled by one such agreement, though she is furiously trying to shake it off. Karen McDougal, a former Playboy model who also claims to have had a Trumpian tryst, is suing to escape a similar agreement. When Mr Trump was still in his gilded tower, silence could usually be bought. As in so many other ways, government is proving tougher. ■

America and Taiwan

Visitors welcome

A long-standing policy is changed, risking another stand-off with China

FEW pieces of legislation sound more anodyne than the Taiwan Travel Act. The bill, which both houses of Congress passed unanimously and President Donald Trump signed into law on March 16th, aims only to "encourage visits between officials from the United States and Taiwan at all levels". Yet it risks triggering a diplomatic brouhaha. China regards the prospect of visits between American and Taiwanese officials as a violation of America's "one-China policy", under which America pledged to maintain only unofficial relations with a place that China regards as a renegade province. "We urge the US side to correct its mistake," says a spokesman from China's foreign ministry.

Steve Chabot, a Republican congressman from Ohio and author of the bill, says that his legislation has "no provocative intent". Taiwan, after all, is America's 11th-biggest trading partner, outstripping Brazil. And the Taiwan Relations Act of 1979 commits America to helping Taiwan defend itself. Mr Chabot worries that insufficient communication between the two sides could hurt Taiwan's, and by extension America's, security in the face of a more assertive China.

Since 1979 only six American cabinet-level officials have visited Taiwan, but no president has. When Gina McCarthy, then head of the Environmental Protection Agency, travelled to Taiwan in 2014, it was the first time an American cabinet official had visited the island in 14 years. When Taiwanese officials travel to America they must keep a low profile. Taiwanese presidents have usually been granted only "layovers" in America, which allow them to stay for just a day or two. Taiwanese leaders have had to lobby hard just for the privilege of making a pit stop in the lower 48 states. In 2006 American officials refused to grant Chen Shui-bian, then Taiwan's president, a layover in New York or San Francisco, offering him instead a refuelling stop in Alaska or Hawaii. His dignity slighted, Mr Chen called off the trip.

America's longstanding reluctance to send officials to Taiwan and overbearing rules concerning the hosting of Taiwanese officials are self-imposed restrictions. Nothing in American law touches on the legality of high-level exchanges between America and Taiwan. Rather, it seems that past practices have become institutionalised. It is also unclear how, by merely encouraging (as opposed to mandating) more visits between officials from the two nations, America contravenes its one-China policy. That policy is "a flexible construct", says Richard Bush of the Brookings Institution, a think-tank.

Even so, some analysts warn against antagonising China just when America needs its co-operation on North Korea's nuclear programme. Shortly after America granted a visa to Lee Teng-hui, then president of Taiwan, in 1995, China launched missiles into the Taiwan Strait. America had to send in two aircraft-carrier battle groups to persuade China to back off. It was America's biggest military showing in the region since the Vietnam war.

America has been quick to act on the new law. On March 20th the State Department dispatched Alex Wong, a deputy assistant secretary, to Taipei for a three-day visit. On the agenda is a dinner with Taiwan's president. The next day China sent its sole aircraft-carrier through the Taiwan Strait. That might not be a coincidence. ■

Illinois politics

The plutocrats' primary

CHICAGO

Illinois is on track to smash an American record

MONEY did not talk during the Democratic and Republican primary elections held in Illinois on March 20th—it screamed. The incumbent Republican governor, Bruce Rauner (pictured), who splashed out some $50m on his campaign, saw off a strong challenge from a right-winger, Jeanne Ives. He will face an even richer opponent in the general election in November, because J.B. Pritzker, a billionaire who poured almost $70m into his own campaign, easily won the Democratic primary for governor. Wealthy candidates also prevailed in many of the primary races for Illinois's 18 congressional seats and other positions, held on the same day.

High-level politics is increasingly a game for wealthy people. *Roll Call*, a political newspaper owned by The Economist Group, calculates that America's senators and congressmen were worth $2.43bn when the 115th Congress began—20% more than the previous Congress. Ten house members and three senators are worth more than $43m each (many politicians are not required to state the value of their properties). Not all contribute to their own campaigns, though, and few are as spendthrift as would-be governors of Illinois. The race, which has already cost about $160m, could well become the most expensive non-presidential campaign in history, exceeding the $280m spent in California's ▸▸

governor's race in 2010.

It is easy to see why the Democratic establishment, including county chairmen, big unions and elected politicians, embraced Mr Pritzker's candidacy. The millions he is spending on his own campaign mean more cash can be spent on crucial legislative races. Daniel Biss, a state senator and former maths teacher who was defeated by Mr Pritzker, wondered during the campaign whether Illinois is engaged in "an auction or an election".

Enormously wealthy people have competed in Illinois elections before. But until Mr Rauner's victory in 2014 "they did not really do well", says Christopher Mooney of the University of Illinois at Chicago. In 2004 Barack Obama saw off two richer opponents: Blair Hull, a former securities trader who had pumped $29m into his campaign, and the Republican Jack Ryan. Both were felled by personal scandals.

The trouble with rich neophytes, explains Mr Mooney, is that they are not properly vetted. Mr Pritzker has already hit a couple of bumps. In February the *Chicago Tribune* unearthed tapes of a conversation in 2008 between Mr Pritzker and Rod Blagojevich, then governor of Illinois, who is now in prison. In the conversation Mr Pritzker called Jesse White, a well-liked secretary of state, the "least offensive" black candidate. On March 14th the same newspaper revealed the businessman's ties to offshore companies.

The bulk of the millions spent on the battle for the governorship so far has come from four men: Messrs Rauner and Pritzker themselves; Ken Griffin, a hedge-fund billionaire, who lavished $20m on Mr Rauner; and Richard Uihlein, an entrepreneur who used to finance Mr Rauner but recently gave $2.5m to Ms Ives because he was upset about Mr Rauner signing a bill that expands public funding of abortions. It is almost enough to make one wish for the old days, when Illinois was run by a corrupt Democratic machine. Almost. ■

Gun laws

What works

LOS ANGELES

While national politicians dither, some states are passing life-saving reforms

THE young people who will march to protest against gun killings in Washington, DC and other cities on March 24th would appear to be wasting their time. Since December 2012, when Adam Lanza murdered 20 children and six staff at Sandy Hook Elementary School, America has experienced some 240 shootings that injured or killed people on school or college campuses. From 2012 to 2016 fully 108,100 people used guns to take their own lives and 63,600 were shot dead by others. Yet the House of Representatives has not voted on a single measure to prevent gun violence, let alone passed a law. In some states the law has loosened. Students at public colleges in Texas can now carry concealed handguns.

The marchers should not succumb to gloom. Congress will probably not pass sensible gun laws, it is true. But some state assemblies and city governments have already done so. These laws seem to be saving lives; if adopted in other states, the toll of guns would almost certainly diminish. They fall into three categories.

The first group of laws increase scrutiny of gun buyers. Federal law requires background checks for anyone purchasing a firearm through a licensed dealer, but says nothing about private sales or transactions at gun shows. Many buyers slip through this loophole. A survey of 1,613 gun-owners published in 2017 found that 42% had acquired their most recent weapon without a background check. The internet has made sales even harder to police. A probe by private investigators hired by New York city in 2011 found that 62% of online private sellers agreed to sell guns to people who stated they "probably could not pass a background check".

Nineteen states and Washington, DC, now require background checks for at least some private gun sales. Most people seem to comply. In states that regulate private sales, 26% of gun-owners who bought their guns privately said they did so without a background check, compared with 57% in states without such regulations.

The Giffords Law Centre to Prevent Gun Violence, a pressure group co-founded by Gabrielle Giffords, a former congresswoman who was shot in the head in 2011, found that between 2009 and 2012 states with universal background-check requirements on handguns had 35% fewer gun deaths per person than states with looser regulations. Other research shows that in states that require background checks for private handgun sales women are less likely to be shot by their partners, police are less likely to be killed by handguns, and gun suicides are rarer than in states with laxer laws.

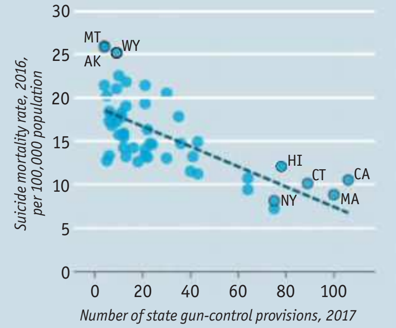
Daniel Webster, director of the Centre for Gun Policy and Research at Johns Hopkins Bloomberg School of Public Health, believes that requiring gun-buyers to apply for permits or licences might be even more effective. Twelve states and Washington, DC have such laws, several of which require would-be handgun-buyers to pass safety training. Some require people to turn up at their local sheriff's office or police department. This may deter so-called "straw purchases", in which someone stands in for a debarred buyer.

In a study published in 2014, Mr Webster and others scrutinised what happened after Missouri scrapped its permit-to-purchase law, which required all handgun purchasers to obtain a licence confirming they had passed a background check. Controlling for changes in poverty, unemployment, crime, incarceration, policing levels and other factors, they found that the repeal was associated with a 23% increase in gun homicide rates. A study conducted by Mr Webster's colleagues in 2015 found that ▸▸

And you fret about screen time

Laws save lives

United States, suicide rates and gun-control laws



Sources: Centres for Disease Control and Prevention; State Firearm Laws project

75% of Americans (and nearly 60% of gun-owners) support licensing laws. Almost everyone wants broad background checks.

The second thing states have done is to create "red-flag" laws. The need for these has become clearer since February 14th, when Nikolas Cruz allegedly killed 17 people in his former high school in Florida. (Mr Cruz is not speaking; a judge has entered a not-guilty plea on his behalf.) In the decade before that horror, the Broward County sheriff's office received at least 45 calls related to Mr Cruz or his brother. Mr Cruz uploaded photos of weapons and dead animals on social media, and seems to have written "I am going to be a professional school shooter" under a YouTube video.

Today six states—California, Washington, Oregon, Connecticut, Indiana and, as of March 9th, Florida—have "extreme-risk protection order" laws. These allow cops to petition courts to remove guns temporarily from those thought to pose a risk to themselves or others. In the first three states, family members can petition, too. Judges can order guns to be impounded for a limited time and, in some states, can bar people from buying new ones. An order can be extended for a year if the judge is given additional evidence that the person continues to be a threat.

Connecticut's law, which was enacted in 1999, seems to have saved lives. One study published in 2017 estimated that for every 10 to 20 gun seizures in the state between 1999 and 2013, one suicide was averted. On average, the police removed seven guns from each person. Earlier this year American State Legislators for Gun Violence Prevention, a coalition of lawmakers worried about gun violence, announced that members in 30 states had introduced or were planning to introduce extreme-risk protection order bills. Even before the Parkland shooting, at least 19 legislatures were considering such bills.

Third, some states have tightened rules on gun storage. Whereas Israelis whose weapons are stolen can be prosecuted, most Americans have little to fear. A survey by the Johns Hopkins Bloomberg School of Public Health has found that 54% of American gun-owners did not store their firearms safely.

This invites trouble. David Hemenway at the Harvard T.H. Chan School of Public Health has estimated that 380,000 guns a year are stolen from gun-owners. Data from the Bureau of Alcohol, Tobacco, Firearms and Explosives shows that licensed dealers lost 18,394 weapons in 2016. Stolen guns often find their way to dangerous criminals. Even if they are not stolen, unsecured guns are dangerous. The Centres for Disease Control and Prevention, a government agency, has reported that about 20,000 people under 18 were killed or seriously hurt in accidental shootings between 2004 and 2015. News reports suggest that children under four shoot about one person a week—often themselves.

The Johns Hopkins researchers classified secure storage as locked in a gun safe, cabinet or case, locked into a gun rack, or stored with a trigger lock or other device on the gun itself. Some states, including California, Connecticut and New York, require guns to be securely stowed if they are anywhere near people who are barred from possessing them. Massachusetts is stricter. If a firearm is not kept "secured in a locked container or equipped with a tamper-resistant mechanical lock or other safety device" the owner could face fines up to $20,000 and up to 15 years of imprisonment. The law seems successful at keeping guns out of the hands of minors. Only 9% of suicides among young people in Massachusetts involve a gun, compared with 39% nationally. The state's youth suicide death rate is 35% below the national average.

Soon after a mass shooting in Las Vegas last October, a poll found that 77% of those asked supported a requirement that all gun-owners should store their guns safely. Such a law would not have prevented that particular atrocity, nor will the other measures mentioned above avert every future suicide, homicide or mass shooting. That is a poor justification for doing nothing. ■

Debunking a Swiss gun myth

Guns and rösti

GENEVA

Switzerland offers a lesson in the benefits of tighter gun control

"PRO Deo et Patria", "For God and Country", is painted over the entrance of the Arquebuse shooting club. Members arrive clutching ear-protectors. A few carry backpacks with rifle barrels poking out. Gunfire echoes from the building, as pistols are fired on 25-metre and 50-metre ranges. Those with rifles pick out targets 300 metres away.

Since 1474 Geneva's male residents, obliged to defend the city, have met for regular weapons practice here. Jacques Vo-Thanh, smoking outside after training, says guns are "embedded in the social life". Though membership has declined, he estimates the club has 500 regulars and 2,000 retired members. Children as young as ten may learn to shoot. The government subsidises ammunition.

Pro-gun types in America have long pointed to Switzerland as a country with supposedly lax rules, widespread ownership of arms, proud hunting and shooting cultures and few resulting criminal problems. As of late last century some 40% of Swiss households had a weapon, usually a military-issue rifle or pistol in a cupboard. Almost all men, having been conscripts, were familiar with small arms. They kept weapons at home because they had to refresh their shooting skills each year.

Yet Switzerland is not a gun-lover's paradise. In fact, it is a model for the benefits of restricting gun use. Ownership rates have tumbled in this century, especially after the army cut the number of conscripts by four-fifths. It now puts recruits through psychological checks to weed out the violent, depressive or criminal. Soldiers may still store weapons at home, but no longer with ammunition. On leaving the army, ex-soldiers must be cleared by police before buying their military-issue weapons. As a result, fewer do so. Civilian buyers need police permits too, while juries screen applicants at shooting clubs. "It is a bit state and a bit social responsibility. It works very well," says Mr Vo-Thanh.

One spur to tighter rules was a mass shooting, in which 14 people died, in Zug in 2001. Public enthusiasm for guns has declined. Although voters rejected seven years ago a proposal to ban home-storage of weapons, fewer people do so. According to an estimate in 2016, only 24% of Swiss own guns. Increasingly it is the elderly who attend shooting clubs. Many store their weapons there.

The reduced availability of weapons has coincided with—and helps to explain—steadily falling rates of suicide and murder in which guns are used, as well as lower levels of all types of killings. The rate of gun homicides in 2015, 0.2 per 100,000 people, was roughly half the level of the late 1990s. In contrast, America's figure was 4.0; and over the same period it has barely budged.

Lexington | Stormy at the barricades

Why a quick-witted porn star is Donald Trump's most effective adversary

THE humourist P. J. O'Rourke once made these distinctions. "There is parody, when you make fun of people who are smarter than you; satire, when you make fun of people who are richer than you; and burlesque, when you make fun of both while taking your clothes off." Stormy Daniels's "Make America Horny Again" tour, which the porn star recently took to strip clubs in Texas and Florida, arguably constitutes a rare triple-whammy. And if power can be substituted for smarts, which Stephanie Clifford, as Ms Daniels is properly known, appears to have in abundance, the case is indisputable. Not since a Mikhail Gorbachev impersonator enticed a fawning Donald Trump onto 5th Avenue has anyone made such a monkey of the president.

Much has been made of a moment in West Palm Beach last month when Mr Trump's motorcade, en route between Mar-a-Lago and a golf club, roared past a strip joint advertising Ms Clifford's tour in neon lights. But irony did not die that night, as some have suggested. It is thriving at Ms Clifford's shows, which sound a lot like a Trump rally. Both feature stirring, slightly eccentric, entrance music; "Li'l Red Riding Hood" for Ms Clifford, who appears wearing a red cape; "Nessun Dorma" for Mr Trump, who wears a red tie. Both performers are over-the-top assertive and racing against time. (Fear of death is an under-considered explanation for Mr Trump's belligerent insecurity, and the 39-year-old Ms Clifford is now the oldest stripper in the club.) Both offer their fans a sugar rush of instant gratification. Mr Trump invites his to shout, "Lock her up!" Ms Clifford pours molten wax on herself.

Mr Trump's titillating, debasing speeches are the apogee of what a conservative columnist once described as the "pornificaton of politics". Ms Clifford, in her shows, but even more in her offstage comportment since news broke in January of a scandal linking her to the president, is in a sense the inverse. Immune to his bullying, she has emerged as a powerful emblem of Mr Trump's vulnerabilities. Benjamin Wittes, editor of the influential Lawfare blog, hails her as "the icon of our time".

There are three big reasons for Ms Clifford's effectiveness as a Trump-mocker. The first is that the star of "Big Busted Goddesses of Las Vegas" appears, through no plan of hers, to have put the president in serious jeopardy. That is not because of her alleged months-long affair with him, which took place long ago and reveals nothing new about Mr Trump. Rather, in the usual way of political sex scandals, it is because of the blundering way he, or his retainers, tried to cover it up. Two weeks before Mr Trump's election his lawyer, Michael Cohen, paid Ms Clifford $130,000 in return for an agreement not to speak of the alleged affair, which the president denies. When this was revealed, Mr Cohen claimed, almost incredibly, that he had taken the step on his own initiative, using his money. Ms Clifford then sued to be released from the non-disclosure agreement, claiming Mr Cohen had broken its terms by talking about it and the president had done so by failing to sign it. She has recorded an interview with CBS's show "60 Minutes", which is expected to air on March 25th.

This appears to have put Mr Trump in a bind. He can let Mr Cohen try to enforce the agreement with Ms Daniels, which might look like an admission of guilt and would risk her aggressive lawyer, Michael Avenatti, airing further revelations in court. Or he can let the matter lie. But that would signal to any other woman bound by a non-disclosure agreement with the president—and Mr Avenatti claims to know of two—that it can be safely ignored.

That would in turn risk highlighting Mr Trump's broader problem with women, including the 18 who have accused him of molesting them. Indeed, the striking degree to which Ms Clifford's case contains echoes of Mr Trump's wider legal troubles is another reason she is proving such a thorn in his flank. A hint that she might have certain mementoes of Mr Trump is also illustrative of this. It recalls speculation that Mr Trump's history of sexual indiscretion could leave him open to Russian blackmail, as was alleged by Christopher Steele, a former British spy. So too, the way Mr Trump seems to have used Mr Cohen as a blunt instrument, while keeping him at arm's length for plausible deniability, is a familiar pattern. This was evident last year in the president's cackhanded attempt to sack Robert Mueller, the special counsel investigating him, through two stages of intermediary.

Yet the main reason Ms Clifford is running rings around the commander-in-chief reflects what a nightmarish matchup for him she is personally. The president's recipe for political success is to appear more down-to-earth than his effete critics in the media, and so robustly transactional that his political rivals appear hypocritical by comparison. Yet Ms Clifford is no smarmy British comic or slippery senator. She is a self-made Republican-voting woman from Louisiana who has sex for a living. In a pre-agreement interview, she suggested she had indulged Mr Trump not because she was attracted to him ("Would you be?"), but because he had promised to make her a TV star. She out-Trumps Trump.

A storm in a DD-cup

Besides blunting the president's strengths, she also shows up his biggest weakness. He is at once thin-skinned and unembarrassable, a combination that explains most of his Twitter rages and boasting. After years of dealing with misogynist insults, by contrast, she appears so cheerfully thick-skinned as almost to be operating on a higher plane. This is also apparent on Twitter, where Ms Clifford dispatches the slurs Mr Trump's fans hurl at her with wry wit ("You know you're supposed to read that Bible and not smoke it, right?") and no tolerance for poor English. "Commas are our friend. Don't forget them," she advised one critic.

The effect is devastating, a rapier to the president's bludgeon. Ms Daniels has not merely ridiculed and perhaps imperilled Mr Trump more effectively than anyone else. She has done so, most crushingly of all, while coming across as perfectly pleasant. ■

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Peru

Odebrecht claims its biggest scalp

LIMA

After Pedro Pablo Kuczynski's short, tumultuous presidency, the country may calm down for a while

PERU'S president, Pedro Pablo Kuczynski, left office on March 21st much the way he had governed during his 20 months in power. He walked out of the massive doors of the presidential palace and started waving to onlookers before taking a call on his mobile phone and ducking into a car. It was a low-key exit for the former banker, who was elected with one of the slimmest majorities in recent history and had little support in congress or among the 30m Peruvians he governed. Most had little idea how Mr Kuczynski planned to help Peru become a solidly middle-class country with strong institutions, as he had promised. His administration, like his departure, seemed distracted.

What felled him, though, was his connection with Odebrecht, a Brazilian construction firm at the centre of multiple scandals across Latin America. In December congress obtained evidence that Westfield Capital, a company owned by Mr Kuczynski, had worked with Odebrecht while he was finance minister and prime minister in a government that awarded contracts to the company. He had repeatedly denied that he had had any contact with the firm. Congress, in which Mr Kuczynski's party has just 15 of the 130 seats, started impeachment proceedings.

Mr Kuczynski fought off that assault in December, apparently by striking a cynical deal. Kenji Fujimori, a congressman from the opposition Popular Force party, abstained along with nine others, which scuppered the impeachment. Days later, Mr Kuczynski pardoned Mr Fujimori's father, Alberto, a former president who was serving a 25-year jail sentence for human-rights violations. The agreement left Mr Kuczynski friendless. He had fought the election as a foe of *fujimorismo*, against the former president's daughter (and Kenji's sister) Keiko, who leads Popular Force. The pardon alienated his anti-Fujimori base without placating Keiko, who still controls the largest faction in congress (and expelled her brother from it).

Calm comes from Canada

Opposition congressmen resumed their attack this month, citing further evidence of questionable dealings with Odebrecht. Wilbert Rozas, from the left-wing Broad Front coalition, said the president "showed zero understanding of the need to separate politics from his business life". His downfall became inevitable on March 20th, when a video surfaced that showed Kenji Fujimori apparently promising another congressman public-works projects in his constituency in exchange for voting against impeachment. Mr Kuczynski's allies in congress then abandoned him.

In a seven-minute resignation speech, he blamed the opposition, saying it had undermined him from the day he took office. He accepted no responsibility himself.

With Mr Kuczynski gone, things may calm down. His successor is the vice-president, Martín Vizcarra, who was also serving as ambassador to Canada. As governor of the small southern region of Moquegua, he improved education (pupils in the region get the highest marks in Peru on standardised tests). He also brokered an agreement to develop a big copper mine between Anglo American, a mining company, and nearby communities, no easy task. He will be the first president in decades who has made his career outside the capital, which will appeal to a lot of voters.

Opposition congressmen forced Mr Vizcarra out of his job as transport minister in May as part of their campaign of sabotage against Mr Kuczynski. They are likely to treat Mr Vizcarra more gently now, pundits predict. Few want to face another general election, which could be triggered if the chaos continues.

Mr Vizcarra must show soon that he is different from his ill-fated predecessor. "He will fail quickly if he keeps the same kind of cabinet, with bland ministers who seem more interested in their business deals than governing," says Eduardo Dargent, a political scientist at the Catholic University in Lima. And he will have to prove that, unlike Mr Kuczynski, he can get things done. "When you ask people what the Kuczynski government did, they stare back at you. They have no response," says Mr Dargent. An early chance for Mr Vizcarra to shine will come on April 13th-14th, when Peru is due to host a regional summit. Donald Trump says he will attend.

The Odebrecht scandal will test Peruvians' faith in politicians and institutions. The company's former director in Peru testified in February that it financed campaigns for the last four presidents, including Mr Kuczynski. Mr Vizcarra must ensure that investigations proceed unimpeded, however painful the results. ■

Crime in Brazil

Mourning Marielle

RIO DE JANEIRO

The police have failed to control violence. The army is doing no better

ON THE sweltering afternoon of March 18th some 2,000 people crammed the narrow streets of Maré, a favela in the north of Rio de Janeiro, to protest against the murder of a friend. Marielle Franco, a city councillor who grew up in Maré, was shot dead four days earlier in the city's centre (along with her driver) after a meeting she had organised for young black women. "She was killed for trying to make things better," said Diony, a supermarket employee watching the protesters parade slowly through Maré.

The assassination of Ms Franco, a young, black, gay activist, has reverberated far beyond her birthplace. It was the subject of 3.6m tweets in 34 languages in less than two days. Thousands of people marched in cities across Brazil. In February the president, Michel Temer, made Rio's crime a national issue when he ordered the army to take control of the state's police, prisons and fire services until the end of this year. This is the first such intervention since the end of military rule in 1985. Ms Franco's murder will help keep crime uppermost in Brazilians' minds when they vote in elections scheduled for October.

Seventeen of the world's 50 most violent cities are Brazilian, according to Security, Justice and Peace, an NGO. In poor neighbourhoods, drug gangs battle for turf while the state stands by. In 2016 the number of murders nationwide was a record 61,600. Measured by its murder rate, the city of Rio does not even rank among the top 30 in Brazil. But the state of which it forms a part is uniquely dysfunctional. Three of its past four governors have been charged with corruption. Its government could not pay its bills in 2016 and was bailed out by the federal government.

Rio's "military police", its crime-prevention arm, says it has 2,000 fewer officers than it needs. Just half its fleet of patrol cars are in service. A community-policing scheme, which helped cut the murder rate in 2015 to its lowest level in 25 years, has been gutted. The state's penury weakens a police force already compromised by corruption. "There's practically no serious crime in Rio without police participation," says Luiz Eduardo Soares, a former federal secretary of public security.

Last year, with competition among drug gangs increasing, 6,731 people were killed in the state of Rio, the highest number since 2009. The city itself has ten times as many murders as London but less than half its homicide investigators.

Marielle Franco, now silenced

Mr Temer, weakened by allegations of corruption, has offered himself as Rio's saviour. In the past the army has reinforced police forces, but it has never before commanded them. Now Walter Braga Netto, a general, is in charge of Rio's security. The state is "a laboratory for Brazil", he says.

The deployment of the army made political sense. It allowed the federal government to avoid humiliation in a congressional vote on its most important economic measure, a constitutional amendment to reform the pension system. (Such amendments cannot be voted on during federal interventions.) Sending the army looked like a way to undercut support for Jair Bolsonaro, a demagogic congressman from Rio who believes that "a good criminal is a dead criminal." He is the second-most popular contender to succeed Mr Temer as president (after Luiz Inácio Lula da Silva, a left-wing former president who has been convicted of corruption and may not be able to run). Three-quarters of Brazilians support the army's intervention.

But there is scant reason to believe that the army will succeed where Rio's police have failed. It has "limited training in arrests, crowd control or street-level operations that minimise casualties", says Robert Muggah of the Igarapé Institute, a think-tank. Reluctant to brave the gangs, the army has so far mainly patrolled the streets by day. In one favela, Vila Kennedy, it has removed barricades put up by gangs to allow state services to enter. To do much more will require extra money. The federal government has said it will provide the army with 1bn reais ($300m) to police Rio; the army says it needs 1.5bn. Its deployment does nothing to reform the police. Four-fifths of Rio's residents say that the army has made no difference so far.

Ms Franco, a member of a small left-wing party, was a fierce critic both of the army's deployment and of the police. She was a member of a city-council commission that oversees the intervention and she accused the police of abuses in the weeks before her murder. On the day before she died she tweeted her suspicion that the military police had killed a young black man, Matheus Melo, as he left church.

Many suspect that the murderers of Ms Franco are members of "militias" controlled by serving and former police officers, which run extortion rings in some favelas. In 2011 Patrícia Acioli, a judge who jailed around 60 police officers belonging to militias and death squads, was shot dead. Six military-police officers were convicted of the crime.

Ms Franco's murder, and the suspicion that police may be the culprits, have changed the tenor of Brazil's debate about crime. Mr Bolsonaro has said nothing about the killing, presumably because in its wake his harsh rhetoric would alienate centrist voters whose support he will soon need. Mr Temer's military response is starting to look simplistic. Rio, along with other cities and states, needs healthier finances, better-run police and schools and services that steer children away from crime. With luck, voters will demand that from the politicians they elect in October. ■

Canada

First family's fixer-upper

OTTAWA

Why Justin Trudeau is homeless

MOST heads of government have an official residence. It is normally an uncontroversial perk. Not so in Canada. Since 1951 the country's prime ministers have lived in 24 Sussex, a 34-room limestone mansion in Ottawa. Justin Trudeau, the current prime minister, did as a child, when his father, Pierre Trudeau, had the job. But he has taken up residence at Rideau Cottage on the neighbouring estate of the governor-general, the queen's representative in Canada. The problem is that 24 Sussex is too run-down to house Mr Trudeau, his wife and three children. And he does not want to take the political heat for approving repairs.

No one doubts that the 150-year-old house, built by a lumber baron, needs work. Ceilings and walls are impregnated with asbestos, a mineral so carcinogenic that Canada will ban its export next month. Some of the paint is lead-based. The place is infested with mice, which may be why Mr Trudeau's predecessor, Stephen Harper, liked cats. The auditor-general warned a decade ago that the plumbing was clapped out, the 50-year-old knob-and-tube wiring was near full capacity and heat was escaping through loose win-

dows. The house needed C$10m ($10m) in repairs immediately, she said.

Recent prime ministers have preferred to cope with the quirks of a house that last got a big renovation nearly 70 years ago. Jean Chrétien, who governed from 1993 to 2003, used buckets to catch rain. He blew a fuse when he plugged in a heater to supplement the feeble central heating. Paul Martin, his successor, made light of his discomfort on a satirical television show by visiting Canadian Tire, a hardware store, to buy plastic wrap for the windows. Mr Harper, a fiscal conservative, said his family would wear sweaters to ward off draughts. When he left, his moving boxes carried mould warnings.

Unlike the White House or 10 Downing Street, 24 Sussex has no government function. It is just a residence, managed by the National Capital Commission (NCC), a government agency. Mr Trudeau works in an office block across the street from Parliament. Soon after he became prime minister in 2015 the NCC suggested several options for housing Canada's first family, from extensive repairs on 24 Sussex to knocking it down and building an environmentally friendly showpiece residence in its place. Suggestions have poured in from ordinary Canadians. A home-makeover reality television show called "Reno my Reno" offered to help fix the house up.

But Mr Trudeau is unconvinced. No prime minister wants to be accused of spending taxpayers' money to make his life more pleasant, he said recently. Mr Martin, who endured 24 Sussex for two years, suggests setting up a non-political body to keep up the house. Neither Mr Trudeau's office nor the NCC will say what they think of that idea. He seems resigned to spending his prime ministership as the governor-general's guest while his childhood home moulders across the street. ■

Bello | The battle for the conurbano

Mauricio Macri's attempt to do away with Argentina's tradition of handouts for votes

JUST off Leonardo da Vinci Avenue, a long street of modest shops and foul-smelling gutters in the district of La Matanza outside Buenos Aires, stands La Juanita, a co-operative. Founded by unemployed workers in 2001, it occupies a former school. It runs a free kindergarten, a microcredit programme, a call centre and, nearby, a large community bakery, all with the aim of helping the unemployed get work. Since Mauricio Macri, a former businessman of the centre-right, was elected as Argentina's president in 2015 La Juanita has become part of a political experiment.

La Matanza is in the heart of the *conurbano*, a sprawl of poor and crime-ridden suburbs around Argentina's capital which contains some 10m people. It was a bastion of support for Cristina Fernández de Kirchner, the populist Peronist president from 2007 to 2015. Peronism long controlled the *conurbano* through clientelism, providing handouts in return for political loyalty. This system stopped offering social mobility, argues Héctor "Toty" Flores, a founder of La Juanita. The *conurbano* has become home to an underclass preyed on by drug gangs and dirty cops.

Mr Macri has attracted attention for his effort to stabilise and open Argentina's economy while avoiding shock therapy. Yet in the medium term his impact on his country's politics may be even bigger. The victory of Mr Macri's Cambiemos ("Let's Change") coalition in a legislative election last October means that everybody except diehard *kirchneristas* now thinks he will become the first elected president who is not a Peronist to finish his term since the movement was founded by Juan and Eva Perón in the 1940s. Barring accidents, he has a good chance of winning a second term in 2019. "He has created a new equilibrium in the party system," says Juan Cruz Díaz, a political consultant.

It helps Mr Macri that an ally, María Eugenia Vidal, unexpectedly won election as governor of Buenos Aires province (which includes the *conurbano*) in 2015 against a weak *kirchnerista* candidate. Mr Macri and Ms Vidal promise a new kind of politics, with two pillars.

The first is more efficient delivery of public services to places that lack them. Mr Macri has built a rapid-transit bus line in La Matanza. "People didn't even demand sewerage here because they couldn't get it," says Mr Flores. "In a year they will have it." Officials say that they are able to spend more on public works, even while reducing the fiscal deficit and taxes, because they are cutting out waste and corruption. Marcos Peña, Mr Macri's chief of staff, cites a big tender for medicines this month, which he says came in 80% below the previous cost.

La Juanita now gets official support. A dozen of its members draw government salaries. The labour ministry has set up a small office there to help the unemployed draw up CVs. An IT training school will open next month. Ms Vidal's people see La Juanita as a model. "If they can do it here, we can do it in other places," said Gabriela Besana, a visiting provincial legislator.

The second change is philosophical. The state will do different things. Mr Macri's people stress pre-school education and changing the physical and social environment in poor areas. The government will soon require jobless welfare recipients to attend school or training programmes. "We don't ask anything [else] in return," says Mr Peña. "Clientelism demands the subjection of the poor, rather than lifting them out of poverty," he adds. "Our main aim is to offer these people the dignity of the middle class."

Plenty could go wrong. Cambiemos has won over former Peronist political operators and risks lapsing into the same methods. La Juanita could itself become a vehicle for clientelism. Mr Flores is a congressman for Cambiemos. Then there is corruption. "Off the record, this is a very honest government," says a political scientist, who fears any such statement in Argentina is a hostage to fortune.

Mr Macri's bet on economic gradualism could also be derailed. The middle class—Mr Macri's own political base—has felt the squeeze of higher utility bills as subsidies are withdrawn, but not yet many benefits from an economy that is growing at a rate of less than 3% per year. On the streets of La Matanza scepticism still outweighs hope. The divided Peronists may unite around more moderate policies. Perhaps the biggest risk is that success goes to the heads of Mr Macri's team of bright young technocrats.

Yet the potential prize for Cambiemos—and for Argentina—is great. Mr Macri is building a movement founded on the values of opportunity and aspiration, not dependence. If he succeeds, his example will echo around Latin America.

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Egypt's election

Sisi v the sycophant

CAIRO

Egypt's sham election features two candidates, but no choice

SINCE one in four Egyptian voters cannot read, political candidates pick symbols to identify themselves on the ballot. Abdel-Fattah al-Sisi, the president, chose a star. It shines down from billboards across the country alongside his ubiquitous visage, smiling on a farm or peering through binoculars aboard a warship. His opponent in the coming election, Moussa Mustafa Moussa, chose an aeroplane. Walking past a poster of Mr Moussa, a man laughs at his choice: "It's because he'll need to fly away if anyone votes for him."

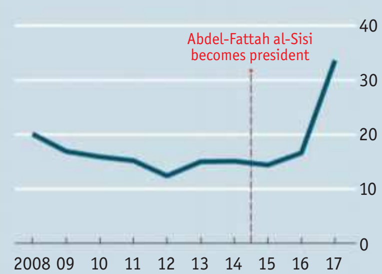
There is little else to say about the election itself, which begins on March 26th and lasts three days. Mr Sisi will win. His opponent has lived up to a promise not to challenge the president. Across the whole of Cairo your correspondent has seen only four banners in support of Mr Moussa. The only question is whether the electorate will turn out in greater numbers than they did for the last presidential election, in 2014, when 47% voted. Mr Sisi's critics have called for a boycott.

This will be Egypt's ninth national ballot since the revolution that toppled Hosni Mubarak, a previous strongman, in 2011. It is also the most depressing. The first votes were fair, with raucous campaigns and a range of candidates. Egyptians handed the Muslim Brotherhood, an Islamist group, the presidency and a plurality in parliament in 2012. But in mid-2013 Mr Sisi, then the defence minister, overthrew the Brothers in a coup that had popular support. Now Egypt is back to the days of strongmen like Gamal Abdel Nasser, when elections were for show. The pointless Mr Moussa was the only candidate allowed to run. Others were arrested or intimidated into dropping their bids.

Mr Sisi inherited a mess. Investors and tourists had fled after years of turmoil. The central bank spent more than half its foreign reserves propping up the Egyptian pound. The president deserves some credit for taking painful steps to stabilise the economy. He has cut fuel subsidies and introduced a value-added tax in order to trim the budget deficit. He also allowed a big devaluation of the currency in 2016. Foreign reserves are now above their pre-revolution levels. Annual inflation is down from its peak of above 30%. Tourists are trickling back, too: 8.3m visited Egypt last year, up from a low point of 5.4m in 2015.

Sisi's soaring legacy

Egypt, external debt, % of GDP



Source: Haver Analytics

But Mr Sisi took most of these steps as a last resort, to secure a much-needed loan from the IMF. His broader economic vision is muddled. Private-sector job growth is minimal, while the armed forces play an ever-larger role in the economy. The men in uniform have overseen the construction of nearly two dozen new highways. When mothers complained of baby-formula shortages in 2016, Mr Sisi put the army in charge of distributing it. Meanwhile, public debt has surged: Egypt owes $81bn to foreign creditors, up from $46bn when Mr Sisi took office. The state is pouring much of this into dubious mega-projects, such as a new capital city and an unnecessary expansion of the Suez Canal.

In February the central bank reduced its main interest rate by one percentage point, the first cut since the devaluation. But, at over 18%, it is still a big obstacle for businesses wanting to invest. High prices have caused many Egyptians to spend less. Meat has become an unaffordable luxury for the poor. The middle class has cut back on everything from groceries to education.

As discontent simmers on the mainland, Sinai boils over. The army has been tormented by a jihadist insurgency in the northern part of the peninsula. Egypt's allies in the West support it with a steady stream of arms, but many are ill-suited for the battle. The conflict, which has spilled into other areas and involves regular massacres of civilians, undermines Mr Sisi's claim to have stabilised Egypt.

In the last days of Mr Mubarak's rule, an oft-repeated joke was that God dispatched the angel of death to fetch the president, but he was caught and tortured by state security. Weeks later, when Azrael returned to heaven, God blanched: "You didn't tell ▸▸

them I sent you, right?" Still, Mr Mubarak allowed some political debate during his 30-year reign, if only as a safety valve.

No one jokes about Mr Sisi's repression. Tens of thousands of political prisoners languish in jail. Last year Mr Sisi signed a law that bars NGOs from working on human rights and restricts the funding even of apolitical charities. Journalists are arrested and harassed by the police. The death penalty, in effect suspended after the revolution, is back. Mr Sisi accelerated executions after an attack in November on a mosque in North Sinai that killed more than 300 people. Almost every week since, the state has led groups of mostly Islamist prisoners to the gallows on what activists call "Hanging Tuesdays".

Yet for all this, Mr Sisi's grip on power is not secure. Another revolution is unlikely, but he could face a challenge from within, by military and business elites unhappy with his policies. Sami Anan, a former army chief, briefly tried to run for president. He accused Mr Sisi of undermining civilian government and placing too big a burden on the army. Though he was arrested within days, his attempt was a sign of internal dissent.

This should, anyway, be Mr Sisi's last election, since the constitution allows only two four-year terms. Some MPs have offered to amend it. But even many ardent supporters think Mr Sisi should step aside after his second term and make way for a successor. As the chairman of a private bank puts it: "Even if you love mango, you cannot eat mango all day long." ■

Kurdish women in Syria

Where the fighters are female

QAMISHLI AND DARBASIYAH

A short history of Kurdish women on the front lines

WHEN Anna Campbell heard that Kurdish women were fighting the jihadists of Islamic State in Syria, she left her job as a plumber in Britain and joined them. Ms Campbell (pictured), who was privately educated, said she wanted to defend the "revolution of women" in Kurdish-held parts of the country—even though the British government regards such volunteers as, in effect, terrorists. On March 15th a missile killed her as she fought with the Women's Protection Units (YPJ), the Kurds' all-female militia, against the Turkish army.

A British warrior abroad

Kurdish women first took up arms in the early 1990s, as members of the Kurdistan Workers' Party (PKK), which has waged a decades-long war for self-rule in Turkey. Inspired by Murray Bookchin, an obscure American philosopher, Abdullah Ocalan, the PKK's leader, sought to empower his female comrades. "The 5,000-year-old history of civilisation is essentially the history of the enslavement of women," wrote the now-imprisoned Mr Ocalan, whose ideas are also embraced by Syria's Kurdish leaders.

The first volunteers struggled, amid mockery and abuse by the men in their ranks. Few were given weapons. But the YPJ is now celebrated for its battlefield prowess; some women even command men. In January a female fighter blew herself up to destroy a Turkish tank. The death of another sparked outrage when Syrian rebels fighting alongside Turkey mutilated her body.

Those who join the YPJ must swear off sex and romance. They are like fighting nuns, says a Dutch academic. That has won over conservative Kurdish men, many of whom oppose other forms of progress for women. Over their objections, the ruling Democratic Union Party has banned forced marriages and polygamy. Honour killings and domestic abuse are harshly punished. Party rules mandate that women make up at least 40% of every governing body and that each is headed by a man and a woman.

Kurdish children in Syria are taught that self-rule will come only after the oppression of women stops. Yet Kurdish women enjoy more freedom in Turkey, in part because they are better educated. For Syrian Kurdistan to live up to Ms Campbell's hopes for the region, more progress must occur off the battlefield.

Turkey takes Afrin

Where next?

ISTANBUL

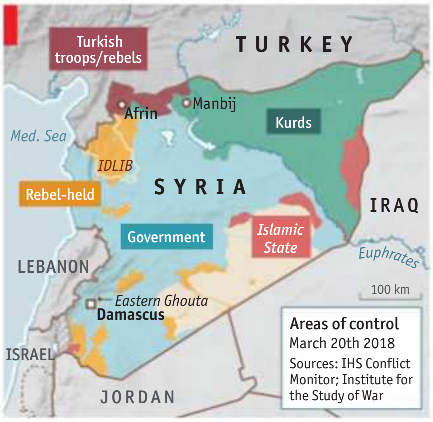
After capturing Afrin, the Turkish army looks for new targets in Syria

FOR President Recep Tayyip Erdogan, the timing of Turkey's victory in the Afrin region of northern Syria could not have been better. After a two-month offensive against Kurdish militants, Turkish troops took control of the enclave's main town on March 17th. The next day Turkey celebrated the anniversary of the battle of Gallipoli, the only big Ottoman victory of the first world war. True to form, Mr Erdogan rolled the two conflicts into one, accusing Western powers of backing the Kurdish forces against Turkey. "In Gallipoli they attacked us with the most powerful army," he said. "Now that they do not have the courage to do so, they come at us with the world's basest, bloodiest, specially trained and equipped terrorist organisations."

Capturing Afrin was easier than expected. By the time Turkish tanks rolled into the main town, the Kurdish militia known as the People's Protection Units, or YPG, had melted away. Nearly 200,000 residents had already fled, according to the Syrian Observatory for Human Rights. The Britain-based monitoring group says 289 civilians died over the course of Turkey's offensive, along with more than 1,500 Kurdish fighters and 46 Turkish soldiers. America and Germany have condemned Turkey for adding to Syria's misery. But Mr Erdogan dismisses their criticism. "We have not caused a single civilian to bleed from his nose," he says.

Turkish officials say they now intend to bring the war against the Kurdish militants to Syria's north-east and Iraq, where the YPG's mother organisation, the Kurdistan Workers' Party (PKK), has bases. Turkey does not distinguish between the two groups. It has been fighting the PKK, which seeks self-rule in Turkey, for over three decades. But there is a big problem with Turkey's plans. In the Syrian Kurds' eastern strongholds, which stretch from Manbij to the Iraqi border (see map), they are flanked by as many as 2,000 American troops. The YPG, backed by America's air force, has pushed the jihadists of Islamic State (IS) to the brink of defeat. Now Turkey wants America, its NATO ally, to get out of the way so that it can go after the YPG, considering it no less a threat than IS.

Manbij may hold a solution—or become a flashpoint. America long ago promised Turkey that Kurdish forces, who wrested the ethnically mixed town from IS in 2016, would withdraw. They have not. America sees them as crucial to security in



Areas of control
March 20th 2018
Sources: IHS Conflict Monitor; Institute for the Study of War

the area. A deal might see the YPG pull back to east of the Euphrates river, while Turkey and America work with local leaders to keep the peace.

The other pressing question is what Turkey will do in Afrin. Mr Erdogan has suggested returning it to its "rightful owners", raising fears that he may use it to settle some of the 3.4m (mostly Arab) Syrian refugees living in Turkey; or to absorb future refugees from Idlib, a rebel-held province that is under attack by the regime of Bashar al-Assad, Syria's president.

Mr Assad's forces are close to capturing rebel-held Eastern Ghouta, a suburb of Damascus. Syrian bombs have killed at least 1,400 civilians in the area in the past month. Similar massacres are expected once the regime and its Russian allies focus their attention on Idlib. "The refugee exodus this would produce is something Turkish policymakers would prefer to deal with outside Turkey," says Ahmet Han of Kadir Has University in Istanbul. Afrin might offer them a chance to do just that. ■

Loans, trains and automobiles

Kenya's white elephant

MOMBASA

A new Chinese-built railway is off to a bad start

WHEN Kenya launched its new railway last year, connecting the coastal city of Mombasa to the capital, Nairobi, passenger tickets sold out. Travelling between the country's two biggest cities overland had meant crowding into a bus for 12 hours, or riding the old British-built railway, which might have taken 24 hours. The new line, run by Chinese engineers who wander up and down the carriages, has cut the journey to between four and six hours, depending on the number of stops. The seats are comfortable and, at just 700 shillings (about $7), affordable. Lucky passengers see elephants along the way.

Shuttling passengers, however, is not what the new line was built for. When Kenya borrowed $3.2bn from China for the railway in 2014, the aim was to move freight efficiently between the capital and the port at Mombasa, 484km (301 miles) apart. Unlike the passenger service, the cargo one has been a disaster. The second train out of Mombasa arrived a day late, because it didn't have enough goods to leave the port. Passengers may find the biggest elephant on their journey is the white one they are riding.

In theory the line should move about 40% of the freight coming inland from Mombasa. The cargo is loaded straight from ships onto trains, which take it to a depot near Nairobi. There it is processed by customs officials. The goal is to relieve congestion on the roads and lower transport costs. One day, it is hoped, the railway will connect all of east Africa. For now, officials would settle for enough revenue to cover the running costs and repay the loans.

But getting importers to use it is proving harder than expected. In its first month the line moved just 1,600 containers out of roughly 80,000 processed in Mombasa. Though the trains go faster than lorries, the line is far less efficient at moving cargo, says William Ojonyo of Keynote Logistics, a Nairobi-based cargo-clearing firm. There have been delays in loading trains. Customs processing at the inland depot is less reliable than in Mombasa. "We are more comfortable dealing with the devil we know, the container on a truck," he says.

Fees were cut after the first slow month, but traffic did not improve much. On March 1st James Macharia, the transport secretary, sacked 14 out of 16 heads of department at the Kenyan Port Authority, alleging that "cartels" had been obstructing the new railway. Cargo that is not directed to a specific clearing depot in Mombasa has been ordered onto the railway automatically, regardless of its final destination. Importers have arrived in Mombasa to pick up containers, only to find that they have been sent to Nairobi.

Few in Mombasa are pleased by the idea of cargo being sent straight to the interior, bypassing the armies of agents based in the port city. Hassan Joho, Mombasa's governor, a fierce critic of the new railway, has stakes in two container-storage depots in the city, which the railway could undermine. By moving freight straight to Nairobi, "you're killing the economy down here," says Mr Joho's spokesman.

A bigger issue than cartels in Mombasa ought to be economics. Even if traffic increases, the line will probably not make enough money to repay its debts. In 2013 the World Bank said that a new railway would be feasible only if it were able to move at least 20m tonnes of cargo a year, just about everything that goes through the port. At best, the new line will transport half of that. Some fear that it may not make enough to cover its running costs. If the authorities then skimp on maintenance, the railway could deteriorate quickly.

Before the new line Kenya already had a functional railway—the old British one. In the 1980s it moved about 5m tonnes of cargo a year. It could have been refurbished for perhaps a quarter of the cost of building a new one. But that would not have come with a big Chinese loan or the cash that was splashed out on subcontracts and the land purchases needed for the new line. Some cynics in Nairobi say that building the railway was a way to get a loan, rather than the other way round. ■

Trade in Africa

Opening the market

KIGALI AND ABUJA

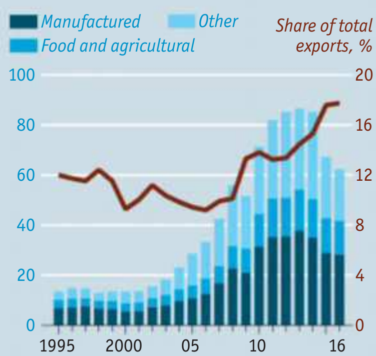
African countries have signed a trade deal, but not everyone is on board

"LET'S get together," sang the choir to the rhythm of Bob Marley, as a succession of African leaders signed an ambitious, continent-wide free-trade agreement in Kigali on March 21st. Although all 55 members of the African Union (AU) had been involved in negotiations around the grandly named Continental Free Trade Area (CFTA), not all were ready to sign as one. On the day, 44 put pen to paper. Among the holdouts was Nigeria, Africa's largest economy. Paul Kagame, Rwanda's president and the host of the AU summit, had no time for sceptics. "Some horses decided to drink the water. Others have excuses and they end up dying of thirst."

The logic of the deal is sound. Trade in Africa is still shaped by relationships and infrastructure dating back to the colonial era. Countries mostly sell primary commodities to other continents. Only 18% of their exports are traded within Africa, ▸▸

Money for yarn

Intra-African trade, exports of goods, $bn



Source: UNCTAD

where they often face high tariffs. The CFTA is meant to change that by creating a "single continental market for goods and services". UNCTAD, a UN agency, reckons that eliminating import taxes between African countries would increase regional trade by a third and lift African GDP by 1% over time. Currently, nearly half of this trade is in manufactured goods. Services would also be opened up.

But not everyone is convinced. Muhammadu Buhari, Nigeria's president, cancelled his flight to Kigali amid domestic pressure. An official says Nigeria was given just a few days to read the text, which he worries will hurt incumbent businesses.

Some protectionists fret that importers will slap "Made in Africa" labels on goods from elsewhere. "It will kill our industry and kill our jobs," says Ayuba Wabba of the Nigeria Labour Congress. Such instincts run deep in Nigeria. Its biggest company, Dangote Cement, was nurtured with import restrictions, which shielded it from foreign competition. Chiedu Osakwe, Nigeria's chief negotiator, is nevertheless confident that his country will sign in due course. Big countries such as Nigeria stand to gain most from the deal, which will help their firms expand regionally.

Many of the details of the accord are still to be agreed upon. Countries are supposed to eliminate tariffs on a list comprising 90% of products (although they have not yet agreed what will go on this list). In practice, however, that could allow them to leave unchanged duties on most of their current imports, which are concentrated in a narrow range of goods.

Tariffs are not the most important barrier to trade. A bigger obstacle is that standards and licences are different across Africa. Take the example of a large South African retailer with stores elsewhere on the continent. It has a big warehouse where employees take products such as tubes of toothpaste out of the cartons that are used in South Africa and repack them into ones that comply with labelling rules in other countries. Red tape also slows things down. The Trade Law Centre, a South African think-tank, looked at the time taken for customs and port handling in Africa and in Singapore, and then imagined closing the gap by a fifth. The economic gains would be roughly double those expected from eliminating tariffs. The CFTA will try to lower these hurdles to trade, though there is little sign of the EU-style machinery that makes Europe's single market work.

Big plans can go stale. A mooted free-trade area for the Americas is now defunct. This one will come into force only when it has been ratified by 22 signatories. Trade patterns will not change until countries start making things that their neighbours want to buy. But some countries are galloping ahead, hopeful the rest will catch up. ■

Nigeria's insurgency

Bringing back the girls

ABUJA

A sudden conclusion to a horrific kidnapping

IT WAS a crisis that ended as suddenly as it began. On the morning of March 21st gunmen from Boko Haram, a jihadist cult, swept back into Dapchi, a remote town in north-east Nigeria, and dropped off most of the 110 schoolgirls they had snatched a month earlier. The return was a rare victory for Muhammadu Buhari, Nigeria's president. It is also a sharp contrast to the kidnapping of 276 girls from Chibok, another remote town, in 2014. Many of them remain in captivity.

The abduction of the "Chibok girls" by Boko Haram drew international attention and came to define the administration of Mr Buhari's predecessor, Goodluck Jonathan: incompetent, detached and corrupt, unable even to provide security to threatened schools. That played no small part in Mr Jonathan's defeat at the ballot box in 2015, the first by an incumbent president since the end of military rule in 1999.

A year ahead of presidential elections scheduled for February, the Dapchi kidnapping seemed as if it might be a similar millstone for Mr Buhari. The former general had campaigned on a pledge to end an insurgency in which thousands of people have been killed and more than a million have been forced from their homes. Since he came to power, the army has made progress in driving the insurgents away from the main towns and roads in the north-east of Nigeria. But it has not secured large areas of the countryside.

The government fumbled its initial response to the kidnapping. Amnesty International, a human-rights group, says the army did not respond to multiple calls warning that a convoy of insurgents was travelling towards (and asking for directions to) the school in Dapchi.

But thereafter the government moved more quickly. Sources say that the army, working with intelligence agencies using drones and satellite imagery provided by Western governments, blocked the routes the kidnappers were trying to use to escape across the border into Chad and their strongholds on islands in Lake Chad.

Denied their favoured haven, the kidnappers were boxed in to the inhospitable terrain of rural Yobe State and cut off from the bases of other Boko Haram factions in the Sambisa forest. "We were able to create an environment where dialogue was able to resolve the situation quickly from a group that ran out of options," says a security official in Abuja.

No arrests have been made in connection with the kidnapping. Lai Mohammed, Nigeria's information minister, says no ransom was paid, nor were prisoners released in exchange for the girls.

Although the immediate crisis over the kidnapping is drawing to a close, it highlights the many security challenges facing Mr Buhari's government. Large parts of the north-east are lawless, with only the lightest of government footprints. Farmers and villagers still crowd into camps or big towns for safety. Many are unable to till their fields. Farther south, in the Middle Belt, bloody clashes occur regularly between herders and farmers. To bring peace Nigeria needs to focus not just on its army, but on rebuilding the state in those parts of the country where it has failed. ■

On their way home

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Sanitation in Bangladesh

Beating the bugs

TRISHAL

How one of Asia's poorest countries vanquished enteric disease

IN THE 27 years since he became headmaster of a school in Trishal, in northern Bangladesh, Mohamed Iqbal Baher has noticed some changes in his pupils. Although boys and girls are often absent because they are helping their parents in the fields, they miss fewer lessons because of illness. Mr Baher does not recall an outbreak of cholera in the past ten years. And, although he cannot be sure, he thinks that pupils are taller than they used to be.

If so, it is probably because they were healthier infants. In 1993-94, 14% of Bangladeshi babies aged between 6 and 11 months had suffered an attack of diarrhoea in the previous two weeks, according to their parents, who were responding to a household survey. That is an important stage in a child's development, but also a period of great vulnerability to stomach bugs, as babies are weaned. By 2004 the proportion of stricken babies had fallen to 12%, and in 2014 it had dropped below 7%. Stunting—being extremely short for one's age—has declined roughly in parallel.

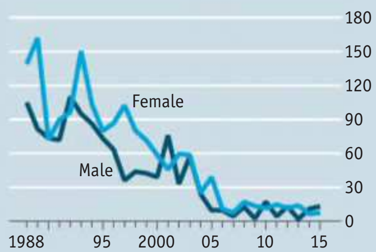
The abating of enteric disease, together with the growing use of salty rehydration solutions to treat it, has spared many lives. In Matlab, a part of Bangladesh with good data, deaths from diarrhoea and dysentery have dropped by about 90% since the early 1990s (see chart). That decline helps to explain how Bangladesh has pulled off a remarkable feat. Though it is still one of Asia's poorest countries, with only half the GDP per person of India, Bangladesh now has a child-mortality rate lower than India or Pakistan, and indeed lower than the world average.

The most obvious explanation for Bangladesh's success is the proliferation of outhouses in Trishal and other villages. Made of tin or palm fronds, these conceal simple pit latrines—concrete rings sunk into holes in the ground, with toilets on top. Between 2006 and 2015 a sanitation programme run by BRAC, a charity that is ubiquitous in Bangladesh, helped more than 5m households build a toilet.

What charity started, village one-upmanship has accelerated. A group of women in Trishal explain that a household toilet is now a symbol of respectability, to the extent that marriages have been called off when a groom's family is discovered not to have one. Even in the districts where BRAC operates, two-thirds of the latrines built between 2006 and 2015 were constructed not by charities or the government, but by ordinary people.

Latrine dream

Bangladesh, Matlab study area, diarrhoea and dysentery death rates, per 100,000 people



Source: International Centre for Diarrhoeal Disease Research

More important, people use the latrines. According to the World Health Organisation (WHO), the proportion of Bangladeshi households that defecate in the open has fallen to zero. That is probably overstating things. Other studies suggest that about 5% of households still resort to woods or roadsides, or use toilets overhanging rivers. But Bangladesh has certainly done better than other poor countries. According to the WHO, 40% of Indians defecate outdoors. The Indian government, which is in the midst of a fierce campaign against open defecation, disputes that, and claims to have cut the number of rural people relieving themselves outside from 550m to 250m since 2014. Either way, that is still far behind Bangladesh.

Janir Ahmed, a sanitation specialist at BRAC, says that villagers were reluctant to use outhouses at first. They complained about the smell and felt uncomfortably enclosed. BRAC discovered that the poorest people were more willing to listen to experts. The charity built latrines for them, then gently (and sometimes not so gently) shamed wealthier villagers into following suit. Mushfiq Mobarak, an economist at Yale University who has researched sanitation decisions, suggests that better-off people may be more likely to copy poor people than the other way round. If a wealthy person has something, you do not necessarily feel ashamed not to have it.

The other striking thing about Trishal is the abundance of drinking water. This village of 270 households has 33 water pumps. As with the outhouses, the great ▸▸

majority were paid for privately. Bangladesh has a thriving boring industry—teams of men who will drill tube wells dozens or hundreds of feet deep, depending on the height of the water table and levels of arsenic in the area. The water pumps are unnervingly close to the outhouses. But Mohammad Sirajul Islam, of the International Centre for Diarrhoeal Disease Research in Bangladesh, suggests that this does not matter. By testing groundwater around pit latrines, he has found that bugs can barely travel more than two metres underground.

Mr Sirajul Islam has also discovered something else. Whereas groundwater is pretty clean, the water that comes out of pumps is not. And the water stored in people's homes is often filthy, as is the food that mothers have set aside to feed to their babies. If Bangladeshis can be persuaded to wash water pumps, pots and their hands, and to reheat food that has been allowed to cool down, all as a matter of routine, rates of enteric disease ought to decline even further. A mass killer has already been reduced to the level of a hazard. It could yet be turned into an occasional nuisance. ■

The judiciary in the Philippines

Impeachy keen

MANILA

The chief justice of the Supreme Court faces attacks on two fronts

IN THE back room of a chicken restaurant famous for its banana ketchup, the small, neat, bespectacled chief justice tells a swarm of journalists that she has done her best "to fight for justice". Maria Lourdes Sereno has been having to fight harder than usual in recent weeks. Congress is initiating impeachment proceedings against her, while the government is attempting to nullify through the courts her appointment as chief justice almost six years ago. On March 1st she took a voluntary leave of absence from the Supreme Court while she tries to defend herself. It is not yet clear when she will return.

Ms Sereno's detractors have come up with no fewer than 27 complaints against her, from claiming unduly lavish expenses to failing to file all the necessary paperwork during her previous job as a university professor. But many believe the real reason for the campaign to remove her is her outspoken criticism of the government's violent campaign against drug-dealers and -users and its extension of martial law on the troubled island of Mindanao. Rodrigo Duterte, the president and architect of both policies, has denounced her as "the kingpin of the judiciary".

The president says he is not responsible for her troubles, and that impeachment cases are "not my style". But his supporters in Congress are pressing on, regardless. On March 19th a committee of the House of Representatives approved six articles of impeachment against Ms Sereno. The full House is expected to vote to send her for trial in the Senate soon. Ms Sereno's sympathisers there will be wary. "Dissent is seen as a destabilisation," explains Francis Pangilinan, an opposition senator. Still, it remains unlikely that two-thirds of the 24 senators will find her guilty, the margin required to remove her from office.

The uncertain situation in the Senate may explain why the government has opened another front against Ms Sereno. The solicitor-general has filed a petition at the Supreme Court in recent weeks to nullify her original appointment as the country's top judge. He argues that her failure in certain years during her two-decade career at the University of the Philippines to file annual financial declarations required of all government employees should have made her ineligible for office. (Ms Sereno filed the mandatory statements of her assets, liabilities and net worth only in 1998, 2002 and 2006).

Under the constitution, certain officials, including the chief justice and the president, can be removed from office only through impeachment. Critics therefore question the legality of the petition as a ploy to get around this stricture—although only one of Ms Sereno's 14 colleagues on the Supreme Court has objected. Ms Sereno also ridicules the idea that her sporadic filings constituted a deliberate effort to conceal ill-gotten riches. "You cannot accumulate wealth at the University of the Philippines. Your problem is unexplained poverty, not hidden wealth!" she jokes.

Given the uncertain prospects of both the impeachment and the petition, it would be far more convenient for the government if Ms Sereno were simply to resign. On March 12th dozens of legal colleagues published a statement urging her to do so. She says she has no intention of acceding to their request. The row threatens to distract lawmakers from other pressing matters, such as tax reform and the president's plan to institute federalism by amending the constitution.

How do you solve a problem? Fire Maria

The furore also comes at a tricky time for Mr Duterte's administration. Filipinos are fuming at a shortage of subsidised rice. The president's joke that the Philippines should become "a province" of China has not gone down well, either. A controversial procurement contract has already led to the removal of the head of the navy and is causing trouble for an aide to Mr Duterte.

Ms Sereno denies any wrongdoing, but has yet to give a detailed response to all the allegations against her. She says she is preparing a thorough defence and welcomes the opportunity to clear her name. Turning a vocal critic into the star of a televised courtroom drama might do the government more harm than good. Then again, it is unlikely to have Ms Sereno's sympathy if she manages to remain in office. ■

Advertising in Pakistan

Blank slates

KARACHI

Why billboards are under attack in the business capital

GONE are the 20ft-long bars of Dairy Milk. Gone the models with Veet-shaven legs. And gone the handsome cricketers, inviting you to open a refreshing can of Pepsi. Over the past 20 months officials have stripped Karachi, Pakistan's throbbing business capital, of all billboards on public property. On a drive through its traffic-clogged streets, fresh views of concrete highways and pedestrian overpasses greet the eye. "The city is barren by comparison," beams Sumaiya Zaidi, who campaigned for the purge.

The clean-up jars with Karachi's reputation, for two reasons. First, the local government usually fumbles even basic tasks. Mafiosi sell water to many of the city's 15m residents, driving tankers down pot-holed or unpaved roads. Second, the megacity is the heart of Pakistan's retail market, whose latest annual growth of 8.2% is about the fastest in the world, according to Euromonitor, a market-analysis firm. Keen to hawk their wares within its bounds are the country's biggest businesses and its most outrageous hucksters (including one entrepreneur arrested for painting stray dogs and selling them as pedigree chums).

Why, then, the ban? "Civil rights" is the

The way things were

official answer. In 2016 the Supreme Court vaguely claimed that a rash of billboards endangered the "life and property of the common man". Local media had reported injuries after monsoon winds blew over rickety structures. Pedestrians complained about the blocking of pavements. And during the trial a judge warned that the sight of a giant woman eating a biscuit could distract male drivers, causing them to crash.

Yet the unofficial answer aligns better with Karachi's cut-throat reputation. The rate that established firms in the outdoor advertising industry had been able to charge for a billboard had plummeted before the ban, notes a retired official. A clutch of small businesses had been making signs using cheap laser printing and illegally flinging billboards up across the city. The fact that the concerned citizen who originally petitioned the Supreme Court seems to have vanished has fuelled speculation that he was acting on behalf of struggling advertising firms, says a journalist, Mahim Maher.

The ban has hurt the trade's small fry. Only a few workers remain in Al-Karam Square, a cavernous building that used to thrum with flex-fitters, steel-workers and laser-printers. "I had to let go of 90% of my staff," sighs the despondent Naeem, whose unventilated workshop reeks of paint fumes. Around 125,000 labourers are thought to have lost their jobs. Some, drawn by the still-billboard-strewn streets of Pakistan's other big cities, have moved.

There is also a political dimension to the ban. It feeds into a long-running battle for control of the city between the Muttahida Quami Movement (MQM), a party of migrants from India which dominates the city government, and the liberal Pakistan Peoples Party (PPP), which rules the province of Sindh, of which Karachi is the capital. The city government manages to collect only a tenth of the municipal taxes it is due, the World Bank estimates. It used to earn around a seventh of its revenue by letting space for billboards. Some advertising firms say they also paid the MQM bribes equal to the official fee. Today the party is split, demoralised and cash-starved. MQM leaders claim the PPP engineered the ban to sabotage its preparations for a general election this summer. ■

Local elections in Indonesia

Red-bullfighter

SEMARANG

Provincial and local polls will test the president and his party

SUDIRMAN SAID is smiling and shaking hands with shopkeepers selling everything from meat carcasses to herbal tonics. The crowded market in Semarang, the capital of Central Java, is not the sort of place one would expect to encounter a smartly dressed 54-year-old accountant. But as the opposition's candidate to be governor of the province, Mr Sudirman must campaign in every corner to stand even a slim chance of victory. Few others were brave enough to seek the nomination. "They didn't want to be losers," Mr Sudirman chuckles. "Am I willing to be a loser?"

Millions of Indonesians will go to the polls on June 27th to choose governors, mayors and other officials. All three of the country's most populous provinces—West, East and Central Java—face elections. The island of Java accounts for less than a tenth of Indonesia's territory but almost half of its 190m-plus voters (the overall population is 266m, making Indonesia the world's fourth-most-populous country). Moreover, Java played a pivotal part in the most recent presidential election, in 2014, when Joko Widodo, known as Jokowi, narrowly beat Prabowo Subianto. The upcoming vote is the biggest test for the president since then and before next year's parliamentary and presidential elections.

Jokowi had a setback last year when the opposition won Jakarta, the capital. Even in Central Java, the president's own province and a stronghold of his party, PDI-P, the opposition sniffs a chance. The two big electoral coalitions in the province are not exactly the same as the ones at the national level, but the resemblance is close enough that the campaign for governor may provide clues as to how next year's presidential poll might unfold.

In Jakarta, the opposition prevailed by stirring up racial and religious rancour against the ethnic-Chinese, Christian incumbent. That may not work in Central Java. Its governor, Ganjar Pranowo, is a Javanese Muslim. Campaigns against "loose morals", and the president's failure to enforce a stricter sort, might go down well in conservative places but do not resonate with Central Java's more relaxed voters. The version of Islam practised here owes more to the moderate views of Nahdlatul Ulama, a mass Muslim organisation with roots in the countryside, than to the more doctrinaire teachings gaining ground elsewhere in Indonesia. So the opposition is focusing instead on public disenchantment with Jokowi's government, especially its seeming inability to curb corruption.

This plays to Mr Sudirman's strengths. As Jokowi's energy minister in 2014-16, he won fame as an advocate for clean government. Sensationally, he released a recording in which the Speaker of parliament at the time appeared to try to extort shares from the local head of Freeport McMoRan, an American firm that runs a huge copper-and-gold mine in the Indonesian part of New Guinea. The Speaker said variously that the request for shares was a joke and that it was made at the president's behest (which the president denies), but he resigned his post. A court later declared the tapes inadmissible as evidence. The former Speaker is now on trial in a different corruption case. Mr Sudirman, for his part, was dropped from the cabinet.

Mr Sudirman suspects he was sacrificed to preserve Jokowi's alliance with Golkar, the second-largest party in parliament, which the Speaker then chaired. "Golkar made a bargain," he says. Reckoning that Jokowi's government was no longer serious about reform, Mr Sudirman defected to Mr Prabowo's camp. "At the national level there is a changing political landscape. When people are tired, they look for something new. That is also happening in Central Java," he says.

At a hotel conference room in Semarang Mr Sudirman kneels solemnly as Christian priests crowd around, reciting prayers. Christians, many of them ethnic Chinese, are only 3% of Central Java's 34m people, but Mr Sudirman says he has a "special interest" in listening to their worries, to counter claims that he wants to stir up the religious and ethnic tensions of Jakarta's election. "I have to prove I am not in that mood," he says.

However ecumenical his behaviour, it still seems unlikely that Mr Sudirman will prevail in Central Java. Jokowi hails from a town in the province. In 2014 he won 67% of the local vote. Flags emblazoned with the symbol of PDI-P, a red-eyed bull, are a common sight. Opinion polls are not always reliable in Indonesia, but the latest one puts Mr Ganjar, the incumbent, almost 70 percentage points ahead of Mr Sudirman. After all, points out Ari Setiawan, a 50-year-old with a wispy white beard eating a bowl of rice gruel at a roadside stall, "Central Java is the home of the red bull." But it could still provide some pointers for the opposition. ■

Rural Japan

Pining for the paddyfields

SHIMANTO

Not all Japanese towns and villages are atrophying

THERE was nothing wrong with Chika and Takeshi Ota's life in Osaka, Japan's liveliest city, where she worked as a shop manager and he as a driver. But a visit to Tasmania, in Australia, convinced Chika of the superiority of rural life. In May last year, with two tiny children in tow, they moved to Shimanto, a sprawling town in Shikoku, the smallest of Japan's four main islands. Sitting in one of the sparse buildings that make up Kleingarten, a community of 22 basic houses with allotments they now call home, the couple, who are in their late 30s, describe how they hope to make a living through farming. "It is a risky choice, but we are happy," says Chika.

Japan's population is shrinking and ageing. Both trends are especially pronounced in the countryside, since young people tend to move to cities to find jobs, romance and good restaurants. The net inflow of Japanese to Tokyo rose from 96,500 in 2013 to 120,000 people last year, notes Ayumi Ito Rai of the cabinet office's department for revitalising local areas. The city's population continues to creep up. But there was net emigration from all but seven of Japan's 47 prefectures last year. The population of Kochi prefecture, where Shimanto sits, peaked in 1955 at 883,000. By 2015 it had fallen to 728,000.

But even as young country-dwellers seek their fortune in cities, a small but growing number of their urban counterparts are packing up and heading for the paddyfields. In the last nine months of 2017, 139 people settled in Shimanto, up from 73 in 2016 and 45 in 2015. There are no up-to-date nationwide statistics, but in 2017, 33,165 people contacted the Furusato Kaiki Shien Centre, an NGO supporting people who want to move to rural areas—a more than threefold increase on 2013.

It used to be older folk who headed to the countryside, often the retired returning to their childhood homes. Today those interested in moving are increasingly young. The trend is reflected in popular culture. Last year "Gifu ni iju", a TV drama, followed two women in their 30s who moved to Gifu, an area in central Japan full of small mountain towns. *Josei Seven*, a magazine for young women, recently wrote about moving to the countryside. All but one of the 73 people who moved to Shimanto in 2016 were under 50.

That is good news for the receiving towns and villages. A report in 2014 suggested that by 2040 depopulation would wipe out nearly 900 municipalities, almost half the total. That panicked the government. The next year Shinzo Abe, the prime minister, set out a plan to revive dying areas, one pillar of which was encouraging migration.

The rustic revival is thanks in part to public programmes, such as one that sends young people to work in rural areas for two or three years, in the hope they will then settle. Also important, says Tokumi Odagiri of Meiji University, were the earthquake and tsunami in 2011, which killed some 18,000 people. The disasters "caused young people to re-evaluate their lives", he says. Many are looking for peace and quiet, or simply cheaper homes. Another draw is better work-life balance, says Junichi Yanagi of *Living in the Countryside* magazine.

Young people can revitalise an area, says Nakao Hironari, the mayor of Shimanto. In part, that is because they work. Many go into farming or learn traditional crafts. Yu and Miki Kikuchi left their jobs as a factory worker and a nurse; he is now training to be a blacksmith, while she hunts game.

It helps that young people are the ones who have babies, too. Shimanto offers subsidised child care and housing for new arrivals. In contrast, Yoshiro Yamauchi, a pensioner who three months ago moved from Saitama, a city of 1.3m close to Tokyo, to Hirado, a town of 31,000 on the island of Kyushu, says: "It's pretty run down here, and you only really see old people."

Mr Odagiri says government policies to combat depopulation focus on infrastructure and subsidies, or on deterring people from moving to the cities. Instead, he says, research shows that people are attracted to areas where there is a positive mood and a sense of community. That creates a virtuous cycle, as immigration begets more immigration. In Shimanto, at least, that cycle may be taking off. After living there for three years, Naofumi Takase, who is 31, is planning to start a bed-and-breakfast business. Mayu Kase, 22, who left her job as a hotel receptionist in Chiba, an area east of Tokyo, wants to open a cake shop. "I love it here," she says. ■

Some towns are blossoming

The Economist

FT
FINANCIAL TIMES

Nico Colchester

Journalism fellowships

BETWEEN THE migration crisis, the threat of terrorism, the rise of populism, the euro zone's economic struggles and the Brexit vote, the very foundations of European integration have been called into question in recent years. But Emmanuel Macron's victory in the French election and the prospect of a new grand coalition in Germany have raised hopes that a new European dawn could be in store. Undoubtedly, Nico would have been able to tell this story like few others in his profession: just consider some of his most famous work, from his creation of a Mars Bar index—"a currency for our time"—to his division of the world, and its politicians, into the "soggy" and the "crunchy".

So in this momentous year for Europe, here is your chance to emulate one of the finest reporters of his generation, and launch a career in the exciting world of journalism at two of the most global and prestigious news organisations. Below are the details.

What do the prizes involve and who is eligible?
Two awards are on offer: one, for a British or Irish applicant, will consist of a three-month fellowship in continental Europe at *The Economist*; the other, for an applicant from elsewhere in the European Union, will be in London at the *Financial Times* also lasting three months. The fellowships are open only to EU citizens. Both winners will receive a bursary of £6,000 to cover accommodation and travel.

Who are the fellowships suited for?
The fellowships are intended for aspiring or early-career journalists with bold ideas and a lively writing style, each capable of adapting to the excitement and pressures of a modern newsroom. The fellow should have a particular interest and curiosity about European affairs, as the prize aims to help continental writers understand Britain and British writers understand Europe.

What is this year's subject?
What is Europe's greatest weakness? Please choose the country, institution, or issue that is of greatest concern.

How to apply?
Please send a submission on the subject above, together with a CV and covering letter. The submission can be:

- an unpublished written article, blog post or data-rich essay of max 850 words (pdf or doc)
- an unpublished 2-minute video (avi or mp4)
- an unpublished 2-minute podcast (mp3)

Please make sure you submit your work in one of the formats specified. Big files can be sent using a file transfer or file hosting service or by submitting a password-protected link.

Entries should be sent, **by the closing date of April 6th 2018**, by e-mail to **ncprize@ft.com**.

Shortlisted candidates will be asked to provide confirmation of their citizenship.

Successful applicants will be notified by the end of May 2018.

Banyan | Hun Senescence

Cambodia's ruler has been in power too long

A COUNTRY boy, Hun Sen gets up early and works hard. He is said to spend hours every morning on his treadmill, to counter the ravages of his earlier years as a field commander and chain-smoker. Like the best autocrats, Cambodia's prime minister understands the importance of social media. Aware that dull state television repels viewers, he lives on Facebook, buying what followers he cannot attract—he now has 9.6m of them.

He also attends to his constituents. Twice a week he goes down to the garment factories that have burgeoned around the edges of Phnom Penh, the capital. They were once a heartland for the opposition, the Cambodia National Rescue Party (CNRP). But he now delivers long, exhortatory speeches to the textile workers, without notes. He has put up their minimum wage to $170 a month, provided health care and even promised maternity leave.

Since you cannot be too careful, Mr Hun Sen has also abolished the opposition. In November the Supreme Court agreed that the CNRP was part of a foreign plot to overthrow the ruling Cambodian People's Party (CPP). Many members have fled the country. Those who remain are disqualified from running in elections in July. Since September the CNRP's president, Kem Sokha, has been in detention without trial. Anyone who crosses power is at risk. In 2016 Kem Ley, an activist and outspoken critic, was shot dead in broad daylight.

Just getting started

Though Mr Hun Sen has ruled for 33 years, as strongmen go he is a whippersnapper at 65. He will need to live half as long again to be of Robert Mugabe's vintage. He made his mark as a commander for the genocidal agrarian utopians of the Khmers Rouges, losing his eye and gaining his glassy squint during their assault on Phnom Penh in 1975. Two years later, as the regime's purges intensified, he fled with his battalion over the border to Vietnam. In 1979 he returned with an invading Vietnamese army.

Mr Hun Sen was made foreign minister in the new puppet government before he was even 30—picked out because, though uneducated, he was a quick study and always attentive to Vietnamese interests. By 1985 he was prime minister, a post he refused to give up even after UN-supervised elections in 1993 produced a hung parliament with the royalist party, FUNCINPEC, holding the largest number of seats. He grudgingly shared power with the royalists' leader, Prince Norodom Ranariddh, until 1997, when he ousted him in what was, in essence, a lightning civil war.

Prince Ranariddh has recently made his peace with the strongman. He spends languid days with cigars and claret at the colonial-era Raffles Hotel. His even softer-edged half-brother, Norodom Sihamoni, who studied film-making in Pyongyang and taught ballet in Paris, is the titular king. But Mr Hun Sen is the real one. His regal paternalism is intended to suggest that an earlier order has been restored after decades of horrors, from American bombing in the early 1970s to the civil war of the 1980s, not to mention the Khmers Rouges' grotesque Year Zero.

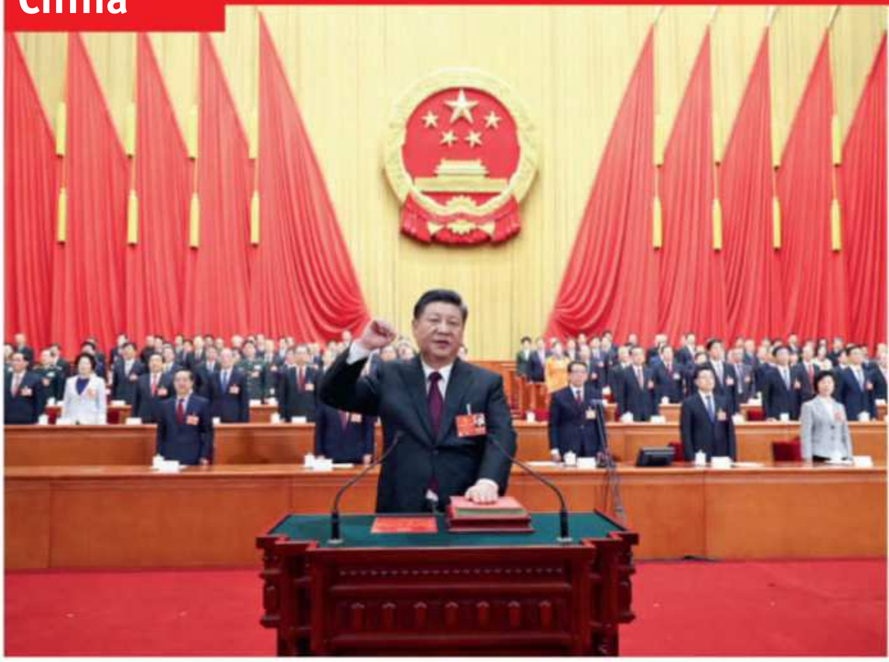
Mr Hun Sen, along with his overcoiffed wife, Bun Rany, sit at the centre of cosmic relations like the rulers of old Angkor, as Sebastian Strangio puts it in "Hun Sen's Cambodia". The roads, pagodas and, above all, the thousands of "Hun Sen schools" are proof of his virtue. The website of the Cambodian Red Cross, of which Ms Bun Rany is honorary head, is a paean to her saintliness as she tends to her poor.

"Meritorious benefactors", among them tycoons and government officials (the distinction not always clear), contribute to Mr Hun Sen's beloved projects and are awarded ornate titles and sinecures in return. Authority is handed down and money up, the whole elite nexus of business and political families cemented through tactical marriages. It is such families' wealth—made, out of sight, from deals in banking, agribusiness, logging, resource extraction and the like—that clogs Phnom Penh's streets with supersized SUVs.

With the economy growing by almost 7% a year, some analysts are ready to overlook the elites' excesses. Yet Hunsenomics carries costs. A ravaged natural environment is one, high-handed land grabs from subsistence farmers another. The counterpoint to what Mr Strangio calls the elites' "mirage money" is real money draining out of the formal economy. Handing tycoons the right to import and sell cigarettes or booze on favourable terms means less tax revenue. Those Hun Sen schools are crumbling, and pupils hoping to pass their exams have to bribe ill-paid teachers. The poorest get little health care. Inequality remains extreme. Even Mr Hun Sen's minimum wage for garment workers risks pricing the country's only competitive industry out of global markets.

Meanwhile, as the election approaches, foreign criticism of Mr Hun Sen's shutdown of democracy continues. Last weekend protests railed against him on the fringes of a South-East Asian summit hosted in Australia. He affects not to care. The old fox is surely right in calculating that Europe will not end preferential access for Cambodian textile exports. More important, he has China at his back, providing money and (a)moral support. Yet Cambodia's international isolation is growing. Even members of the Association of South-East Asian Nations have harsh words in private about his sycophantically pro-China stance.

As for his grip at home, some wonder whether it is quite as sure as it seems. Last year his veteran henchman, Sok An, died of ill health, and he appears to feel the loss profoundly. Sok An, moreover, was one of the few who knew how to handle Mr Hun Sen's increasingly erratic temper. The expansion of the CPP's central committee last year by more than 300 cronies smacks of trying to please everyone. The government is packed with enough dead wood as it is. Fawning courtiers orbiting a king and his consort: that is no way to run a country. Whenever and however Mr Hun Sen goes, he will have been on the throne too long. ■



Also in this section

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Xi Jinping's new sidekicks

The helmsman's crew

BEIJING

A firefighter and a brainbox win important posts

IT SEEMS almost quaint to focus on the officials elevated to leadership positions under Xi Jinping, China's president. Mr Xi, after all, is now being called the Communist Party's core, helmsman of the country and the people's leader—all titles associated with Mao Zedong. Mr Xi's thought has been written into the constitution, to which all members of the party must pledge allegiance. State media report on him in ever more fawning terms and pay less and less attention to everyone else.

Television news showed delegates to the annual session of the National People's Congress (NPC), China's ersatz legislature, weeping for joy when Mr Xi's re-election as president was announced. His unusually bellicose speech to the NPC, on March 20th, in which he warned the world that "not one inch of the motherland's territory can be carved off", was rapturously received. Yet even a one-man show needs its stage hands. Mr Xi has assembled a new team, anchored by two officials who will go a long way to determining the success of his rule. One is known for his intellect, the other for his ruthlessness.

Mr Xi dispensed with several political norms during the recent NPC session. In addition to doing away with term limits for his own post, he also in effect scrapped the unwritten retirement age for senior officials, to secure the return to government of Wang Qishan, a close ally. Mr Wang has earned a fearsome reputation over the past five years as the head of the agency prosecuting an unprecedentedly harsh anti-corruption campaign. Since he will turn 70 in July, he stepped down last year from the Standing Committee of the Politburo, China's most powerful decision-making body, in keeping with convention. But Mr Xi has brought him back to the centre of politics as vice-president. Mr Wang is the first person who is not a member of the Politburo to hold the job since 1998.

In Mr Wang's hands, the vice-presidency will go from being a largely ceremonial role to one with significance. He is expected to be the point-man on relations with America, at a time when Donald Trump is pushing the United States and China ever closer to a trade war. Mr Wang has, over the years, earned a nickname as China's chief firefighter for his adept handling of incendiary problems. In 1999 he helped resolve a big bankruptcy; in 2003 he led the response to an outbreak of the SARS virus in Beijing; and during the global financial crisis he was the main economic liaison with American officials, building up a network of contacts in Washington which should prove useful in his new role. If there were any doubts about Mr Wang's clout, seating arrangements during the NPC dispelled them. He was placed immediately next to the Standing Committee, as if he were the eighth member of the seven-man group.

Mr Xi's imprint on China's economic bureaucracy was also unconventional. The most important official, apart from the president himself, will be Liu He, a mild-mannered policymaker who has risen from relative obscurity to become Mr Xi's trusted adviser on the economy. Mr Liu is credited with persuading Mr Xi to play closer attention to the economy by convincing him that, if there were a crash, he would be remembered for it, rather than for any positive achievement. Now appointed as one of four deputy prime ministers, Mr Liu, who has a master's degree in public administration from Harvard University, will lead a committee created last year to oversee the central bank and various other financial regulators. Normally, anyone with that kind of administrative responsibility would have experience managing a large bureaucracy. Mr Liu, in contrast, spent much of his career in the bowels of the state-planning system.

From Ivy League to leading small group

Over the past five years he has become far more prominent, thanks to Mr Xi's backing. The head of a party "leading small group" to spearhead economic reforms, he was the architect of a policy to cut excess capacity in the steel and coal industries. Although critics grumble that private rather than state-owned firms bore the brunt of enforced closures of mines and mills, the strategy has worked, as prices have recovered and margins have risen for the surviving producers. Mr Liu is also widely believed to be the man behind an article in 2016 in the *People's Daily*, the party's main newspaper, which called for more vigorous tactics to pare back the economy's debts than the prime minister wanted.

With Mr Liu already supervising the central bank, many had thought that Mr Xi ▸▸

might go one step further and put him directly in charge of the People's Bank of China as governor, succeeding Zhou Xiaochuan, who has retired after 15 years as its boss. Instead the reins were given to Yi Gang, the bank's deputy governor for the past decade. That, again, was a break with convention, since Mr Yi is only a stand-in member of the party's central committee.

Those hoping that Mr Xi will push through reforms to relax government control of the economy welcomed the appointment of Mr Yi. His foreign academic background—a PhD in economics from the University of Illinois and several years of teaching at Indiana University—had previously been seen as limiting his career prospects. Mr Xi, apparently, is more open-minded than that. And Mr Yi's academic writings, dating back to the early 1990s, are also, by Chinese standards, relatively liberal. In one paper he discussed the dangers of the government implicitly guaranteeing the entire banking system.

But trying to read Mr Yi's appointment as a victory for free markets is a stretch. It looks more like a victory for technocratic competence. He has managed the day-to-day operations of the central bank in recent years. One reform he championed involved improving its ability to lend confidence-boosting dollops of cash to sound banks when markets get skittish, which in turn has allowed regulators to be tougher with the most indebted companies without causing systemic distress. He has also overseen reforms to make the yuan's exchange rate a little more flexible. However, on all big decisions, notably on whether to loosen capital controls, Mr Yi will be little more than an adviser.

One important figure will remain in place, at least in theory. Li Keqiang was reappointed for a second term as prime minister, after several years of rumours that he might be replaced. By all appearances, though, he has been marginalised. The prime minister has traditionally looked after economic policy. But in Mr Xi's first term the party's leading small groups, over which he had direct control, took over much of that responsibility. In Mr Xi's second term, with his allies further empowered, Mr Li seems to have been reduced to prime minister for cutting red tape.

Those looking for disagreement among the legislators gathered in the Great Hall of the People, a Stalinist building in the heart of Beijing, had to squint to find even the faintest glimmer. The appointment which faced the stiffest opposition was that of the education minister: a mere 97.9% of delegates voted for him. Mr Xi, for his part, was reappointed unanimously. He will rely on his closest allies, above all Messrs Wang and Liu, to advance his goal of making China richer and more powerful. Mr Xi will no doubt get credit for successes. Apportioning blame for any failures will be trickier. ■

Health care

Clot-hoppers

BEIJING

A change to the blood-donation system is bungled

PU BAOZHEN sold her house and car and moved to Beijing to seek treatment for aplastic anaemia, a rare blood disease. In early February, just minutes into her first session of chemotherapy, the hospital pulled the plug. Writing on Weibo, a Chinese social-media site, Ms Pu says doctors were worried that they would not have enough blood to support her through a gruelling bone-marrow transplant. A sudden change to the city's blood-donation rules had given them a fright.

Blood shortages are common in China—particularly around Spring Festival, when lots of potential donors leave the cities to holiday in their hometowns. Only about 1% of Chinese give blood each year, slightly below what might be expected given its level of development (see chart). Some people worry that even a modest loss of blood is unhealthy, and no one has forgotten a grim scandal that began in the 1980s, when middlemen paying for blood infected hundreds of thousands with HIV.

Paying people to give blood was outlawed in 1998. Instead, to encourage donations, the government gave volunteers the right to certificates meant to grant them priority access to blood, should they ever need it. More significantly, it allowed donors to transfer this privilege to someone else—in effect allowing them to donate blood directly to family or friends in need. The idea was that blood donated this way would help to supplement stocks provided freely and altruistically.

This kind of reciprocal-donation system is common in less-developed countries, and in large part it succeeded in China. Blood donations rose from about 5m units a year in 1998 to more than 20m in 2011, according to data published in *Transfusion Medicine Reviews*, a journal. But lately its flaws have become apparent. First, growth in donations has slowed, and now lags behind hospital admissions, which are rising by over 15% a year. The reciprocal-donation system makes it harder to persuade people to donate regularly and freely, says Yu Chengpu of Sun Yat-sen University, though that is essential if China is to meet demand in years to come.

Stepping up to the platelets

Blood donations and GDP per person

2013

Sources: WHO; World Bank; *The Economist*

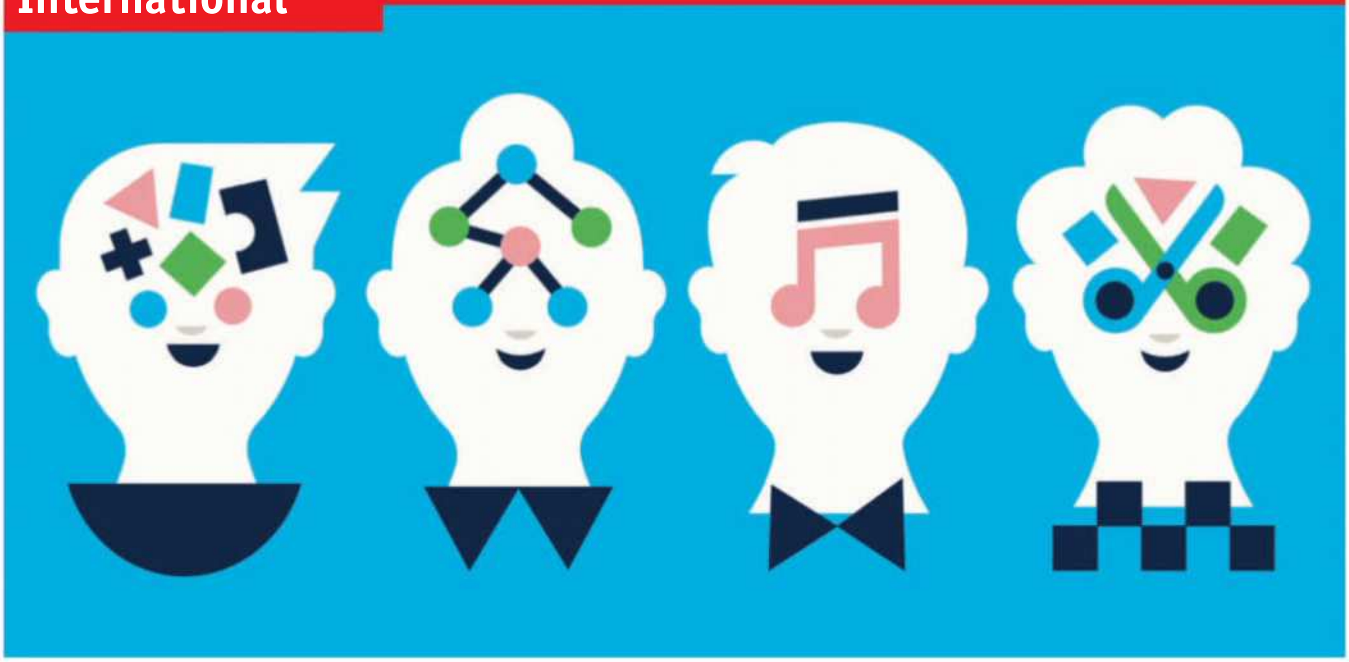
*At purchasing-power parity

A second problem is that presenting blood-donation certificates has become more or less essential for patients seeking transfusions in some big city hospitals (blood stocks are particularly stretched in such places, because lots of people travel from outlying towns or even different provinces to be treated in them). Patients who require frequent transfusions but whose needs are not considered an emergency—such as those undergoing chemotherapy—are worst affected. They end up having to ask crowds of friends and relatives to donate on their behalf. That is especially tricky for people without lots of well-wishers, and for out-of-towners.

The inevitable consequence has been a resurgence of black-market blood-selling of the type officials had initially intended to stamp out. Patients who are on the mend sometimes sell unused blood entitlements to those who are still ill. For a fee professional blood merchants will herd a gaggle of impecunious strangers to a donation centre, where they pose as acquaintances of the patient in need. Some of these criminals hang around hospitals, but increasingly introductions are made through WeChat, a messaging app.

Many provinces have scrapped reciprocal donations. The health ministry wants the rest to phase them out. Last year it told local officials that they had until the end of March to do so. The holdouts are places where supplies are tightest, and the straitened spring months are the worst time to be tinkering with the system. For some reason city officials gave hospitals in Beijing only a few days' notice that the rules would change. Hospitals postponed long-scheduled operations at short notice and patients who were caught in mid-treatment panicked. Blood-sellers made huge profits catering to patients who had counted on getting friends and family to donate for them, but realised they no longer had time to do so before the rules changed.

In the end blood imported from neighbouring provinces helped carry Beijing's clinics through the holiday (Ms Pu's transplant is under way). Officials say that, although donors may no longer pledge blood to particular patients, they can still donate to specific hospitals. In the long run, though, they will have to try harder to promote altruistic blood-giving. ■



Educating gifted children

Talent shows

New research is encouraging a rethink of gifted education

EVERY year in Singapore 1% of pupils in the third year of primary school bring home an envelope headed "On government service". Inside is an invitation to the city-state's Gifted Education Programme. To receive the overture, pupils must ace tests in maths, English and "general ability". If their parents accept the offer, the children are taught using a special curriculum.

Singapore's approach is emblematic of the traditional form of "gifted" education, one that uses intelligence tests with strict thresholds to identify children with seemingly innate ability. Yet in many countries it is being overhauled in two main ways. The first is that educationists are using a broader range of methods to identify highly intelligent children, especially those from poor households. The second is an increasing focus on fostering the attitudes and personality traits found in successful people in an array of disciplines—including those who did not ace intelligence tests.

New research lies behind these shifts. It shows that countries which do not get the most from their best and brightest face big economic costs. The research also suggests that the nature-or-nurture debate is a false dichotomy. Intelligence is highly heritable and perhaps the best predictor of success. But it is far from the only characteristic that matters for future eminence.

The study of gifted children goes back at least a century. In 1916 Leta Hollingworth—a psychologist whose doctorate refuted the idea that women struggled at science because of destabilising menstrual cycles—began some of the earliest research on children with high IQs. Two decades later she started work at the Speyer School in New York City, one of the first schools with a challenging curriculum for these pupils.

Like, really smart

IQ tests have attracted furious criticism. Speaking for the sceptics, Christopher Hitchens, a journalist, argued that: "There is...an unusually high and consistent correlation between the stupidity of a given person and [his] propensity to be impressed by the measurement of IQ." Like any assessment, IQ tests are not perfect. But as Stuart Ritchie of the University of Edinburgh points out in "Intelligence", researchers in cognitive science agree that general intelligence—not book-learning but the ability to reason, plan, solve problems, think abstractly and so on—is an identifiable and important attribute which can be measured by IQ tests.

Just how important is suggested by the Study of Mathematically Precocious Youth (SMPY), founded in 1971. Julian Stanley, then a psychologist at Johns Hopkins University, over 25 years recruited 5,000 precocious children, each of whom had intelligence-test scores in early adolescence high enough to gain entry to university.

Research into how these children did in adulthood has emerged over the past two decades. Of the SMPY participants who scored among the top 0.5% for their age-group in maths and verbal tests, 30% went on to earn a doctorate, versus 1% of Americans as a whole. These children were also much more likely to have high incomes and to file patents.

There is variation even among the top scorers (see chart on next page). This runs contrary to the idea, proposed by some psychologists, that there is a ceiling to IQ, after which its influence wanes. Of the top 0.01% of children, 50% went on to earn a PhD, medical or law degree.

Findings from studies led by Ian Deary of the University of Edinburgh, meanwhile, undermine the idea that gifted children go on to become disproportionately troubled. There are of course exceptions. But on average having a high IQ as a child is associated with better physical and mental health as an adult. Being moved up a school-year, as many are, tends to do them little harm. SMPY pupils who skipped at least one grade were 60% more likely to file patents than those who did not.

Officials often cite the SMPY as the inspiration for the creation in 2014 of two specialist maths schools in England. Based on the Kolmogorov School in Moscow, these schools accept only those pupils who excel in maths at exams at age 16. In ▸▸

Foreign internship: We are seeking a summer intern to write about foreign affairs for *The Economist*. The internship will be London-based, will last for three months or more, and will pay £2,000 per month. Anyone is welcome to apply. Applicants should send an original unpublished article of up to 600 words on any issue in international politics or foreign affairs, a CV and a cover letter to foreignintern@economist.com. Applicants will not have to sit an IQ test. Instead we are looking for originality, wit, crisp writing and clarity of thought. The deadline is April 3rd.

January the government said it wanted to open more as part of its "industrial strategy", a plan to boost Britain's woeful productivity growth. Linking gifted education to economic growth may horrify some people. But it has long seemed like common sense in countries without many natural resources, such as Singapore.

Sadly, however, the potential of poor bright children is often wasted. In December Raj Chetty of Stanford University and colleagues published a paper lamenting "lost Einsteins". They found that children who score in the top 5% of standardised tests in the third year of primary school are many times more likely than the other 95% to file patents in later life. But the likelihood is still much greater among smart kids from rich families.

Philippe Aghion of the London School of Economics and colleagues found similar results in Finland. Those with high IQs but from poor backgrounds were especially at risk of not fulfilling their potential. That is not only unfair. It also implies that a lot of talent, which could have been harnessed to cure diseases or design better toasters, is being squandered.

There are many reasons why poor-but-smart children struggle. Yet gifted schemes have often not helped. When applications are voluntary, they come mostly from rich or pushy parents. In New York City, for example, tutoring companies often charge $200 per hour to help four-year-olds prepare for admissions tests for gifted-education programmes starting in kindergarten. Tutoring may temporarily bump up scores by only a few points, but that can make all the difference. In 2015 70% of pupils admitted to such programmes were white or Asian, though they represent just 30% of the school-age population.

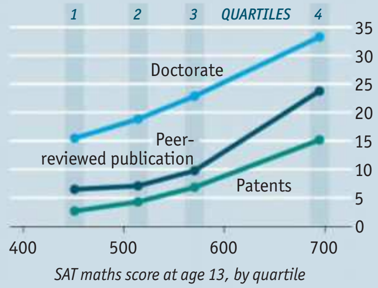
It helps when schools test every child, rather than rely on parents to put children forward. In a paper from 2015, economists David Card and Laura Giuliano found that when a school district in Florida introduced universal screening for its gifted-education scheme, admissions increased by 180% among poor children, 130% among Hispanics and 80% for black pupils. (Admissions among white children fell.)

Some programmes go further. Miami-Dade, America's fourth-largest school district, uses universal screening. It has a lower IQ threshold for poor children or those for whom English is a second language, so long as they show other signs of promise, such as learning English quickly or high scores in other tests. In Miami-Dade 6.9% of black pupils are in the gifted programme, versus 2.4% and 3.6% in Florida as a whole and nationwide respectively.

In America 48 out of 50 states have programmes for brainy children, but in the decade before 2013, 24 redefined them, typically ditching the "gifted" label in favour of "high-ability". Today no state relies on a

Don't stop 'til you get enough

United States, share of adults* with various accomplishments, by SAT score, %



Source: Robertson et al. (2010)

*Within the top 1% of mathematical-reasoning ability when aged 13

single IQ score to select students. In his book "Ungifted" Scott Barry Kaufman of the University of Pennsylvania calls this a "huge change from just 20 years ago". European countries have seen similar shifts.

School districts are also testing for other attributes, including spatial ability (ie, the capacity to generate, manipulate and store visual images). Jonathan Wai, a psychologist, notes that spatial ability as a child is strongly linked to achievement in science and technology in later life. The Finnish study also found this. But it is less correlated with income during childhood than are verbal and mathematical scores. So testing for it gives talented poor children a better chance to shine, says Mr Wai.

The power of persistence

Other researchers worry, though, that no matter how good the selection process, relying only on measures of intelligence will fail to find children with the potential to excel in adult life. Psychologists such as Mr Kaufman argue that there are many more possible paths to success in adulthood than often assumed, and that education must do more to foster attributes such as passion, determination and creativity.

Whether termed "grit", "task-motivation" or "conscientiousness", more psychologists are emphasising the role of persistence. "As much as talent counts, effort counts twice," writes Angela Duckworth of the University of Pennsylvania, in "Grit", published in 2016. For Anders Ericsson of Florida State University, deliberate practice over a long period (popularly understood as 10,000 hours) is critical.

Such statements are simplistic. But few researchers disagree with the idea that talent requires development, and that should involve promoting hard work as well as intelligence. Gifted programmes from Singapore's to England's specialist maths schools make it a priority to help children pursue their passion. Robotics prodigies, for example, may be given the opportunity to shadow university students.

There is evidence that aspects of gifted education should influence education more broadly. Project Bright Idea, developed at Duke University, saw 10,000 typical nursery and primary-school pupils taught using methods often reserved for brainier kids—fostering high expectations, complex problem-solving and cultivating meta-cognition (or "thinking about thinking"). Nearly every one of them went on to do much better on tests than similar peers.

Some researchers go further. Carol Dweck of Stanford University emphasises children's "mindset" (the beliefs they have about learning). Children who think they can change their intelligence have a "growth mindset", she says. Those who believe they cannot do much to change their "D" grades have a "fixed" one. According to Ms Dweck, children who adopt the first mindset quickly start to do better in tests.

Teaching methods that draw on Ms Dweck's work are now found in schools across Britain and America. The World Bank is running trials of the approach in countries such as Peru. One technique, for example, might see a pupil told to add the word "yet" to their statements, as in "I can't do long-division—yet."

However, a recent meta-analysis suggests that interventions based on growth-mindset are less effective than their hype implies. The study suggests that the effects of interventions drawing on the idea have no effect on the typical student's outcomes and at best a small effect on those of poorer students. Other psychologists have struggled to replicate Ms Dweck's results.

The idea that intelligence is highly malleable also jars with research on its heritability. Studies led by Robert Plomin of King's College London suggest that roughly 50% of the variance in IQ scores is due to genetic differences. These findings do not dismiss the role of nurture; hard work and social background matter. But they undermine the idea that supreme intelligence can simply be willed into being.

A broader approach to gifted education ensures that more children reach their potential. But the evidence suggests that, so long as they are open to everyone, IQ tests still have a vital role to play. To find lost Einsteins, you have to look for them. ■

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Pharmaceuticals (1)

Endpoints

WASHINGTON, DC

American drugmakers are struggling with low productivity. The government wants to help

SCOTT GOTTLIEB, the thoughtful head of America's Food and Drug Administration (FDA), has had a busy first year. He has launched the process of lowering nicotine levels in cigarettes, approved self-testing kits for breast-cancer genes and waved through the most new medicines in two decades, as well as a record number of copycat drugs (see next article). There is one thing he and his regulatory agency are doing less of, however—regulating. New rules were at a 20-year low in 2017, according to analysts at PWC, a consultancy. Instead, the FDA is providing more guidance to industry. This approach, Mr Gottlieb hopes, will help pharmaceutical firms in America develop drugs more efficiently. Since that is where most drug development happens, the FDA's philosophy matters beyond American borders.

Given the rapid pace of scientific advances in medicine, you might think Big Pharma is in rude health. You would be wrong. Last year consultants at Deloitte estimated that returns on investment among the biggest American drugmakers fell to 3.2%, from 10.1% in 2010 (see chart). Many observers blame the rising cost of bringing new drugs to market.

It now costs an average of $2bn to develop a new drug, up from $1.2bn in 2010. One theory is that the easier discoveries have already been made. As medicines become more personalised, the returns per drug may be squeezed because fixed development costs are spread across a smaller pool of potential patients. Either way, firms may have fewer incentives to innovate.

Mr Gottlieb has several ideas for how to provide them with more. First, he wants the agency to rethink how much information the FDA demands at an early stage. For example, with better models of a drug's toxicity, it could be tested in animals later in the process rather than at the outset. Lowering upfront costs should encourage investment, especially by smaller biotech firms with bright ideas but fewer resources. Making early failure cheaper should also enable startups to raise capital more easily.

Under the weather

United States, returns* on pharmaceutical R&D

%

Source: Deloitte

*Internal rates of return

Mr Gottlieb's second idea is to extend to other areas the innovative trial design that the FDA has pioneered in recent years for cancer drugs. This may involve doing away with the traditional hard boundaries of the drug-testing process (known as phases 1, 2 and 3). Instead, trials constantly adapt by expanding and shrinking cohorts of patients depending on their response to treatment. This makes the process more efficient. The agency is also open to the inclusion of non-trial data (from wearables or patient records, say).

Crucially, some cancer drugs do not now need to show that they extend overall survival, merely that they prolong the time a patient lives without the cancer getting worse. As a benchmark of clinical success, this "endpoint" is quicker, and cheaper, to prove. It may have encouraged investment and innovation in oncology.

The FDA now wants to do something similar for other diseases, in particular Alzheimer's. This is Mr Gottlieb's third idea—and potentially the most controversial.

Dementia is an area of growing concern as populations age, but one where drugmakers have a history of costly failures. Since 2003 more than 200 compounds for dementia have entered phase-2 clinical trials, when drugmakers begin testing efficacy. None has yet passed the final phase 3 trial by showing that it actually slows cognitive decline and preserves the ability to perform everyday functions. Over the years the field has proved so costly that AstraZeneca and GSK have cut back research; Pfizer has bowed out entirely.

To counter this trend, the FDA is weighing whether to approve dementia drugs based on their effect on biomarkers: signatures of genes or proteins that imply the presence and severity of a disease. For Alzheimer's, this is a lower hurdle than the ▸▸

current cognitive-function endpoints. But biomarkers are not the same as symptoms, so the risk is that costly new drugs will be approved that do not actually work. Avastin (bevacizumab), which was approved for breast cancer using alternative endpoints, turned out to be ineffective.

A few duds may be worth the risk if overall more good medicines reach patients. Pharma firms certainly think so. They have welcomed Mr Gottlieb and his ideas with "almost uniform pleasure and happiness", says John Maraganore, the boss of a biotech company called Alnylam who also chairs BIO, an industry group.

That is unsurprising—lower development costs should mean higher returns. What is less clear how much these savings will help the industry's giants, whose research-and-development efforts are spread thinly across many fields, without deeper changes to their business models.

Even today inexpensive drug development is perfectly possible. If you understand the biology and can identify the patients who will benefit from your drug, Mr Gottlieb says, trials can already be shorter and cheaper. Midsized and biggish biopharma firms, for instance, have done far better than the very largest ones. According to Deloitte, biotech companies such as Celgene, Gilead, AbbVie and Biogen enjoyed returns of around 12% last year. Many of them have already benefited from past efforts by the FDA to lubricate the approval of potential breakthrough drugs for cancer and some other diseases. But they are also much less diversified than the likes of Pfizer or GSK. It may be that this narrower focus makes them more efficient.

It therefore remains to be seen if Mr Gottlieb's approach can improve efficiency and innovation across the industry. His tenure may be judged a success if he manages to slow their decline. The rest is up to the industry itself. ■

Pharmaceuticals (2)

In need of a new prescription

MUMBAI

India's successful makers of copycat drugs see their health deteriorate

A SINGLE pill of Abilify, a drug used to treat manic depression, costs $30 or so in America. Or you could try gAbilify (the g stands for "generic"), better known to chemists as Aripiprazole. Thrifty pharmaceutical companies, many of them in India, can provide it for less than $1 a pop since the drug's patent expired in 2015. That is bad news for Otsuka and Bristol-Myers Squibb, the two labs that formulated Abilify and got it approved by authorities in the 1990s. Everyone else, from patients to insurers to the public purse, is correspondingly better off. Generics-makers have thrived, particularly in India. But the prognosis for the industry is less rosy.

India became the world's biggest exporter of generics almost by accident. Lax intellectual-property rules in the 1980s allowed its firms to crib drugs patented elsewhere for its huge domestic market. Trade deals gradually opened markets abroad. As patents for a wave of drugs from the 1980s expired two decades later, sales of Indian generics surged.

Their off-brand pills, vaccines, patches and syrups help contain health-care costs in rich countries and supply poor ones with once-unaffordable drugs to combat AIDS and other scourges. Firms like Cipla, Sun Pharmaceutical, Lupin and Dr Reddy's have become pharma's quiet titans. Indian pharma companies sold $29.6bn-worth of pills and potions in 2017.

America accounts for two-fifths of that. Sales there have grown by 30% a year for the past decade. The Food and Drug Administration (FDA), which licenses medicines, has embraced generics and made rapid approval easier for copycat drugs. Nearly 550 labs in India supply the lucrative American market, which is now 90% generic by volume. From virtually nothing at the start of the century, around a billion prescriptions made out by American doctors every year are fulfilled with drugs from companies based in India.

The FDA's approval came with conditions attached, however. Notably, these included site visits carried out by its dozen-plus inspectors in India. Several plants have flunked these because of poor hygiene or deficient processes, such as a failure to keep track of manufacturing glitches. A giant factory in Halol owned by Sun Pharmaceutical, the biggest Indian firm, has been unable to export new drugs to America since 2015.

The FDA also wants to see more competition in generics. The agency is licensing ever more foreign drugs and labs—including Chinese ones—for imports to America, undercutting Indian incumbents. It wants to see multiple generics approved for each medicine, to limit pricing power. Wholesalers, distributors and retailers of drugs in America (such as hospitals and pharmacies) have merged or ganged up in consortia to help contain rising drug costs.

The side-effects are already showing in India. Indian companies' sales of generic drugs have been flat for the past two years, and profits in the most recent quarter were down by a third compared with a year ago. Analysts expect profits from America to erode by around 10% annually. Prosecutors in 45 American states suspect that price-fixing helped to fatten margins earlier this decade. That could result in large fines for guilty firms. As easy-to-copy blockbuster drugs become rarer, moreover, manufacturers of copycats may see their lifeblood threatened. An index of Indian pharma companies has fallen by a quarter in two years, at a time when the broader market grew by 40%.

There is no obvious cure. Prospects for growth in other markets look mixed. Europe and Japan are less keen on generics than America, for now. Patients in poor countries are popping more pills as their incomes rise. But regulators there have a tendency to cap prices—a phenomenon

which has crimped Indian pharma at home for years.

In response to these pressures, Indian firms have turned to more intricate products, such as patches and inhalers, as well as to more complex drugs. These are trickier to develop but offer better margins. Research-and-development costs have crept up as a result, although the top seven labs in India jointly spend around $1.5bn a year on innovation—about a fifth of what a large Western pharmaceutical company splashes out.

More dramatic treatment may be in order. Consolidation has helped generics giants elsewhere to cut costs. Teva, based in Israel, and Mylan, an American company, both slashed their workforce after recent takeovers. But Indian firms, though listed, are still controlled by their founders. Many are run as family businesses, which tend to be averse to mergers.

The industry's panjandrums insist that a new culture of compliance will make FDA site closures a thing of the past. Once in denial over challenges to their business model, the generics-makers now acknowledge the symptoms afflicting them. It is not yet clear that they know how to cure the underlying condition. ■

Workplace reform in Japan

Calling time

TOKYO

Employers and the government are trying to tackle overwork

SANAE ABUTA is a manager at Panasonic, a giant electronics manufacturer, in Osaka. One day she may work from 9am to 5.45pm. On another she may take a break in the middle, to go to the bank or see a doctor. Or she will stay with her child in the morning and start at 11am. One day a week she works from home. "I appreciate the flexibility," she says.

Ms Abuta's schedule is unusual in Japan. Long office hours are seen a proxy for hard work, itself regarded as the cornerstone of Japan's post-war economic boom. Companies offer to look after employees for life in return for a willingness to dedicate that life to the company, including "service" (ie, unpaid) overtime or moving house on demand. People hesitate to leave the office before their peers, and certainly before their boss. Some sleep at their desks. Convenience stores sell shirts for workers who have no time to go home and change. Death by overwork is so common—191 people in the year to March 2017—that there is a word for it (*karoshi*).

Employers and politicians want to make workplaces friendlier. In 2016 the government launched an annual report on *karoshi* and started to name and shame workplaces—which last year included Panasonic—that violate existing rules. The Diet (parliament) is debating a bill which would cap monthly overtime at 100 hours.

The government hopes that relaxing the work culture will boost productivity (where Japan underperforms the OECD, a club of rich nations) and maybe even combat deflation (it has pushed the idea of freeing workers at 3pm on some Fridays so they can go shopping). Businesses, for their part, are under pressure to attract employees, especially women, amid a severe labour shortage at home.

Dreaming of lifestyle change

Some big names are changing their ways. An employee at the national broadcaster, NHK, notorious for all-nighters, says hours have got better and that bosses are nervous about overloading staff. Hitachi, a conglomerate, is leasing co-working spaces so workers don't have to commute to the office from afar. Clerks at 7-Eleven's convenience stores are getting flexible hours.

Yuka Sanui, who heads Panasonic's efforts, admits that "change is slow". Not many of Ms Abuta's colleagues are taking advantage of the company's schemes. In most places, few workers opt for holidays or child-care allowances. Shaking up Japan's work culture requires deeper labour reforms, says Yumiko Murakami of the OECD. Paying for performance rather than seniority would be a start, by making employees less hesitant to leave oppressive firms and to seek out friendlier ones. In her previous life at an investment bank Ms Murakami toiled endless hours most days. "But I knew if I didn't like it, I could go elsewhere."

Aerospace

Engine trouble

SINGAPORE

A spanner in the works for the world's biggest makers of jet engines

IT USED to be the world's two biggest makers of airliners that would invariably deliver new designs late and over budget. A decade ago the cost of Airbus's A380 superjumbo soared by about €5.5bn ($6.6bn) after engineers got its 330 miles of cables in a jumble. Boeing's rival 787 Dreamliner exceeded its forecast costs by a whopping $20bn, give or take; its parts, once assembled, did not fit together properly. But just as both planemakers are mending their ways—Airbus's A350 and A320neo and Boeing's 737 MAX arrived in a much more timely and economical manner—manufacturers of the engines which power the aircraft are beginning to stall.

On March 15th Boeing revealed that the new engines, the largest ever made, for its new 777X wide-body airliner had completed their first test flight. But GE, the American engineering giant that built them, is already three months behind with their development, because of hiccups with the engine's compressor.

GE is not the only engine-maker with problems. Pratt & Whitney, a rival owned by UTC, an American conglomerate, has had a catalogue of problems with its new engines for the A320neo. The latest, a fault with knife-edge seals on some of them, forced American and EU safety regulators to limit their use. On March 12th regulators in India, where 40% of the world's A320neos fly, grounded all aircraft with faulty engines. That forced IndiGo, India's largest airline, to cancel 5% of its flights.

Worse still are errors made by Rolls-Royce. Warren East, the embattled British company's chief executive, fessed up this month that replacing faulty turbine blades in engines on 787s will cost it £580m ($800m) over the next two years. The defect has forced airlines, including ANA of Japan and British Airways, to cancel flights. Repairs could take four years or more.

Engines are complicated pieces of machinery, so teething troubles are not new, points out Richard Aboulafia of the Teal Group, a research firm. Problems with Pratt engines in 1969 delayed the development of Boeing's 747 jumbo jet. Rolls had to be bailed out in 1972 because of costs associated with design faults in its RB211 engine. But as technology matured over the next 40 years glitches became rarer.

A new generation of engines is stretching designs and materials to their limit. At Rolls's new engine factory in Singapore, lightweight titanium fan blades similar to ▸▸

It never walks. But does it run?

the faulty ones on 787s are baked into shape in ovens. Some 150 measurements are then taken to ensure that the curves are accurate to the width of a human hair. Be off by more than that and you risk a catastrophic failure.

Strict safety rules mean defects have so far been spotted before they have caused an accident. And demand from airlines for the new generation of engines remains robust, thanks to their high fuel efficiency (over 85% of the fuel savings for the Boeing 737 MAX comes from the engines).

However, shifting more motors is not how engine-makers turn a profit. Engines are like razors, explains Adam Pilarski, an economist at Avitas, a consultancy. They are sold at a loss—of £1.6m for each one Rolls churns out, for example. The money is recouped by lucrative service contracts and data analytics, which used to command margins of up to 35%.

No longer. Slight errors in forecasts, such as underestimating repair costs or overpromising how long engines will last, can push a programme into the red, says Sandy Morris of Jefferies, a bank. That could easily happen on Rolls's 787 engine if, for instance, the replacement blades do not last as long as expected. Moving production to cheaper countries like China or Russia could cut production costs but puts intellectual property at risk.

Airbus and Boeing pose another threat. The planemakers want to grab a share of servicing and analytics contracts to leaven their own margins. They are finding other ways of gouging the engine-makers, too, for instance by forcing them to pay billions of dollars to help develop new planes in exchange for the exclusive right to supply engines for them. For engine-makers, the sky has more limits. ■

Dropbox

Cloud $9bn

NEW YORK

Another unicorn goes public

DREW HOUSTON and Arash Ferdowsi must have few regrets since they turned down an offer for their start-up from Apple's then boss, Steve Jobs, in 2011. Dropbox hasn't done too badly in the interim. It rakes in over $1bn in revenue by allowing users—500m at the last count—to store and share data in the cloud. On March 23rd it is due to go public, making it the biggest firm to do so since Snap, a messaging app, floated in early 2017. Dropbox's range for its share price values it at between $8bn and $9bn. That will comfort other "unicorns", the tag given to startups valued at over $1bn, that are considering listing.

True, the valuation is less than its early backers were hoping for when they valued the company at $10bn in 2014, when it last raised equity. But as Matthew Kennedy from Renaissance Capital, a research firm, points out, the previous valuation coincided with peak investor exuberance for tech firms. The adjustment may also reflect some doubts about the firm's long-term prospects.

Its challenge, common to many unicorns, is to convince users to part with cash. Dropbox gives away a basic level of storage for nothing but charges for premium services, including pricier business subscriptions. In order to increase revenues, it either needs to convert more users into paying ones, or encourage existing subscribers to upgrade. So far only 2% of users pay anything, and average revenue per paying user is flat. In 2017 it posted a loss of over $110m. The firm is counting on a shift away from individual users and towards firms to deliver profits.

It will have to do battle with the giants. Apple, Amazon, Google and Microsoft all now offer either consumer or enterprise storage services. They bundle together a wider range of offerings than Dropbox can. Jobs's reported description of the firm as a "feature, not a product" might not have been sour grapes. If the behemoths were to slash prices for storage, Dropbox's margins would be squeezed.

That said, the firm has enough going for it to keep investors interested. It is not losing out to rivals yet; revenues grew by a third last year. The market for the management of corporate information is wide open, says Terry Frazier from IDC, a market-research firm. Most businesses have yet to make the leap from storing data on their premises to the cloud. An agreement with Salesforce, which offers corporate online services and is buying $100m of its shares, could give Dropbox a shop window for new business customers. And if Dropbox manages to acquire some of them, the cost of moving data to other platforms means they could stay loyal for some time. Messrs Houston and Ferdowsi may continue to confound the giants for a while yet.

Digitax in Europe

The old one-two

PARIS

European regulators take a jab at tax-shy tech giants

IT IS a choice that would make Thomas Hobson proud. European officials this week unveiled plans for a quick and dirty tax policy to apply to big digital firms, in theory by the end of the year. The idea, promised since September, would ditch a tradition of taxing profits and instead let collectors in member states take a share, 3% for starters, of the firms' local revenues. There is a lively debate about where exactly the tech giants create taxable value. Is it where their programmers sit? Or the intellectual property? Or users? The firms have become so adept at tax avoidance that the European Commission is not going to hang around until the argument is settled.

Pierre Moscovici, the commissioner overseeing the proposals, was at pains to say on March 21st that the turnover tax would be an "interim" fix. He denied Americans are his targets. Between 120 and 150 companies would be affected, around half of them American and a third European. (Apple, Google and other American giants would surely get the biggest bills.) Only those with global revenues of more than €750m ($920m), and EU revenues of more than €50m, would be covered. Earnings in the sights include those from ads and marketplaces.

Crucially, firms would pay taxes where they generate revenues, which are harder to sequester abroad with the sorts of intragroup loans and other accounting wheezes often used to book profits in lower-tax jurisdictions such as Ireland or Luxembourg. Regulators say that this practice helps explain why digital firms pay an estimated effective tax rate in Europe of just 9.5%, compared with 23.3% for bricks-and-mortar ones. The new tax could raise €5bn a year.

France under President Emmanuel Macron has pushed hardest for the plan. But it hardly signals "the right environment for modern business" that Mr Moscovici brags about. Tax on revenues could backfire—it is unclear what a loss-making firm with whopping turnover is supposed to do, for example. Nor will the proposal easily become reality: tax changes in the EU require unanimity. France, Britain, Germany, Italy and Spain welcomed the plans. But they will have to strong-arm smaller, low-tax countries, which have most to lose. America, unsurprisingly, is also opposed. Steve Mnuchin, its treasury secretary, told the *New York Times* this week that gross taxes on internet companies are "not fair".

Why push a reform that might hobble the sort of digital economy European officials call the future? Enter Hobson: doing so makes another proposal, announced by Mr Moscovici on the same day, look more appealing. His preferred outcome is for firms to pay taxes locally on a share of their digital profits, not revenues. To make that possible he says countries should pass laws to identify companies' "digital presence". This would be defined as having online revenues worth €7m or more, 100,000 customers or more than 3,000 business contracts in any given country. The EU is fuzzier on how to determine what share of profits derives from these revenues.

That may be fleshed out by various obscurely named efforts to draw up global standards for taxing profits. The EU has an existing proposal, called CCCTB (don't ask), for common rules for calculating firms' taxable profits across Europe. However, such plans progress agonisingly slowly, perhaps because digital firms (and their army of lobbyists) prefer the lucrative status quo. The real gain from threatening a turnover tax might therefore be to speed up plans to tax profits better. ■

Li Ka-shing

Plastic flower of the flock

HONG KONG

The city's most successful tycoon cedes a sprawling empire to his son

"TOO long" was how Li Ka-shing, known fondly by locals as *chiu yan* (Superman) for his business nous, described his working life when he announced on March 16th that he would be retiring in May. Asia's pre-eminent dealmaker has been around for longer than his fictional namesake, scoring and selling assets in ports, telecoms, retail and property to amass a fortune estimated at $36bn.

Few expect Mr Li, who will turn 90 this summer, to hang up his cape for good. He says he will stay on to advise his eldest son, Victor Li, who will inherit his two main businesses. The first is CK Hutchison, a conglomerate with interests in power plants, perfume and much in between. It runs 52 ports and owns 14,000 high-street stores, including Watsons at home and Superdrug in Britain. The second is CK Asset, one of Hong Kong's biggest property developers. Combined they are worth $79.7bn.

At the press conference the younger Mr Li made all the right noises. "When I return to work tomorrow, it will be the same," he told investors. They took it well—shares in the two CK businesses dipped only modestly at the news. His father's willingness to cut him off and answer reporters' questions himself may have reassured them that he really will stick around.

Succession is a delicate matter. Joseph Fan of the Chinese University of Hong Kong has found that family-run firms in Hong Kong, Singapore and Taiwan lose 60% of their value on average in the years before and after a change. Many a tycoon has proved hopeless at planning for his departure. Discussing death is regarded as unlucky. Most cling on past their prime.

Pot of gold

Share prices, January 1st 1973=100, HK$ terms

Source: Thomson Reuters

Not so the meticulous Mr Li. As early as 2000 it became clear that Victor would inherit his empire, after his second son, Richard, stepped down as deputy chairman of Hutchison Whampoa (now CK Hutchison) and went his own way. In 2012 Mr Li made this line of succession official.

According to Oliver Rui of the China Europe International Business School in Shanghai, Mr Li also simplified a complex holding structure in 2015 with the handover in mind. He split property holdings from other assets, boosting both firms' valuations and making it easier for his son to sell off bits of the empire in future.

Mr Li has also been reinvesting his fortune in stable, cash-generating assets in Europe. These now account for close to two-thirds of CK Hutchison's operating profit, compared with just 16% from Hong Kong and mainland China. In November he sold a 73-storey skyscraper on Hong Kong island for $5.2bn, and since 2013 has parted with $3bn-worth of commercial properties in Beijing, Shanghai and Guangzhou.

Although both father and son speak of continuity, many in Hong Kong see Li senior's exit as the end of an era—and not just for his empire. Mr Li came to Hong Kong as a wartime refugee, fleeing Guangdong with his family in 1940 at the age of 12. His father died soon afterwards, and he was taken out of school and put to work. In 1950 he was among the first in the British colony to get into the plastics business. His plastic flowers were a hit. (His future wife came from a well-off industrial family, helping with credit and connections.) When property prices slumped during riots in 1967 he pounced, setting up his first property company in 1971. The timing was propitious; Hong Kong's economy grew by 9% a year on average in that decade.

He went on to operate container ports, and belonged to the first wave of outsiders to invest in China when it opened up in the late 1970s. In Hong Kong he bought into everything from groceries to pharmacies, and supplied swathes of the city with electricity. Through Hutchison, an old British trading house that he bought in 1979 (the first time a Chinese took control of a British firm), he expanded abroad in a way no other local tycoon has. Unusually for a head of a family firm, he sought out professional managers, many of them foreign.

The incoming boss has worked with some of them for decades. Victor is credited with CK Hutchison's push into overseas utilities, including three big recent investments in energy infrastructure in Australia, Canada and Germany. Still, if he has his own vision for the business, it may not become apparent for two to three years, says Mr Rui.

It could use fresh thinking. Two decades ago, Mr Li's stocks were among the ten most actively traded on Hong Kong's exchange, according to Bloomberg, a data provider. Now they are outside the top 30. A foray into biotech has been ho-hum.

As for Hong Kong, it is less fertile ground for would-be tycoons than before. Oligopolies are entrenched locally. Mainland China, meanwhile, produces a dollar billionaire every five days. Pony Ma and Jack Ma, (unrelated) founders of Tencent and Alibaba, two tech giants, are richer than Mr Li. A new Li Ka-shing is more likely to rise in next-door Shenzhen than in Hong Kong. ■

Schumpeter | Citizens of somewhere

A golden age of companies having fistfuls of different passports is over

WHEN it comes to companies and their passports, there is a flutter of activity in the air—and a reek of hypocrisy. This month Qualcomm, an American-domiciled tech giant which does 65% of its business in China, booked most of its profits last year in Singapore, and pays little tax at home, successfully lobbied the Trump administration to block a hostile takeover on the ground that its independence was vital to ensure American strategic supremacy over China. The predator was Broadcom. It is listed in America but domiciled in Singapore, where it gets tax perks. On November 2nd, four days before its bid, it announced a burning desire to shift its legal base to the home of the brave.

In Europe, Unilever, which a year ago demanded that the British authorities help it fend off an unwelcome takeover by Kraft Heinz because it was a national treasure, is shifting its sole base to the Netherlands (at present it is split between London and Rotterdam). The consumer-goods firm says it wants to simplify its structure. But it has been an outspoken critic of London's open takeover regime, and is probably relieved to shelter behind more protective Dutch rules. In Asia, Alibaba, a Chinese internet giant that has its domicile in the Cayman Islands, its principal office in Hong Kong and its listing in New York, has been invited by China's government to float its shares "at home" in Shanghai, an offer it cannot refuse.

It is easy to view these events as just more examples of companies being opportunistic, cynical or both. But in fact a bigger trend is afoot—corporate flag-waving. After years of having more than one identity (rather like fictional spies having a safe-deposit box full of passports) companies are electing, or being forced, to show more allegiance to a particular country.

For three decades, a golden era for globalisation, the trend has gone the opposite way. Companies have unbundled their nationality from operations in the pursuit of efficiency or strategic advantage. The slicing and dicing of identity has occurred in at least half a dozen dimensions.

Take, for example, the frequent difference between where firms put their legal headquarters, where they put their de facto headquarters and where their decision-makers reside. When Anshu Jain was co-chief executive of Deutsche Bank between 2012 and 2015, it was often said that the German lender was run from London. ArcelorMittal, a steel firm based in Luxembourg with French, Belgian, Indian and Indonesian roots, is run by the Mittal family, who live in Britain. Jean-Pascal Tricoire, the boss of Schneider Electric, a French industrial firm with global interests, is based in Hong Kong.

The tax residence of firms is similarly unmoored. Apple is run from California but routes its foreign profits through Ireland, where it says key subsidiaries reside. Nor do regulators need to be physically close to their charges. HSBC, a global bank based in London, relies on profits from subsidiaries supervised in Hong Kong. Companies create intellectual property abroad; foreign pharma firms do most research in America. Then there is the final dimension of nationality: where a firm's shares are listed. Dozens of Chinese internet companies are quoted in New York. In 2011 Prada, an Italian fashion house, chose Hong Kong over Milan.

This unbundling of nationality had a powerful logic. A firm might achieve a higher valuation by listing its shares in one country, get a lower tax bill by domiciling subsidiaries in another, and offer a better quality of life for its executives in a third. In some cases having multiple passports also allowed firms to win the support of more than one government, or undertake mergers that would have otherwise raised nationalistic hackles. Renault-Nissan-Mitsubishi has taken this idea to an extreme, operating as an alliance of firms with their own corporate governance that are linked by cross-shareholdings and some common management.

Today it is still possible to find firms keen to transcend nationality. On March 14th Prudential, an insurer that operates in Asia and America, said it would spin off its European unit, maintain its domicile in London but no longer be supervised by British regulators. SoftBank, a Japanese telecoms and tech firm, has set up a $100bn investment fund that is domiciled in London but mainly invests in Asia and America. But the overwhelming trend is for companies to shed their multiple passports, for three reasons.

First, some shareholders argue they are too expensive to maintain. BHP Billiton, a mining firm with listings in Sydney and London, has come under attack from an activist fund to simplify its structure. Analysts gripe that Renault's alliance is too fiddly to value. Second, some firms are seeking the protection of one government—as in the case of Qualcomm and, perhaps, Unilever. Third, as a more protectionist climate takes hold, governments want firms to locate more activity "at home". A recent example is Saudi Aramco, which was due to list in London or New York, but is now most likely to float its shares only at home. One reason is to help catalyse Riyadh's development as a financial centre.

Passport control

The end of the golden age of corporate cosmopolitanism may make some governments feel more secure. But it could become a zero-sum game, where each country squabbles to get a bigger slice of a fixed pie. For the world's great corporate entrepots, this is bad news. As nationality becomes rebundled, fewer firms will place particular functions away from their headquarters.

The most intriguing question is whether it is good for companies to be tethered to one place. Now that it is a ward of Uncle Sam, Qualcomm may be unable to cut back on pointless research or relocate jobs from America. Unilever may find the Netherlands cosy but Dutch sensibilities on pay restrictive. And being more protected ultimately breeds complacency. Multinationals may come to miss the days when they could stride the planet, belonging to everyone and no one at the same time. ■

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The scramble for battery minerals

Goblin metals

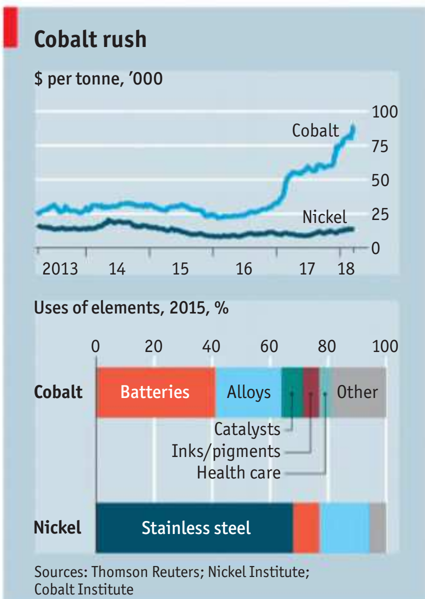
What if China corners the market in the cobalt needed for electric vehicles?

COBALT derives its name from Kobold, a mischievous German goblin who, according to legend, lurks underground. For centuries it vexed medieval miners by looking like a valuable ore that subsequently turned into worthless—and sometimes noxious—rubble. Once again it is threatening to cause trouble, this time in the growing market for batteries for electric vehicles (EVs), each of which uses about 10kg of cobalt. The source of mischief is no longer in Germany, though, but in China.

It is widely known that more than half of the world's cobalt reserves and production are in one dangerously unstable country, the Democratic Republic of Congo. What is less well known is that four-fifths of the cobalt sulphates and oxides used to make the all-important cathodes for lithium-ion batteries are refined in China. (Much of the other 20% is processed in Finland, but its raw material, too, comes from a mine in Congo, majority-owned by a Chinese firm, China Molybdenum.)

On March 14th concerns about China's grip on Congo's cobalt production deepened when GEM, a Chinese battery maker, said it would acquire a third of the cobalt shipped by Glencore, the world's biggest producer of the metal, between 2018 and 2020—equivalent to almost half of the world's 110,000-tonne production in 2017. This is likely to add momentum to a rally that has pushed the price of cobalt up from an average of $26,500 a tonne in 2016 to above $90,000 a tonne.

It is not known whether non-Chinese battery, EV or consumer-electronics manufacturers have done similar, unannounced deals with Glencore. But Sam Jaffe of Cairn Energy Research Advisors, a consultancy, says it will be a severe blow to some firms. He likens the outcome of the deal to a game of musical chairs in which Chinese battery manufacturers have taken all but one of the seats. "Everybody else is frantically looking for that last empty chair."



Mr Jaffe doubts the cobalt grab is an effort by Chinese firms to corner or manipulate the market for speculative ends. Instead, he says, they are likely to be driven by a "desperate need" to fulfil China's ambitious plans to step up production of EVs.

Others see it more ominously. George Heppel of CRU, a consultancy, says that, in addition to GEM sweeping up such a sizeable chunk of Glencore's output, China Moly may eventually ship its Congo cobalt home rather than to Finland, giving China as much as 95% of the cobalt-chemicals market. "A lot of our clients are South Korean and Japanese tech firms and it's a big concern of theirs that so much of the world's cobalt sulphate comes from China." Memories are still fresh of a maritime squabble in 2010, during which China restricted exports of rare-earth metals vital to Japanese tech firms. China produces about 85% of the world's rare earths.

Few analysts expect the cobalt market to soften soon. Production in Congo is likely to increase in the next few years, but some investment may be deterred by a recent five-fold leap in royalties on cobalt. Investment elsewhere is limited because cobalt is almost always mined alongside copper or nickel. Even at current prices, the quantities needed are not enough to justify production for cobalt alone.

But demand could explode if EVs surge in popularity. Mr Heppel says that, though most cobalt is currently mined for batteries in smartphones and for superalloys inside jet engines (see chart), its use for EVs could jump from 9,000 tonnes in 2017 to 107,000 tonnes in 2026.

The resulting higher prices would eventually unlock new sources of supply. But already non-Chinese battery manufacturers are looking for ways to protect themselves from potential shortages. Their best an- ▶▶

swer to date is the other "goblin metal" closely associated with cobalt, nickel, whose name comes from a German spirit closely related to Old Nick.

The materials most commonly used for cathodes in EV batteries are a combination of nickel, manganese and cobalt known as NMC, and one of nickel, cobalt and aluminium known as NCA. As cobalt has become pricier and scarcer, some battery makers have produced cobalt-lite cathodes by raising the nickel content—to as much as eight times the amount of cobalt. This allows the battery to run longer on a single charge, but makes it harder to manufacture and more prone to burst into flames. The trick is to get the balance right.

Strangely, nickel has not had anything like cobalt's price rise. Nor do the Chinese appear to covet it. Oliver Ramsbottom of McKinsey, a consultancy, says the reason for this relative indifference dates back to the commodities supercycle in 2000-12, when Indonesia and the Philippines ramped up production of class-2 nickel—in particular nickel pig iron, a lower-cost ingredient of stainless steel—until the bubble burst. The subsequent excess capacity and stock build-up caused nickel prices to plummet from $29,000 a tonne in 2011 to below $10,000 a tonne last year.

As yet, the demand for high-quality nickel suitable for EVs has not boosted production. Output of Class-1 nickel for EVs was only 35,000 tonnes last year, out of total nickel production of 2.1m tonnes. But by 2025 McKinsey expects EV-related nickel demand to rise 16-fold to 550,000 tonnes.

In theory, the best way to ensure sufficient supplies of both nickel and cobalt would be for prices to rise enough to make mining them together more profitable. But that would mean more expensive batteries, and thus electric vehicles. Only a goblin would relish such a conundrum. ■

Buttonwood | CAPE crusaders

Tackling the criticisms of a favoured valuation measure

FEW measures of stockmarket valuation are as controversial as the cyclically adjusted price-earnings ratio, or CAPE. American equities have looked expensive on this measure for most of the past 20 years, which is why many bulls tend to dismiss its usefulness. It is pretty clear that the CAPE does not help investors to time the market.

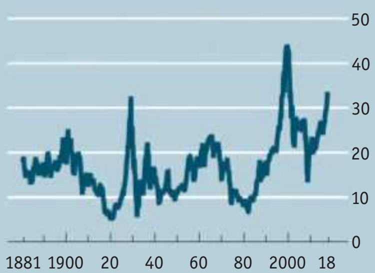
But a new paper* from Research Affiliates, a fund-management group, explains why many criticisms are overblown. The strongest case for the measure is that a higher ratio tends to be associated with lower long-term returns. A study of 12 national markets shows that a 5% increase in the CAPE, from 20 to 21, say, tends on average to reduce the total ten-year expected return by four percentage points.

The attraction of the CAPE is that it smooths out the vicissitudes of the profit cycle. In a recession, profits can plunge even faster than share prices. So if you look only at the ratio of a share price and the previous year's profits, the market can look very expensive. Since it is a moving average of profits over ten years, the CAPE is less volatile. Past peaks have coincided with the top of bull markets, as in 1929 and 2000 (see chart). It is now well above its long-term average.

Critics say that the high value of the CAPE can be easily explained. One argument is that profits have shifted to a permanently higher level. Accounting standards have changed and modern companies, such as Google and Facebook, have more market power. Another line of argument is that, regardless of the level of profits, valuations should be higher. Demographic changes mean that baby-boomers are piling into equities as they prepare to retire. Low real interest rates mean future profits, when discounted, are worth more today. General economic and financial risks have fallen.

Triple peaks

US cyclically adjusted price-earnings ratio*



Source: Robert Shiller, irrationalexuberance.com

*Based on inflation-adjusted earnings from previous ten years

The paper tries to tackle those arguments. The authors accept that the current level of profits is high. But they do not believe that this means future profits growth will necessarily be strong. There is a tendency to revert to the mean. Historically, rapid growth in profits over a ten-year period is associated with slower growth over the next decade. Furthermore, the high level of profits is linked to slow growth in wages. That has led to a populist backlash, which could result in higher taxes on companies or restrictions on trade.

The demographic argument also has its flaws. The baby-boomers are already in the process of retiring, which means they will be running down their savings pots rather than building them up. Furthermore, the ageing population means that the workforce will grow more slowly in future. Other things being equal, that will be bad for both economic growth and profits.

As for the impact of low interest rates, a lot depends on why rates are low. If they are depressed because central banks expect slow economic growth, that is not great for equities. Arguments based on low macroeconomic volatility tend to be hostages to fortune; there was much talk of the "great moderation" in the early 2000s, just before the financial crisis hit.

Finally, other countries also have low interest rates, reduced volatility and ageing populations, without their markets trading on anything like the CAPE that Wall Street does. America's ratio is 32.8, whereas Canada is trading on a CAPE of 20. Germany is on 19 and Britain on 14. All are trading near their historical averages; in contrast, Wall Street is at double its usual level. America may have more powerful companies, but that is a very large gap to attribute to a single factor. Alternative measures of stockmarket valuation, which compare share prices with corporate sales or asset values, also show that Wall Street looks expensive, relative to history, but that other countries (particularly emerging markets) look cheap.

Plenty of sceptics will fail to be convinced by this reasoning. They will point out that the American CAPE has been consistently over 20 since 2011, well above its historic average of 16.8. Yet the markets have continued to perform well, admittedly helped by a huge amount of stimulus from the central banks.

But they should consider what their optimism implies for the future. American pension funds are expecting returns of 7-8% from their portfolios. That would require some combination of decent economic growth, continued low interest rates, a bigger share of profits in GDP and even higher valuations. If you believe in all that, this columnist has some crypto-currencies he would like to sell you.

* "CAPE Fear: why CAPE Naysayers are Wrong" by Rob Arnott, Vitali Kalesnik and Jim Masturzo

Economist.com/blogs/buttonwood

American trade policy

Steel banned

Tariffs on imports are bad in theory. They are even worse in practice

HISTORY will rhyme on March 23rd, when Donald Trump's tariffs on steel and aluminium imports are due to come into force. Several previous presidents, from Ronald Reagan to Barack Obama, also used tariffs in an attempt to protect America's steel producers from foreign competition. (There are historical echoes, too, in Mr Trump's plans to slap tariffs on a range of Chinese imports; in the 1980s Japan was the target.) A rhyme is not a repeat. But past experience is not encouraging.

The central problem for America's policymakers is that trade is like water. Block its flow in one place and pressure builds elsewhere. When many countries are covered by tariffs, trade may simply be diverted through those countries that are let off the hook. Importers will howl for exemptions. As a result, whatever the Trump administration's broader ambitions with respect to trade, bellicose unilateralism will make them harder to achieve.

In 1982 America browbeat the European Community, the forerunner of the European Union, into limiting its steel exports to America. But compensating flows from other countries were so great that America's steel imports increased overall. Exemptions for Canada, Mexico, Israel and Jordan when George W. Bush imposed tariffs on steel imports in 2002 allowed the value of their exports to America to surge by 53%. Canadian and Mexican exporters, who are exempt from the latest tariffs, already account for a big share of American imports (see chart 1). They could clean up.

In an attempt to stop such substitution Robert Lighthizer, the United States Trade Representative, is said to be offering to spare America's allies from the tariffs if they ensure their exports to America do not exceed the level in 2017. On March 21st he hinted that negotiations could last until late April. But such a deal would break the World Trade Organisation's rules, and put bureaucrats, not markets, in charge of allocating export rights.

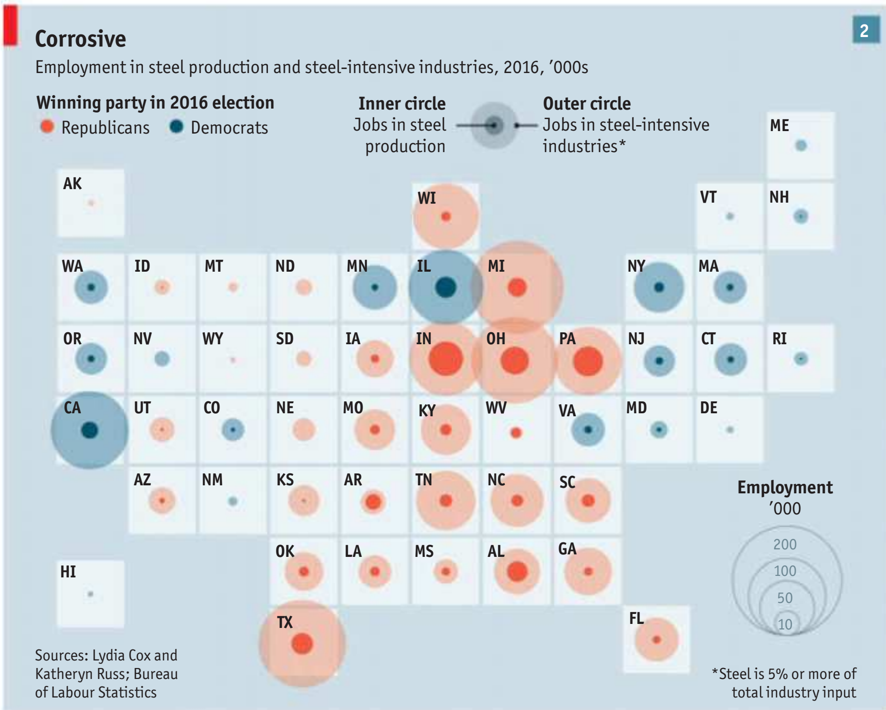
When different countries receive different treatment, circumventing tariffs looks more tempting. Under Mr Obama, America imposed hefty anti-dumping duties on imports of Chinese steel. Inflows from China duly fell, but those from Vietnam surged. America's Commerce Department recently concluded that some steel imports, supposedly from Vietnam, actually originated in China. Mr Trump expects Canada and Mexico to ensure they do not become conduits for steel originating elsewhere. But that may be hard, especially for the generic, less processed stuff.

Mr Trump's tariff barriers are broader than Mr Obama's were. That makes circumvention harder—but also means importers will squeal more loudly for exemptions. After Mr Bush's steel safeguards were applied to the EU and Japan in 2002, companies cut off from their suppliers expended much time and money pleading their case in Washington. Eventually 1,022 exemptions were granted, over 90% of them to firms importing from Japan and the EU. This time, the Trump administration expects to spend 24,000 worker-hours processing 4,500 requests to exempt steel products and 1,500 pleas for aluminium. Lobbyists are rubbing their hands.

Metal consumers will also seek to be spared pricier inputs, which can threaten jobs. In 2002 the employers of Gordon Jones, a steel-drum loader, were thwacked with a 30% tariff. "They say that these tariffs are supposed to help workers, to save steel jobs, but what about me?" Mr Jones asked a congressional hearing. More such complaints will come, since steel-consuming sectors account for far more American jobs than steel production (see chart 2).

Tariffs are not Mr Trump's only trade policy. As well as trying to rewrite the North American Free-Trade Agreement, he is trying to curb China's trade power. Whatever the merits of these aims, the new tariffs will make it harder to rally allies to his side. "Issues like this have a way of overtaking any meeting or any discussion you're having," says Wendy Cutler, a trade negotiator under Mr Obama.

Bill Brock, who was the United States Trade Representative under Reagan, recalls negotiating trade restrictions with Japan in the 1980s. Even amid tensions, he remembers treating Japanese negotiators with respect, knowing that harm to one part of the trade relationship could affect others. Tariffs are "single-shot measures to deal with single issues", he warns, and risk complicating efforts to resolve broader ones. "Of all the stupid self-defeating things we can imagine, a trade war is the top of the list." ■

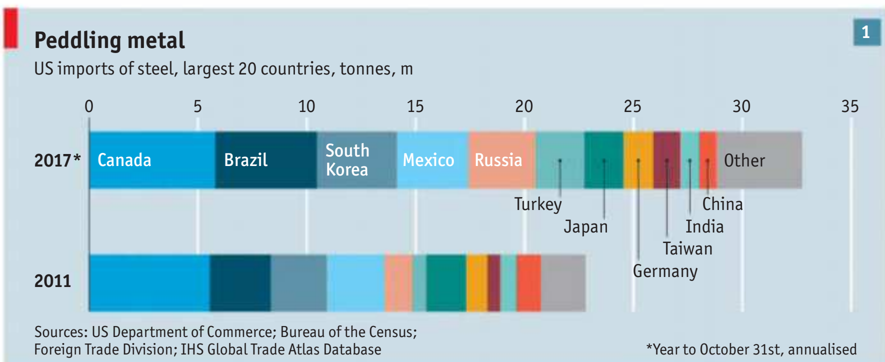


Corrosive

Employment in steel production and steel-intensive industries, 2016, '000s

Sources: Lydia Cox and Katheryn Russ; Bureau of Labour Statistics

*Steel is 5% or more of total industry input



Peddling metal

US imports of steel, largest 20 countries, tonnes, m

Sources: US Department of Commerce; Bureau of the Census; Foreign Trade Division; IHS Global Trade Atlas Database

*Year to October 31st, annualised

Foreign investment in Europe

Capital control

Chinese buyers of infrastructure and technology firms face more scrutiny

"WE ARE not naive free traders. Europe must always defend its strategic interests," said Jean-Claude Juncker, the president of the European Commission, last year as he introduced plans to screen foreign investment into the European Union. America has had such rules since the 1970s; they are set to tighten further. The EU used to be more relaxed about acquisitions by foreigners. Now it too is toughening up.

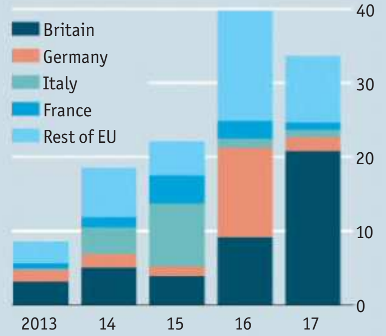
The target is China, whose firms have been on a shopping spree (see chart). Purchases of fripperies such as football clubs and hotels have been curbed by the Chinese authorities, but investment continues to flow into technology and infrastructure, notes James Zhan of the UN Conference on Trade and Development (UNCTAD).

Several European countries, including Germany and Italy, have extended investment-screening rules beyond energy and transport infrastructure to cover technology deemed important for public security, for example in telecoms. Chinese involvement in building Hinkley Point C, a nuclear-power plant, led Britain to tighten its rules. Last month France's government blocked the sale of its share of Toulouse airport to a Chinese consortium, which would have gained a majority stake.

European lawmakers suspect that purchases by private Chinese investors are an extension of their government's "Made in China 2025" strategy, which aims at overtaking Western innovation, says Franck Proust, a French member of the European Parliament. Attitudes have soured most in Germany. A turning-point came in 2016,

Buying time

Chinese FDI* flows into the European Union, $bn



Source: Rhodium Group   *Foreign direct investment

says Cora Jungbluth of Bertelsmann Stiftung, a think-tank, when a Chinese firm acquired KUKA, a German robotics firm, for €4.5bn ($5bn). Critics fumed that, even as Chinese companies gained Western know-how, German ones were facing discrimination in China. Last year Germany, with France and Italy, pushed for an EU-wide regime that could block acquisitions in sectors where European firms did not have reciprocal access in China.

Mr Juncker's proposals, which are now before the European Parliament, are more timid. They allow the commission to issue non-binding opinions on foreign acquisitions, and encourage EU members to share information on the possible effect on public security. They represent progress, says Mr Proust, considering that more than half of EU members do not even have a framework in place to assess such deals. But he would prefer something harder-edged.

Not every EU member feels this way. China's Belt and Road Initiative, which involves it underwriting billions of dollars of infrastructure investment along the old Silk Road linking it with Europe, is regarded by some southern and central European countries as a source of much-needed investment. Other EU countries worry that such eagerness could be exploited to divide the continent. Awkwardly, austerity measures imposed as a condition of bailouts during the euro crisis contributed to Chinese influence. Privatisations intended to help stabilise wobbly public finances mean that the Chinese state now controls Piraeus, a Greek port, and owns the largest stake in Portugal's electricity grid.

The Nordic countries and the Netherlands meanwhile argue that stricter rules on Chinese investment could inflame trade tensions, even as the global trade environment worsens. Business groups fear that tighter screening could be used as a cover for protectionism. International organisations, including UNCTAD, warn that it could scare off investors and harm economic growth. A less starry-eyed approach to foreign investment brings risks, too. ■

Financial regulation

Green tape

The European Union wants to make finance more environmentally friendly

TO GAUGE an issue's importance, a guest list is a good place to start. The one for a conference in Brussels on March 22nd to discuss the European Union's "action plan" on sustainable finance features heavy-hitters including Emmanuel Macron, France's president, and Michael Bloomberg, a former mayor of New York who campaigns on climate change. Given that sustainable finance is well-established, what action does the EU think is needed?

Investing with an eye to environmental or social issues, not just financial returns, has become mainstream in the past decade. According to the Global Sustainable Investment Alliance (GSIA), $23trn, or 26% of all assets under management in 2016, were in "socially responsible investments" that take account of environmental, social and governance (ESG) issues. New asset classes have sprung up. According to SEB, a Swedish bank, the issuance of green bonds, the proceeds of which are invested in environmental projects, reached $163bn in 2017, up from less than $500m in 2008.

Yet standards are a hodgepodge. Many certification and evaluation tools cover just one asset class; competing methodologies abound. It is here that the European Commission, and an advisory group of experts, sees a role for public policy. One aim is to create a framework within which to classify the sorts of activities that qualify as sustainable investments, and against which to benchmark existing standards. The commission proposes setting up an EU labelling scheme for green bonds.

It also plans to draft a law by mid-2018 to require all asset managers to consider ESG factors when giving advice, and to explain how they are doing so to their investors. The European Fund and Asset Management Association, an industry group, worries that this would turn ESG investing into a box-ticking exercise. But Christian Thimann of AXA, an insurer, and the chair of the expert group, argues that many financial firms still ignore clients' environmental or social preferences. Compelling them to tick boxes would be better than nothing, he thinks.

Another of the proposals has drawn fiercer criticism: to loosen capital requirements for banks' green investments. That goes against a decade's worth of financial regulation, which has sought to bolster banks' capital buffers. Even the commission's expert group seems dubious, writing that the proposal does not "seem to be quantitatively grounded". (The commission insists any changes will take financial stability into account.)

However the debate on capital requirements is resolved, the commission's plans look likely to boost sustainable finance in Europe. That will not turn the global financial system green on its own. But it will show how financial rules can be harnessed for environmental ends.

Technology and international trade

Pulp friction

SINGAPORE

The digitisation of trade's long trail of documents has been talked about for years. At last things are shifting

THE enormous ships steaming into and out of the world's ports do not only carry cargo. They also represent paperwork: bills of lading (BOLs), packing lists, letters of credit, insurance policies, orders, invoices, sanitary certificates, certificates of origin. Maersk, the world's biggest container-shipping line, found that a shipment of avocados from Mombasa to Rotterdam in 2014 entailed more than 200 communications involving 30 parties. A giant container vessel may be associated with hundreds of thousands of documents. "A Venetian merchant…would recognise some of our documentation," says John Laurens, head of global transaction services at DBS, a Singaporean bank.

According to the World Economic Forum, the costs of processing trade documents are as much as a fifth of those of shifting goods. Removing administrative blockages in supply chains could do more to boost international trade than eliminating tariffs. Full digitisation of trade paperwork, reckons the UN, could raise Asia-Pacific countries' exports by $257bn a year.

After years of talk about digitisation, such a shift may at last be taking place. Banks, insurers, shippers, their corporate customers and governments, abetted by technology companies, are combining forces to digitise the paper trail. Lots of projects are under way, building platforms which the various actors can use. Several are based on the blockchain, or distributed-ledger technology.

Using blockchain means that everyone with access to a ledger—for that consignment of avocados, say—sees the same, up-to-date version of the truth. Flows of goods, information and money are thus aligned. The ledger would contain the purchase order, certification that the fruit came from Kenya, its eligibility for a concessionary European tariff, an updated record of its physical condition, phytosanitary certificates, the BOL and so on. An embedded "smart contract" could trigger payment, in full or in part, once certain conditions were met. All sorts of details could be included, says Tyler Mulvihill of Viant, a blockchain startup, such as the provenance of fish or drugs, or a mining firm's environmental credentials.

In January Maersk and IBM, a computing giant, unveiled a blockchain-based joint venture aimed at digitising the supply chain from end to end. Big companies, ports and the American and Dutch customs authorities have carried out trial projects. The platform will be open to all (and run independently of Maersk): the hope is that logistics firms, financial companies and other shippers will join.

TradeIX, a fintech startup, R3, another blockchain firm, and several banks are testing another open platform, Marco Polo. Last year eight European banks and IBM unveiled we.trade, a trade-finance conduit for small and medium enterprises. They expect to deploy it in the second quarter of 2018. This month Evergreen, a big Taiwanese container line, teamed up with Bolero, a provider of electronic BOLs. Bolero and essDOCS, its rival, have offered electronic BOLs for several years, but have made limited headway. Similarly, electronic letters of credit have been available for some time, but have not been widely used.

Go-ahead governments are also encouraging digitisation. Singapore is building a National Trade Platform (not based on blockchain), involving banks, shippers and technology firms. It will bring "the whole trade ecosystem onto a single platform", says Satvinder Singh of International Enterprise Singapore. Hong Kong is creating a trade-finance blockchain platform. In November the two Asian trading hubs said they would create a cross-border platform, the Global Trade Connectivity Network, which is due to go live next year.

Part of the gain from digitisation lies in cutting costs. Banks employ armies of people in back offices, looking for discrepancies that may betoken fraud or honest error. Digitisation should also free the flow of finance to firms starved of it, partly by helping banks' compliance with anti-money-laundering rules. The Asian Development Bank has put the gap between available trade finance and demand at $1.5trn.

Thomas Olsen of Bain & Company, a firm of consultants, thinks that digitisation could also slow the trend away from formal letters of credit, which now account for about 15% of trade finance, down from half in 1970. "Open account" trade, in which exporters send goods to importers and trust that their invoices will be paid, now accounts for the bulk. That is fine for big corporations and companies familiar with one another; less so for SMEs. "There would be more risk mitigation if it weren't such a pain," Mr Olsen says.

Paper wait

Institutional obstacles to digitisation loom larger than technical ones. For instance, a UN convention adopted in 2008 extends the recognition of electronic documents. But to come into force it must be ratified by 20 countries. Only four have: Cameroon, Congo, Spain and Togo. Upgraded industry standards are essential. The International Chamber of Commerce, a standard-setter for trade since 1919, established a group last June to co-ordinate work on trade finance. A new initiative based in Singapore, Digital Standards for Trade, may also help push things along.

Bain's Mr Olsen thinks the co-ordination problem will not stop progress. "It's a misconception that a lot of people have to leap at the same time," he says. He expects competing blockchain initiatives to develop piecemeal. Some platforms will become utilities; some will specialise; some will fade. Paperwork will not vanish. But at a difficult time for traders, one burden should become a lot lighter. ■

Dockumentary evidence

Free exchange | Can't hardly wait

A misguided notion of what is normal could cause central banks to err

LIKE teenagers, central bankers long to feel normal. For many of them (the central bankers, that is), the past decade has been an unusually angst-ridden one. They stumbled through it, confused by the way their policymaking bodies were changing, unsure what to do with their interest rates, embarrassed by their burgeoning balance-sheets. Teenagers often seek to quell their anxiety and insecurity by imitating behaviour they regard as normal. So too for central bankers.

But the desire to normalise policy, and leave crisis-era measures behind, could distract central bankers from their main goals, namely to support growth and control inflation. The Bank for International Settlements, a global club for central bankers, recently urged officials not to let market jitters discourage them from raising interest rates. Yet at worst, chasing some elusive notion of normal could put the global recovery at risk.

What central bankers mean by normalising policy is clear enough. As Peter Praet, the chief economist of the European Central Bank (ECB), explained in a recent speech, to normalise is to end their reliance on "unconventional" or "non-standard" tools such as quantitative easing (QE, the printing of new money to buy assets). It means returning to a familiar world in which adjustments to interest rates are their main policy lever.

Central bankers make no secret of their longing to return to this normality. When, in his first monetary-policy report to Congress, Jerome Powell, the new chairman of the Federal Reserve, praised his predecessor, Janet Yellen, he focused on her achievements in just this area. "During her term," he said, "Federal Reserve policymakers began to normalise both the level of interest rates and the size of the balance-sheet." (On March 21st Mr Powell made his own contribution to the effort, as the Fed raised its benchmark rate by 0.25%.)

But what makes one era the standard by which all others are judged normal or abnormal? Older central bankers cut their teeth during the 1970s and 1980s when giants like Paul Volcker, a former Fed chairman, used double-digit interest rates to tame inflation. Younger ones began their professional lives during the 1990s, when Alan Greenspan and his peers manipulated their economies with a deft rate hike here, a cunning cut there.

After the financial crisis, policy rates plummeted to near zero, forcing central bankers to experiment with QE, negative interest rates and promises to leave rates at rock-bottom far into the future. Since the crisis, asset accumulation in rich economies, which still continues in the euro area and Japan, swelled central banks' balance-sheets by trillions of dollars.

This combination is more than a relic of the financial crisis, however. Rather, it increasingly looks like a persistent feature of the world economy. Across rich countries, central banks' benchmark interest rates have been only about 2%, on average, over the past 20 years (see chart). The Fed hopes to raise its benchmark policy rate to 3.5% by 2020, according to its most recent projections, clearing that low bar, but with little to spare.

Since rates usually fall by much more than three percentage points during downturns, the Fed's projections imply that "unconventional" tools such as asset purchases will be needed again in future. For other central banks, normal is even further out of reach. The Bank of England hopes to reach a policy rate of just over 1% by 2021. The ECB is still in the process of weaning its economies off asset purchases, currently set at €30bn ($37bn) a month. Japan has been living in an abnormal world for roughly a quarter of a century.

Am I bovvered?

All this makes talk of normalisation perplexing. It might be bravado intended to conceal uncertainty about how to behave—another teenage habit. Or central bankers may be pinning their hopes on global economic conditions returning to something more like supposedly "normal" periods in the past. But central-bank policy rates are low because interest rates around the world are low. Those rates reflect a world in which economic growth in advanced economies is slower than it was in the post-war decades, in which there is more capital sloshing around than governments or firms can easily put to good use, and in which inflation is very low and stable.

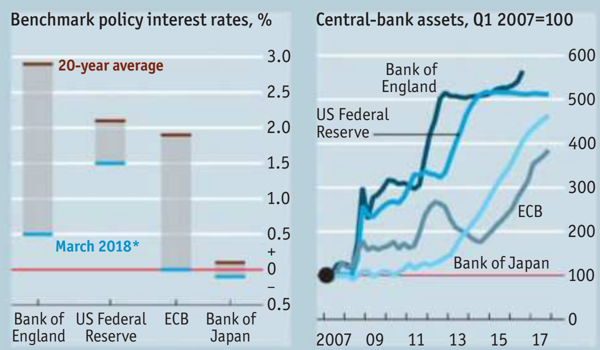
None of this seems likely to change soon. Slow productivity gains and ageing populations weigh on advanced economies. An unanticipated borrowing binge by America's government will soak up some global savings. But it has not yet raised yields on long-term Treasury bonds from their historically low levels. In the absence of a sudden and dramatic change in global conditions, central bankers will be forced to abandon plans to normalise policy—hopefully before, but potentially after, raising rates above levels their economies can tolerate.

Some factors pushing down global interest rates, such as slow growth and excess capital, depress the real (ie, adjusted for inflation) rate of interest. Yet the policy rates that central banks control are nominal. Inflation is a wedge between the two. Consequently, higher inflation would create an environment in which central bankers could set policy rates well above zero even as real interest rates stayed at their current lows.

For just that reason, some economists have proposed a change in central-bank targets. Among their number are former Fed officials, including Narayana Kocherlakota, who has recommended an increase in the central bank's inflation target, and Ben Bernanke, who prefers a flexible approach that would give central banks the freedom to allow inflation to rise temporarily higher than the current target permits.

Each idea has its merits. Neither could be described as a return to normal. But as the rare self-confident, trend-setting teenager realises, it is possible, and indeed often preferable, to come to your own understanding of what normal means. ■

An awkward age



Sources: Thomson Reuters; Haver Analytics

*To March 21st

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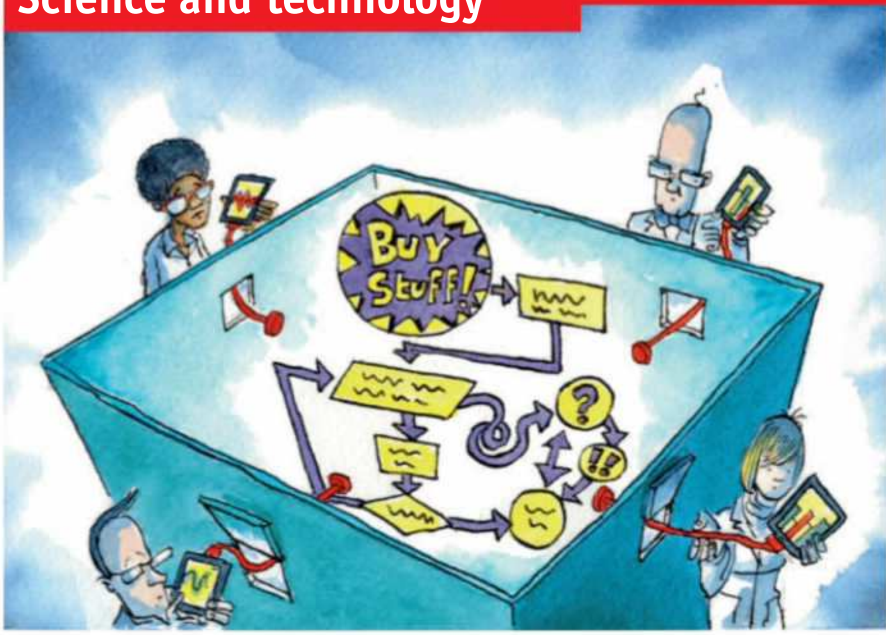


The behavioural ecology of machines

A Skinner box for software

CAMBRIDGE, MASSACHUSETTS

Studying algorithms systematically offers hope of understanding the opaque world of digital advertising

ALAN MISLOVE studies algorithms. Recently, his research at Northeastern University, in Boston, has shown that Facebook's software was leaking users' phone numbers to advertisers. He has also found new ways to audit that same software for racial bias. But work like his faces challenges. Scraping data from public-facing websites often sails close to breaching their terms and conditions. And the companies those websites belong to are generally unwilling to give researchers more direct access to their systems.

Moreover, examining other people's algorithms requires the creation of your own to do so. Dr Mislove's group often spends months just writing the code needed to gather any data at all about the objects of its inquiry. This means that only those with sufficient computer-science skills can study the computer programs that play an ever-growing role in society—not just in commerce, but also in politics, economics, justice and many other areas of life. This is bad for research and for the public.

Now, as Facebook finds itself in the throes of a scandal over its handling of data and the power of its hyper-targeted advertising software, Dr Mislove is working with a group of researchers at the Massachusetts Institute of Technology (MIT) who think they have an answer to these problems. This group, led by Iyad Rahwan, has taken a leaf out of the book of B.F. Skinner, an animal behaviourist who, several decades ago, worked down the road from MIT at Harvard. Skinner invented a device, now known as a Skinner box, which standardised the process of behavioural experimentation. He used his boxes to control input stimuli (food, light, sound, pain) and then observed output behaviour in an attempt to link the one to the other. Though by no means perfect, the Skinner box was a big advance in the field. Dr Rahwan hopes to do something similar to software using what he calls a Turing box.

This "box" is itself a piece of software. Place an algorithm in it, control the data inputs, measure the outcomes, and you will be able to work out exactly how it behaves in different circumstances. Anyone who wants to study an algorithm could upload it to a Turing box. The box's software would then start running the algorithm through a standard data set of the kind it was designed to crunch. All face-recognition algorithms, for example, would be given the same scientifically validated set of faces. The algorithm's output—in this case how it classifies different faces—would be recorded and analysed. Dr Rahwan's hope is that companies will want political and social scientists to use the box to scrutinise their algorithms for potentially harmful flaws (eg, treating faces differently on racial grounds), and that researchers will line up to do the testing.

Indeed, his ambitions go further still. His intention is that the Turing box should become just one component of a new field, the scientific study of the behaviour exhibited by intelligent machines, and of the impact of that behaviour on people. A demonstration paper he and his colleagues have submitted for publication to the International Joint Conference on Artificial Intelligence describes the system, as well as the broader details of this new field of machine behaviour. He plans to finish the Turing-box software by the summer, and says he will publish the code under an open-source licence shortly thereafter, for anyone to reuse. The running of the platform will then be left to a not-for-profit firm that he plans to spin out of MIT.

Boxing clever

It is a neat idea, and timely. Algorithms are being developed far faster than their impacts are being studied and understood (see chart on next page). The Turing box, if it works as intended, could help turn the tide. Understanding algorithms' behaviour is particularly urgent in the existing digital-advertising "ecosystem", in which individual users of software are, in effect, in their own Skinner boxes—with their actions constantly monitored, and tailored rewards fed to them. The Facebook furore, for example, revolves around allegations that Cambridge Analytica, a digital lobbying firm, improperly obtained data from Facebook, then used them to aim advertisements which influenced the American ▸▸

presidential election in 2016 (the firm has denied any wrongdoing).

Dr Rahwan recognises that the reluctance of many companies which form part of the digital-advertising ecosystem to upload their algorithms for inspection make it a bad place to start. So, to begin with, he will work elsewhere, studying less controversial and commercially sensitive systems such as open-source algorithms for processing natural language.

He says, though, that the ultimate goal is to enable the study of the algorithms which some of the world's most valuable IT firms hold dearest: Facebook's newsfeed, for example, or Amazon's product-recommendation software. That means looking at the behaviour of these algorithms in an environment which is as close as possible to that in which they normally operate, so that their impact on the real world can be measured. This in turn will require the firms that own them giving independent researchers access to their systems and data.

Recent years have seen things go in the opposite direction. According to Michal Kosinski of the Stanford Graduate School of Business, who in 2012 pioneered the use of Facebook data to study personality, "academic researchers have virtually no access even to publicly available data without breaking a given platform's terms of service." Firms' scruples in these matters are not driven only by desire for commercial secrecy. As this week's events have shown, a leak of personal data from an academic inquiry can be just as damaging as one from a sloppy business partner.

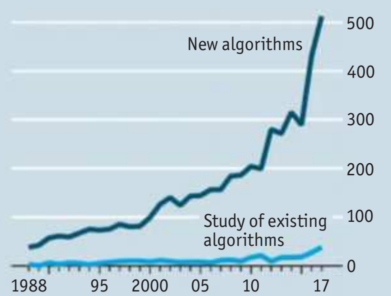
So, research on particularly sensitive data may require academics to be physically present inside an organisation in order to gain access to those data, a process akin to studying in the rare-books section of a library. It might also be a good idea to have independent umpires of some sort, to ensure that both firms and researchers stay on the straight and narrow.

Facebook seems open to the idea of working with researchers in this way. In a statement given to *The Economist* a few days before the Cambridge Analytica story broke, the firm stated a desire to work with researchers in order to understand the impact of its systems, but warned that it had to shield its users' data from third parties. Facebook also said that it is "actively working" on an approach which achieves both goals, although it declined to provide any details of that work. Contacted later in the week, the firm's data-science team declined to issue any additional statement.

The Turing box is only in the earliest stages of development, but it, and systems like it, offer to inject something vital into the discussion of digital practices—independently gathered causal evidence. Without that, people may never get out of the Skinner boxes in which the tech firms have put them. ■

Known unknowns

Neural-network research papers mentioning:



Sources: Rahwan et al.; NIPS

Planetary cataclysms

Inconstant moons

HOUSTON

The rings and inner satellites of Saturn may be recent creations

NOT everything looks lovelier the longer and closer its inspection. But Saturn does. It is gorgeous through Earthly telescopes. However, the 13 years of close observation provided by *Cassini*, an American spacecraft, showed the planet, its moons and its remarkable rings off better and better, revealing finer structures, striking novelties and greater drama.

Cassini's observations, which ended last September when the craft was crashed into Saturn's atmosphere, also provided further evidence that, as might be expected of such delicate beauty, the rings are quite new to the world. This idea is not novel, but has been put on a firmer footing than before. And a new theory proposes that the cataclysm which created the rings may also have brought into being quite a few of Saturn's moons.

By and large the big things in the solar system—planets and moons—are thought of as having been around since the beginning. The suggestion that rings and moons are new is, though, made even more interesting by the fact that one of those moons, Enceladus, is widely considered the most promising site in the solar system on which to look for alien life. If Enceladus is both young and bears life, that life must have come into being quickly. This is also believed to have been the case on Earth. Were it true on Enceladus, that would encourage the idea that life evolves easily when conditions are right.

One reason for thinking Saturn's rings are young is that they are bright. The solar system is suffused with comet dust, and comet dust is dark. Leaving Saturn's ring system (which *Cassini* has shown to be more than 90% water ice) out in such a mist is like leaving laundry hanging on a line downwind from a smokestack: it will get dirty. The lighter the rings are, the faster this will happen, for the less mass they contain, the less celestial pollution they can absorb before they start to discolour. And, though the final figures have yet to be published, on March 19th Jeff Cuzzi, a scientist at America's space agency, NASA, who helped run *Cassini*, told the Lunar and Planetary Science Conference in Houston that combining the mass estimates with *Cassini*'s measurements of the density of comet-dust near Saturn suggests the rings are no older than the first dinosaurs, nor younger than the last of them—that is, they are somewhere between 200m and 70m years old.

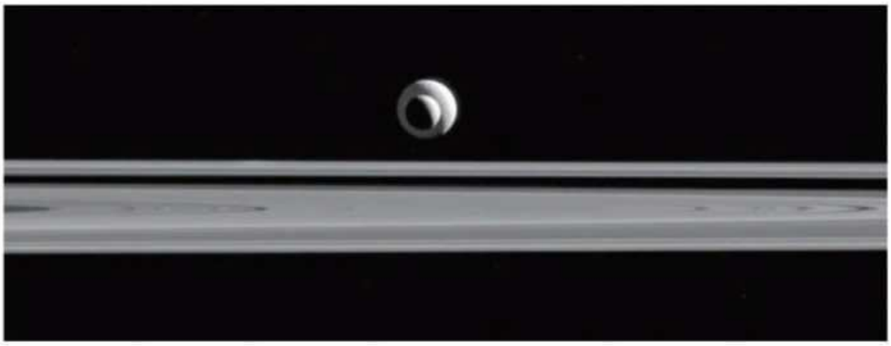
That timing fits well with a theory put forward in 2016, by Matija Cuk of the SETI Institute, in California and his colleagues. They suggest that at around the same time as the rings came into being an old set of moons orbiting Saturn destroyed themselves, and from their remains emerged not only the rings but also the planet's current suite of inner moons—Rhea, Dione, Tethys, Enceladus and Mimas. (Tethys and Enceladus are pictured overleaf, along with the rings.)

Dr Cuk and his colleagues used computer simulations of Saturn's moons' orbits as a sort of time machine. Looking at the rate at which tidal friction is causing these orbits to lengthen they extrapolated backwards to find out what those orbits would have looked like in the past. They discovered that about 100m years ago the orbits of two of them, Tethys and Dione, would have interacted in a way that left the planes in which they orbit markedly tilted. But their orbits are untilted. The obvious, if unsettling, conclusion was that this interaction never happened—and thus that at the time when it should have happened, Dione and Tethys were simply not there. They must have come into being later.

The first blush of youth

How could this be? Dr Cuk's explanation relies on another form of orbital perturbation called an evection. Orbits have a property called precession. The point at which a moon and its planet come closest together, known as periapsis, is not constant. On each of a moon's orbits, periapsis shifts a little farther around the planet until it eventually returns to where it was. When the period of this precession matches the time it takes the planet itself to orbit the sun, the sun's gravity will distort the moon's orbit. This is evection.

Dr Cuk and his colleagues think that Saturn started off with two moons close to it that, between them, weighed a bit more than Dione and Rhea, the biggest of today's inner moons. Their orbits would ▸▸



Enceladus passing in front of Tethys, with Saturn's rings in the foreground

have expanded slowly for billions of years until the radius of the more distant one's orbit was 8.3 times that of Saturn—at which point it would have entered a powerful evection and started swinging around like a wild thing. Eventually it would have smacked into its sibling, destroying both and creating a vast disc of debris. Reasonably quickly, gravity would have clumped almost all of this debris back together, to produce a new set of moons. These are the ones seen today. But within a certain orbital radius, known as the Roche limit, moons cannot form. There, the disc would have remained a disc—the disc of the rings.

If Dr Cuk's theory is correct, it makes Enceladus even more interesting. One of *Cassini*'s most provocative discoveries was that Enceladus has an ocean under its icy exterior, plumes from which are sprayed into space on a regular basis from rifts in the ice at its south pole. *Cassini* showed that this ocean contains hydrothermal sites which could provide chemical energy, and that there are organic molecules in it.

Many believe that the presence of these things was all that was required for life to get started on Earth. Now, Enceladus looks as youthful as Earth was then. Old enough for life to have begun. Young enough for nothing dire to have happened to it. Enceladus has become an even more enticing subject for a long, close inspection than it was before. ■

Scientific foibles

Abstract art

HOUSTON

All annual meetings/Have quirks. The LPSC's/Take poetic form

IN 2001 Allan Treiman, a researcher at the Lunar and Planetary Institute, in Houston, was working on the one-sentence summary that the annual Lunar and Planetary Science Conference (LPSC) requires of presenting authors when inspiration struck. To communicate the essence of a paper entitled "The ALTA II Spectrometer: a Tool for Teaching About Light and Remote Sensing", he wrote down:

Bright leaves on dark sky
Beyond the brilliant rainbow
Vision fades away

The next year Ralph Lorenz, another planetary scientist, followed his lead, summarising "Tectonic Titan: Landscape Energetics and the Thermodynamic Efficiency of Mantle Convection" thus:

Titan's surface forged,
not by blows but by churning.
Carnot tells us why

And thus was a tradition born. The astronomical followers of Basho have multiplied until, this year, more than 200 of the papers at LPSC have such haiku summaries. Some are purely descriptive:

Remote imaging
Of halite habitats in
Dry Atacama

Some impart lessons:

Counting craters is
Easier when you use a
Supercomputer

Others ask questions both scientific...

Deep within Ceres
Mysteries still confound us
Is it mud or ice?

...and ethical:

Absence of voices
Lost paths, lost thoughts, lost ideas
Who we are missing?

And some go beyond the fun of an in-joke or the satisfaction of word play to evoke a sense of change and cycles very fitting to the form and the orbiting subject matter, as in Renee Weber's summation of "Thermal Moonquakes: Implications for Surface Properties":

Sunrise and sunset
Cracking, creaking, and rumbling
The Moon never rests

Autonomous vehicles

A driverless tragedy

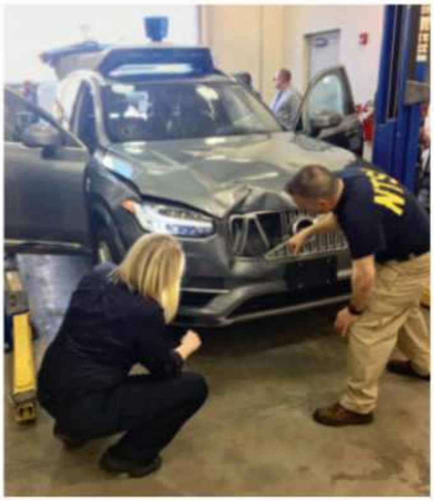
The first pedestrian has been killed by a self-driving car

EVERY day around 100 people are killed on America's roads, including 16 pedestrians. Each death is a tragedy, but that of Elaine Herzberg, who died after being hit by a car in Tempe, Arizona on the evening of March 18th, was a tragedy of a new kind. It was the first known case of a pedestrian being killed by a self-driving car. The accident has raised questions about whether America's rules surrounding the testing of autonomous vehicles (AVs) are too lax.

The vehicle that struck Ms Herzberg was being tested in "autonomous mode" by Uber, a ride-hailing firm. Local police say it was travelling at 38mph (61kph) on a road with a speed limit of 45mph, and that video from the vehicle shows Ms Herzberg, who was wheeling a bicycle by the side of the road, stepping suddenly into the car's path. A human safety driver in the vehicle did not anticipate the collision and had not taken manual control. The police and federal safety bodies have launched investigations, during which Uber has suspended operation of its AVs in Arizona, Pittsburgh and San Francisco.

Many American cities and states permit the testing of AVs on public roads, with varying degrees of licensing and oversight. Boston, for example, requires AVs to pass a driving test in a limited area before heading out into the wider city. California requires companies testing AVs to provide annual safety reports. Arizona is a particularly attractive environment for AV-makers, because its streets are regular grids, the weather is reliably dry and warm (snow can confuse the LIDAR sensors AVs use to scan their surroundings) and its regulators have been unusually welcoming. Since 2015, no special permits or licences have been needed to operate AVs in Arizona, though the governor announced a tweaking of the rules on March 1st.

Those new rules will now come under intense scrutiny, as will legislation, currently in the works in Washington, DC, to introduce federal safety standards for AV testing. This proposes exempting AVs from some existing safety standards, and would prevent states from introducing their own rules for AVs. The aim is to spur innovation by simplifying the regulatory environment. But in the wake of the accident in Tempe, road-safety advocates have called for the rules around AVs to be tightened, not loosened. Boston has asked nuTonomy, an AV firm, to suspend testing. Toyota said it would have a voluntary



Examining the evidence

pause in the testing of AVs on American roads. The firm said it was concerned about the emotional effect of the Tempe accident on its safety drivers.

Proponents of AVs often cite the safety benefits of vehicles that can drive themselves, noting that 94% of accidents are caused by human error. General Motors, America's biggest carmaker, has set a goal of "zero crashes". But developing the technology means testing it on public roads, where accidents involving AVs and other road users are inevitable. AVs will never eliminate road deaths, and expecting them to do so is to hold them to an impossible standard. A more realistic goal, suggests Amnon Shashua of Mobileye, a maker of AV technology, is to reduce the number of road deaths a thousandfold. But in a paper published last year, he warned of the danger of a "winter of autonomous driving", suggesting that because of regulatory uncertainty, fatal accidents involving fully autonomous vehicles could plunge the industry into legal limbo, or kill it altogether.

The extent to which Ms Herzberg's death will change attitudes towards AVs, or influence the regulation of the industry, depends to a large extent on the findings of the various investigations. It is important to avoid unnecessary risks when developing and implementing what promises to be a life-saving technology. But the sad truth is that there are bound to be fatal accidents on the road to a driverless world. ■

Drug resistance

Collateral damage

Non-antibiotic drugs promote antibiotic resistance in gut microbes

THE widespread use of antibiotics encourages the pathogens they are directed against to become inured to their effects. That is well known. But antibiotics cause damage to non-target species as well, so these, too, tend to evolve immunity. Since most antibiotics are administered by mouth, the many bacteria that live peacefully in the human gut are particularly susceptible to such evolutionary pressures.

The medical consequences of this are ill-understood, in part because most gut bacteria are anaerobes (meaning they flourish only in the absence of oxygen) and so are difficult to culture. But Lisa Maier of the European Molecular Biology Laboratory, in Heidelberg, and her colleagues have, nevertheless, grown 40 of the most common strains of them in anaerobic conditions. They have then gone on to expose those cultures to hundreds of drugs for a range of ailments, at the sorts of concentrations that might be encountered in the human intestine. Their study, published this week in *Nature*, has revealed an unexpected avenue by which gut bacteria can become resistant to antibiotics: exposure to drugs that were designed to act on human cells rather than microbial ones.

Of the drugs in the study, 156 were antibacterials (144 antibiotics and 12 antiseptics). But a further 835, such as painkillers and blood-pressure pills, were not intended to harm bacteria. Yet almost a quarter (203) did. These accidental bactericides included proton-pump inhibitors such as omeprazole (used to treat acid reflux), calcium-channel blockers (to lower blood pressure), antihistamines, painkillers and antipsychotics. (In the case of antipsychotics, these chemically diverse drugs seemed to affect many of the same strains of gut bacteria. That suggests their effects on the brain could, in part, be a result of their influence on gut flora).

Hiding in an intestine near you

The researchers noticed too that the strains of bacteria most resistant to the effects of drugs not aimed at them were also those most resistant to antibiotics. This observation implied that these bacteria were using similar means to defend themselves against both sorts of medicine.

To check if that was indeed the case, Dr Maier and her colleagues first looked at a particular strain of a common gut bacterium, *Escherichia coli*, which they knew carried an antibiotic-resistance gene called *tolC*. Bacteria that possess *tolC* can make a protein which works as an antibiotic-expulsion pump. The researchers found that *E. coli* carrying *tolC* were resistant to the effects of both antibiotic and non-antibiotic drugs, and that *E. coli* engineered to lack it became susceptible to both.

The team then conducted a foray through the genome of *E. coli*, intended to look at the protective effects of pretty well every gene the bug possesses. To this end they bought a library of 4,000 strains of *E. coli*, each of which was engineered to overproduce the protein encoded in one particular gene, different for each strain. They studied the effects of seven non-antibiotic drugs on each of these strains.

They found many cases where proteins (and thus genes) which protected bacteria from these seven drugs were ones already known to make them resistant to antibiotics. In sum, their work suggests that bacteria often use similar mechanisms to evade all classes of drug. These can be spread by the bacterial habit of trading DNA not only with conspecifics but also with other members of the bacterial domain. This means the gut bacteria of patients consuming (say) painkillers or proton-pump inhibitors might evolve a resistance that they then passed on to a pathogen that subsequently infected the body.

That is worrisome. Drug-resistant infections could, by some estimates, become responsible for 10m deaths a year by 2050, up from 700,000 today. However, Dr Maier's study also brings some good news for the fight against antimicrobial resistance. Some strains she looked at which were resistant to antibiotics nevertheless succumbed to one or more of the non-antibiotic drugs thrown at them. This could be a starting point for the development of new antimicrobial agents which would eliminate bacteria that have proved intractable to other means. Given that all the drugs tested have already been approved for human use, albeit for unrelated conditions, this is a path well worth exploring. ■

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Sacred artefacts in Ethiopia

Gospel truths

ABBA GARIMA MONASTERY

A monastery's treasures are the focus of a row over heritage and conservation

THE pages crackle, specks of parchment falling to the ground like snowflakes. Wrapped in a white shawl, the book open on his knees on an embroidered velvet cloth, Father Teklehaimanot turns the sheets fastidiously lest the leather ligature tear them. Inside the text is dull and faded. By contrast, the colours of the illustrations are brilliant, rich purples and blues that brighten the gloom of the monastery. On the floor lies the cloth in which the volume is usually enfolded; beside it, the pile of boxes on which it rests. This is where one of the world's most precious religious artefacts is kept, as it has been for as long as the monks can remember.

The Garima Gospels are not easy to see. These illuminated Christian manuscripts—at around 1,500 years old, perhaps the oldest of their kind in existence—belong to Abba Garima monastery, which is perched on a remote outcrop in the Tigray region of northern Ethiopia. The roughly 100 monks store the two books in a circular treasure-house next to the church. Down a slope, just beyond the cloister, is a small museum, built six years ago with the help of the French government, but it is almost empty. The gospels were placed there only briefly before the monks removed them to their customary home. Visiting researchers are occasionally admitted—as *The Economist* was after lengthy negotiation—but tourists are rarely welcomed.

The ongoing dispute over where and how the gospels should be kept, and who may see them, is intensely local yet symbolic. It revolves around the age-old traditions of an isolated monastery, but it exemplifies the scepticism sometimes aroused by Western heritage programmes. It encapsulates the rival claims of sacred rites and secular scholarship, raising questions about the aim of preservation and the ultimate ownership of a nation's culture.

According to legend the gospels—written in the ancient language of Ge'ez—are the work of Abba (Father) Garima, a Byzantine prince who founded the monastery in the 5th or early 6th century. The monks have protected the relics from Muslim invaders, colonial armies and fires. The monastery has been sacked or looted at least four times, most recently by the occupying Italians in 1936, each time being rebuilt.

It is unlikely the gospels have ever left

its walls. They were unknown to the outside world until Beatrice Playne, an English artist, visited in the late 1940s. Women are not allowed inside the compound, so the manuscripts were brought out to her. In recent years scholarly interest in them has surged. Vital restoration work was carried out by the Ethiopian Heritage Fund, a British charity, in the mid-2000s. Today a trickle of foreign academics arrive at Abba Garima's gates seeking the gospels' clues to the early history of eastern Christianity.

But the monks' suspicions run deep. A long history of cultural theft has scarred Ethiopia. In April riches plundered by the British in 1867-68 go on display at the Victoria and Albert Museum in London, despite long-standing calls for their return. During the Italian occupation many artefacts were taken from Ethiopian churches to museums in Rome, afterwards vanishing. Lately there has been an uptick in low-profile thefts, driven by a flourishing black market in Ethiopian antiquities. "People come here with permission from the government, but then we find them doing other things," says Father Teklehaimanot warily.

The monks' unease reflects a broader move against researchers by the Ethiopian Orthodox church. Scholars say it has become almost impossible to study ancient manuscripts. Photographing them is generally forbidden. Efforts by European and American libraries to digitise hundreds of thousands of Christian codices have ended abruptly, often bitterly. For some in the church, a deficit of trust is compounded by a concern over authority: control of texts confers it, sharing them dilutes it. "There is a feeling that if these manuscripts are made too accessible the church will lose its secrets," says Michael Gervers, a historian at the University of Toronto. Some see digitisation as akin to robbery.

The moving of sacred objects to profane settings arouses particular anxieties. "Museums necessarily re-contextualise the objects on display," says Michael Di Giovine, author of "The Heritage-scape", a book about heritage and tourism. In the Catholic and Orthodox faiths, he points out, veneration often involves touching, kissing, burning incense and audible prayer, "things you simply cannot do in a Western-style museum". He points to the case of St Pio of Pietrelcina in Italy, whose body was exhumed in 2008 and displayed in a glass sarcophagus; distressed pilgrims tried to sue the church authorities for commercialising the shrine. Father Columba Stewart, an American Benedictine monk who digitised the Garima Gospels in 2013 for the Hill Museum and Manuscript Library in Minnesota, observes a similar worry in Ethiopia—that the placing of manuscripts under glass takes them too far from their role in religious ceremony.

Dust to dust

Conversely, researchers fret about the gospels' future in their current setting. When Jacques Mercier, a French art historian, visited in 1995, the second volume of gospels seemed to have gone missing (it turned up later). As their custodians become aware of their financial value, the temptation to profit grows. Some monks can be bribed to produce the parchments for viewing, risking damage. "Every time you open the book the edges turn to dust," says Mr Gervers. "So bit by bit they will fall apart."

At bottom this is a fundamental disagreement about heritage. To whom, in the end, do jewels such as the Garima Gospels belong? Since at least the 1960s Western ideas of conservation have emphasised humanity's common inheritance and the ideal of universal access. This view replaces the principle of ownership with one of stewardship. Thus Mr Gervers suggests UNESCO should intervene to protect the gospels. Others think they should be taken into temporary custody by the church authorities. "It's a matter not of who owns them, per se, but whether they are available to the public to study and examine," says Getahun Girma, an Ethiopian scholar. "The monasteries don't have the resources—the knowledge, the money, the organisational set-up—to do this."

But this universalist approach is not common in Ethiopia, even if the church officially encourages the keeping of antiquities in museums. In any case, an Ethiopian monastery is an island, the writ of the outside world barely reaching its gates.

Abba Garima's isolation has helped keep the manuscripts safe for centuries. The treasure-house may be cluttered and dirty, but it is bone-dry and closely guarded. "Many things were lost through history, but they kept these treasures," Daniel Seife-Michael, a scholar and priest of the Ethiopian Orthodox church, says of the monks. "They would die to protect them." ■

An Ethiopian memoir

The scent of a life

The Wife's Tale: A Personal History. By Aida Edemariam. *Harper; 314 pages; $26.99. Fourth Estate; £16.99*

A HOME-COOKED Ethiopian meal is a sensual journey, which extends beyond the warm flavours of ginger and cardamom that spice the languidly served stews. There is also the tactile joy of tearing and rolling *injera*, a spongy and bubbly flat bread, before using it to mop up sauces. Best of all is the whiff of green coffee beans roasted in a cast-iron skillet, which is carried around the table to give each guest a full measure of its aroma.

To read Aida Edemariam's "The Wife's Tale" is to savour the life of her grandmother, Yetemegnu. It is a life scented with ginger and garlic, cardamom and basil, which spans emperors, revolutions, invasion, conquest and liberation. Rather than cataloguing Ethiopia's turbulent modern history, Ms Edemariam stitches together the fragmentary memories and experiences of a single woman.

As is the paradox of memory, some of the oldest are the most vivid. Yetemegnu is married, aged just eight, to Tsega, a religious student more than 20 years older than her; she remembers the calls of children playing outside, and wishing she was with them. After the ceremony, at the start of two weeks of feasting, when someone starts to beat a drum, the sound is quickly silenced. Yetemegnu aches to dance, but her mother says that would attract the evil eye. "She would always remember that no one danced at her wedding," Ms Edemariam writes. "And for the rest of her life she would try to make up for it."

During Yetemegnu's first years of marriage she is not altogether a child, but also not an adult. Bossed about by servants who refuse to play with her, she watches out of the windows as donkeys, slaves and nuns walk past. Her education, such as it is, consists of being taught to sing the alphabet, psalms and set texts by a blind teacher. He advises Tsega that his wife should not be allowed to read, because she is too quick to learn and quotes the Bible in her own defence. So the lessons stop, and the physical abuse begins.

Tsega—who later rose to high office in the church—first beats her when she runs to a neighbour to borrow a pot. After his anger passes he soothes her, comforting her in her grief after her mother dies by promising to be a mother to her himself. By 14 she, too, has a child.

As she endures pregnancies and labours perfumed by incense, Ethiopia changes around her. In 1930 Haile Selassie becomes emperor. Five years later he flees the Italian invaders. Yetemegnu is swept along by her husband and household as they move to the mountains and back to the cities, seeking sanctuary. Her tale is filled with sadness and loss. "When were you happy?" the author once asked her grandmother. "I'm never happy, came the answer…All of my life is painted in tears."

Yet hers is also a life of fortitude and freedom. With motherhood and maturity, Yetemegnu grows in confidence. At about 20 she is preparing to visit a neighbour when Tsega tells her to stay. This time, after the beating, she gathers her children and leaves. She returns only after a deputation of village elders convinces her that he will not hurt her again. When, some time later, he raises a stick against her, she stares him in the eye until he lowers his arm. For all the violence in her marriage, it also contains love, courage and fealty. When Tsega ▸▸

Haile Selassie, before the fall

is arrested and unjustly jailed, Yetemegnu petitions first the governor and then the emperor. After his death in prison, she mourns him as the man who had plaited her hair when she was a child: "my husband, who raised me".

Decades later, after the fall of the emperor, while retrieving banknotes she had hidden in the pages of a child's book, she looks down at the letters and suddenly words leap out at her. A woman who until then could only painstakingly scratch out her name finds sentences unfolding. As for the child who was not allowed to dance at her own marriage ceremony? Attending the wedding of two of her brothers, she sees a circle of women clapping their hands. She joins it, hands on hips, shoulders down, and dances, faster and faster, until she can barely move. ■

China's economy

The undead

China's Great Wall of Debt. By Dinny McMahon. *Houghton Mifflin Harcourt; 256 pages; $28. Little, Brown; £14.99*

THE zombies that appear in Chinese legends are not quite the same as their Western counterparts. They feast on blood, not brains, and hop about rather than staggering forwards. The differences extend to economics. Chinese officials, like their Western peers, openly fret about zombie companies—insolvent firms kept alive by banks—but are far less willing to kill them off. This small excursion into the world of the undead is one of many gems in Dinny McMahon's new book, a vivid account of China's economic problems, from debt to falsified data.

Mr McMahon, a veteran financial correspondent in China, most recently with the *Wall Street Journal*, wears his knowledge lightly, whether discussing ghost stories or balance sheets. His book, "China's Great Wall of Debt", is notable for two reasons. It is one of the clearest and most thorough statements of an argument often made about the country: that its government has relied on constant stimulus to keep growth strong, an addiction that is bound to backfire. Second, he comes closer than any previous writer to covering the Chinese economy as Michael Lewis, the hugely popular author of "The Big Short", might do. His analysis is informed but accessible, animated by anecdotes and characters, some colourful, some verging on tragic.

In a chapter on government meddling, he introduces a hedge-fund analyst who accused a publicly listed Chinese silver-mining company of fraud. Police arrested him, kept him awake for three days and jailed him for two years; he was ultimately found guilty of "impairing business credibility". In a chapter on the deadweight of state-owned companies, Mr McMahon visits a factory owned by Erzhong, a machinery-maker that built the world's biggest hydraulic press forge, used for pounding out metal. But the forge, based on Russian designs from the 1980s, is outdated and the country oversupplied. These days retired workers harvest vegetables planted on unused land along the factory's walls. In a chapter on financial bubbles, Mr McMahon tracks the boom and bust in Moutai, China's most prized brand of *baijiu*, a grain-based spirit, through the story of an auctioneer.

As with any financial mess, there is plenty of blame to go around for these excesses. Reckless investors, greedy lenders and lax regulation have all played a part. But Mr McMahon shows that China's political system is at the heart of the dysfunction. Short of tax revenues, local governments treat land as free money, expropriating it cheaply and then selling it at inflated prices. Since the promotions of officials are traditionally based on economic growth, they are encouraged to spend public money first and ask questions later. Implicit guarantees make for fi-

Art and artists in fiction

Pursued by a Bear

The Italian Teacher. By Tom Rachman. *Viking; 352 pages; $27. Riverrun; £13.99*

TOM RACHMAN'S latest novel is the story of a great man and the wreckage greatness leaves in its wake. It chronicles the life and legend of Bear Bavinsky, a painter of enormous appetites and all-consuming ego, largely through the eyes of his son, Charles (known as Pinch). Their names capture the complexion of their fraught relationship. Bear lumbers through life heedless of his impact; Pinch shrinks, unable to escape the giant's shadow, hoping only to avoid being trampled underfoot.

Pinch is far from the only victim of the Bavinsky legend. Speaking to Natty, his current wife—Pinch's mother, and a potter whose insecurities provide the perfect foil for his overbearing personality—Bavinsky proclaims: "You are a talent, my Natty. If you want to be. All it takes is a bit more oomph." Bear is oomph incarnate. He charms and bullies, holds forth and rages, occupying physical and psychic space. Even his encouragement turns out to be another way to assert dominance, proving how far those close to him have fallen short of his own achievement.

"The Italian Teacher" unspools over more than 60 years and across two continents. One of Mr Rachman's gifts is his ability to evoke a time and place in a few deft strokes, whether that is the seedy charm of post-war Rome or the New York art scene of the late 1960s, when Abstract Expressionist sincerity was giving way to Pop irony. He captures the disorienting social and economic shifts of Italy in the 1950s through the Bavinskys' downstairs neighbours, "a family of carpenters who, for generations, carved ornamental altarpieces but whose sons are now selling West German vacuum cleaners". He gets to the heart of Thatcher-era London, with its "thin surface of civility covering deep pools of aggression".

Despite its breadth, though, the book is intimate, subtly exploring its characters' inner lives. Though Bear bestrides the narrative, it is Pinch who commands the reader's respect. An "insubstantial man", as he himself admits, he is difficult, filled with self-loathing, incapable of standing up to his bullying father. Like Natty, he is all damage and insecurity, a victim of Bear's insatiable needs.

Yet he turns out to be far more than the sum of his failures. He is redeemed by his honesty, intelligence and wit, plus his determination to spare neither himself nor others the verdict of his finely tuned sensibility. His struggle to find meaning amid the rubble becomes a surprisingly suspenseful quest. For all his faults, Pinch is gifted with wisdom, as is the author of this sad, funny and moving novel.

nancial distortions. Few think big state-owned banks will ever be allowed to fail or that large state-owned firms will ever be pushed into bankruptcy.

Yet for all the undeniable weaknesses in China's economy, the central argument of the book is debatable. In his introduction Mr McMahon explains that he will neither delve into the government's efforts to clean up bad loans nor examine bright spots such as the tech sector. That makes sense as a way to keep the narrative sharp. Nevertheless, the clean-up and the bright spots matter. Over the past year the government's economic priority has been to defuse debt risks. It has made some headway, not least by thinning the ranks of zombie factories. Meanwhile the blossoming of the tech sector is one example of how China retains the ability to transcend its past mistakes.

Mr McMahon is among the most compelling of the many analysts who conclude that China's economic miracle will end painfully. But until now such forecasts have served as inadvertent testaments to the country's resilience. Despite so much in its economy that looks so deeply rotten, China may yet emerge from its boom stronger than the doomsayers predict. ■

Music, memory and migration

The distant shore

AMSTERDAM

A rarely performed work evokes Europe's migrant crisis in song

LAST September Mamadou Ndiaye swam for 24 hours in the Atlantic Ocean. As he contended with the powerful currents, his head bobbing in the waves, his eyes became bleary with exhaustion. Mr Ndiaye, a swimming instructor from Saint-Louis in Senegal, was tracked and filmed by boat and drones over the four days of his exertions. This month his image was beamed onto a giant fabric screen at the Dutch National Opera, as a chorus of 115 singers, illuminated in the background like ghostly apparitions, performed Hans Werner Henze's surging oratorio "Das Floss der Medusa". The evening drew connections across different art-forms, and between historical woes and modern tragedy.

Henze's work was inspired by Théodore Gericault's painting of 1819, "The Raft of the Medusa" (pictured). That depicts a calamity of three years earlier, when the *Méduse*, a French naval frigate, ran aground off the West African coast. After the top brass boarded the available lifeboats, the remaining crew hastily constructed a raft, tying it to the boats. Making no headway, the commanding officer ordered the towlines to be cut; the more than 150 men and one woman on the raft were set adrift. Sustained by only a few casks of water and wine, they resorted to suicide, murder and cannibalism. Only about ten survived. Gericault's painting portrays a moment when an African crewman, Jean-Charles, raises a red flag to signal to a distant ship.

The *Méduse* became an international scandal. The oratorio, meanwhile, has a tumultuous history of its own. Henze intended it as a requiem for Che Guevara. Its premiere in Hamburg in 1968 drew political protests that devolved into a riot; the debut was cancelled before it began. The music was eventually heard for the first time in 1971, in Vienna. It has been performed only a handful of times, and never staged—until the new production in Amsterdam by Romeo Castellucci, a radical Italian director. For him the work reflects the plight of the thousands of migrants who each year drown in the Mediterranean in their bid to reach Europe. "The 'Raft of the Medusa' is a metaphor of the human condition, for the poor and miserable of the Earth who are constantly abandoned by the powerful," he argues.

One reason for the music's infrequent performance, he says, is that it requires a huge chorus. In Amsterdam the voices of the National Opera were fortified by two other choirs, Capella Amsterdam and the New Amsterdam Youth Choir. The chorus remained behind the screen, rising and falling on an unseen lift, so that it appeared to be floating. The three lead singers—Charon (the ferryman to the underworld), La Mort (Death) and Jean-Charles, the sailor—travelled between the worlds of the dead and living. On the screen Mr Ndiaye swam, splashed and gasped. The constant motion of the waves left some members of the audience feeling sea-sick. "The music is quite cold and fragmented," says Mr Castellucci. "It's built like a raft, with different pieces collected with parts from a shipwreck. You can feel the sense of crisis but also the sense of salvation."

His main challenge was to maintain dramatic momentum despite the lack of action. "In opera there's a story," notes Mr Castellucci. "An oratorio is closer to the idea of ritual in which everything is still"—much like Gericault's painting, he says. As part of his preparation he visited the site of the *Méduse*'s shipwreck. He recruited Mr Ndiaye in Senegal, instructing him to enter the water at precisely the spot where the raft was set adrift, then to swim to the point of exhaustion. "It's an icon of our time: the head of a black man floating above the water, trying to survive," Mr Castellucci reckons. "I wanted the audience to be face to face with this struggle."

The name of the ship adds a further resonance to this encounter with adversity. In Greek mythology, Mr Castellucci recalls, Medusa is changed into a monster, with snakes for hair and a face that turns its beholders to stone. "The Medusa in mythological memory is the image you cannot see because...you will be petrified," he says. "How can we look at all these events on the sea? The spectator is a part of all of this, not just an observer." ■

Two hundred years of cruel seas

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Appointments

Economic data

% change on year ago

	Gross domestic product			Industrial production	Consumer prices		Unemployment rate, %	Current-account balance		Budget balance	Interest rates, %	Currency units, per $	
	latest	qtr*	2018†	latest	latest	2018†		latest 12 months, $bn	% of GDP 2018†	% of GDP 2018†	10-year gov't bonds, latest	Mar 21st	year ago
United States	+2.5 Q4	+2.5	+2.8	+4.4 Feb	+2.2 Feb	+2.3	4.1 Feb	-466.2 Q4	-2.7	-4.5	2.86	-	-
China	+6.8 Q4	+6.6	+6.6	+7.2 Feb	+2.9 Feb	+2.3	3.9 Q4§	+172.0 Q4	+1.3	-4.0	3.69§§	6.33	6.90
Japan	+2.0 Q4	+1.6	+1.4	+2.5 Jan	+1.3 Jan	+1.0	2.4 Jan	+200.1 Jan	+3.7	-4.9	0.01	106	113
Britain	+1.4 Q4	+1.6	+1.5	+1.6 Jan	+2.7 Feb	+2.6	4.3 Dec††	-118.1 Q3	-4.4	-2.8	1.49	0.71	0.81
Canada	+2.9 Q4	+1.7	+2.2	+4.0 Dec	+1.7 Jan	+1.9	5.8 Feb	-49.4 Q4	-2.6	-1.8	2.26	1.30	1.34
Euro area	+2.7 Q4	+2.4	+2.5	+2.7 Jan	+1.1 Feb	+1.5	8.6 Jan	+448.0 Dec	+3.1	-1.0	0.59	0.82	0.93
Austria	+2.9 Q4	+1.6	+2.2	+3.5 Dec	+1.8 Feb	+1.8	5.5 Jan	+8.5 Q3	+2.0	-0.8	0.67	0.82	0.93
Belgium	+1.9 Q4	+2.1	+1.9	-2.8 Dec	+1.5 Feb	+1.8	6.6 Jan	-3.9 Sep	-0.3	-1.5	0.85	0.82	0.93
France	+2.5 Q4	+2.6	+2.2	+1.2 Jan	+1.2 Feb	+1.5	9.0 Jan	-25.6 Jan	-0.9	-2.7	0.81	0.82	0.93
Germany	+2.9 Q4	+2.4	+2.5	+5.5 Jan	+1.4 Feb	+1.7	3.6 Jan‡	+311.8 Jan	+7.8	+0.8	0.59	0.82	0.93
Greece	+1.8 Q4	+0.4	+1.6	-1.7 Jan	+0.1 Feb	+0.8	20.8 Dec	-1.4 Dec	-1.4	-0.2	4.21	0.82	0.93
Italy	+1.6 Q4	+1.3	+1.5	+4.0 Jan	+0.5 Feb	+1.1	11.1 Jan	+57.3 Dec	+2.6	-2.1	1.95	0.82	0.93
Netherlands	+2.9 Q4	+3.2	+2.8	+7.1 Jan	+1.2 Feb	+1.5	5.0 Feb	+80.7 Q3	+9.8	+0.7	0.63	0.82	0.93
Spain	+3.1 Q4	+2.7	+2.8	+4.0 Jan	+1.1 Feb	+1.5	16.3 Jan	+23.0 Dec	+1.6	-2.6	1.26	0.82	0.93
Czech Republic	+5.1 Q4	+2.1	+3.3	+5.5 Jan	+1.8 Feb	+2.3	2.4 Jan‡	+1.9 Q4	+0.9	+0.5	1.98	20.7	25.1
Denmark	+1.2 Q4	+3.9	+1.9	+4.7 Jan	+0.6 Feb	+1.3	4.1 Jan	+24.5 Jan	+7.8	-0.7	0.66	6.07	6.91
Norway	+1.4 Q4	-1.1	+1.8	-0.7 Jan	+2.2 Feb	+2.0	4.0 Jan‡‡	+20.2 Q4	+5.5	+4.9	1.98	7.74	8.47
Poland	+4.3 Q4	+4.1	+3.8	+7.4 Feb	+1.4 Feb	+2.4	6.9 Jan§	nil Jan	nil	-2.7	3.37	3.45	3.98
Russia	+1.8 Q3	na	+1.8	+1.3 Feb	+2.2 Feb	+3.3	5.0 Feb§	+40.2 Q4	+2.7	-1.0	8.13	57.3	57.3
Sweden	+3.3 Q4	+3.5	+2.7	+9.2 Jan	+1.6 Feb	+1.9	6.3 Feb§	+17.1 Q4	+4.2	+0.5	0.77	8.23	8.82
Switzerland	+1.9 Q4	+2.4	+2.0	+8.7 Q4	+0.6 Feb	+0.6	2.9 Feb	+66.4 Q3	+9.7	+0.8	0.11	0.95	1.00
Turkey	+11.1 Q3	na	+3.9	+12.9 Jan	+10.3 Feb	+9.9	10.4 Dec§	-51.6 Jan	-5.2	-2.1	12.65	3.92	3.62
Australia	+2.4 Q4	+1.5	+2.8	+1.6 Q4	+1.9 Q4	+2.2	5.6 Feb	-32.3 Q4	-1.8	-1.2	2.70	1.30	1.29
Hong Kong	+3.4 Q4	+3.3	+2.8	+0.6 Q4	+3.1 Feb	+2.0	2.9 Feb‡‡	+15.4 Q3	+4.6	+1.1	2.02	7.85	7.77
India	+7.2 Q4	+6.6	+7.2	+7.5 Jan	+4.4 Feb	+4.8	6.1 Feb	-39.1 Q4	-2.0	-3.5	7.58	65.2	65.3
Indonesia	+5.2 Q4	na	+5.4	-0.4 Jan	+3.2 Feb	+3.5	5.5 Q3§	-17.3 Q4	-1.9	-2.3	6.75	13,763	13,314
Malaysia	+5.9 Q4	na	+5.5	+3.0 Jan	+1.4 Feb	+3.1	3.4 Jan§	+9.4 Q4	+2.8	-2.8	3.96	3.93	4.43
Pakistan	+5.7 2017**	na	+5.4	+9.4 Jan	+3.8 Feb	+5.7	5.9 2015	-15.7 Q4	-5.0	-5.6	8.80†††	113	105
Philippines	+6.6 Q4	+6.1	+6.1	+21.8 Jan	+3.9 Feb	+4.0	5.3 Q1§	-2.5 Dec	+0.4	-2.0	6.12	52.1	50.1
Singapore	+3.6 Q4	+2.1	+3.0	+17.9 Jan	nil Jan	+0.9	2.1 Q4	+61.0 Q4	+19.5	-0.7	2.43	1.32	1.40
South Korea	+3.0 Q4	-0.9	+2.9	+4.6 Jan	+1.4 Feb	+1.9	4.6 Feb§	+75.8 Jan	+5.1	+0.7	2.72	1,072	1,120
Taiwan	+3.3 Q4	+4.3	+2.4	+10.9 Jan	+2.2 Feb	+1.3	3.7 Jan	+84.1 Q4	+13.6	-0.8	1.03	29.2	30.5
Thailand	+4.0 Q4	+1.8	+3.8	+3.4 Jan	+0.4 Feb	+1.6	1.3 Jan§	+49.3 Q4	+9.7	-2.3	2.45	31.2	34.7
Argentina	+3.9 Q4	+3.9	+3.1	+4.2 Feb	+25.5 Feb	+20.3	7.2 Q4§	-26.6 Q3	-4.8	-5.6	4.19	20.3	15.7
Brazil	+2.1 Q4	+0.2	+2.6	+5.7 Jan	+2.8 Feb	+3.5	12.2 Jan§	-9.0 Jan	-1.3	-7.0	8.14	3.29	3.08
Chile	+3.3 Q4	+2.6	+3.0	+5.3 Jan	+2.0 Feb	+2.6	6.5 Jan§‡‡	-4.1 Q4	-0.2	-2.2	4.48	606	661
Colombia	+1.6 Q4	+1.1	+2.5	+1.0 Jan	+3.4 Feb	+3.3	11.8 Jan§	-10.4 Q4	-3.0	-2.0	6.49	2,849	2,913
Mexico	+1.5 Q4	+3.2	+2.1	+0.9 Jan	+5.3 Feb	+4.2	3.4 Jan	-18.8 Q4	-2.0	-2.3	7.56	18.6	19.0
Peru	+2.2 Q4	-1.3	+3.7	-12.5 Dec	+1.2 Feb	+1.4	8.5 Jan§	-2.7 Q4	-1.3	-3.5	na	3.26	3.25
Egypt	+5.2 Q3	na	+5.1	+11.1 Jan	+14.4 Feb	+18.1	11.3 Q4§	-12.2 Q3	-3.9	-9.4	na	17.6	18.1
Israel	+2.9 Q4	+3.6	+3.9	+6.9 Jan	+0.2 Feb	+1.0	3.7 Jan	+10.5 Q4	+3.4	-2.5	1.74	3.49	3.63
Saudi Arabia	-0.7 2017	na	+1.0	na	+3.0 Feb	+4.4	5.8 Q3	+12.4 Q3	+4.0	-7.2	na	3.75	3.75
South Africa	+1.5 Q4	+3.1	+1.5	+1.5 Jan	+4.0 Feb	+5.0	26.7 Q4§	-8.6 Q4	-2.7	-3.6	8.09	11.9	12.6

Source: Haver Analytics. *% change on previous quarter, annual rate. †*The Economist* poll or Economist Intelligence Unit estimate/forecast. §Not seasonally adjusted. ‡New series. **Year ending June. ††Latest 3 months. ‡‡3-month moving average. §§5-year yield. †††Dollar-denominated bonds.

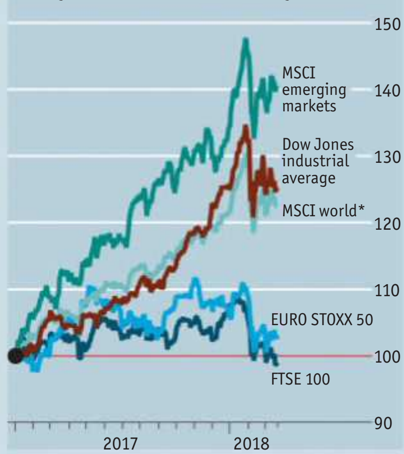
Markets

	Index Mar 21st	% change on: one week	Dec 29th 2017: in local currency	Dec 29th 2017: in $ terms
United States (DJIA)	24,682.3	-0.3	-0.1	-0.1
China (SSEA)	3,436.4	-0.3	-0.8	+2.1
Japan (Nikkei 225)	21,381.0	-1.8	-6.1	-0.5
Britain (FTSE 100)	7,039.0	-1.3	-8.4	-4.8
Canada (S&P TSX)	15,675.3	+0.1	-3.3	-6.5
Euro area (FTSE Euro 100)	1,188.2	+0.4	-1.8	+0.3
Euro area (EURO STOXX 50)	3,401.0	+0.3	-2.9	-0.8
Austria (ATX)	3,496.4	+2.1	+2.2	+4.4
Belgium (Bel 20)	3,925.8	-0.1	-1.3	+0.8
France (CAC 40)	5,239.7	+0.1	-1.4	+0.8
Germany (DAX)*	12,309.2	+0.6	-4.7	-2.7
Greece (Athex Comp)	800.1	-2.9	-0.3	+1.9
Italy (FTSE/MIB)	22,820.1	+1.6	+4.4	+6.7
Netherlands (AEX)	536.5	+1.0	-1.5	+0.6
Spain (IBEX 35)	9,630.9	-0.6	-4.1	-2.0
Czech Republic (PX)	1,126.5	+0.9	+4.5	+7.3
Denmark (OMXCB)	899.2	-0.1	-3.0	-1.0
Hungary (BUX)	38,236.9	-1.7	-2.9	-1.1
Norway (OSEAX)	905.2	-0.4	-0.2	+5.4
Poland (WIG)	60,932.3	-0.8	-4.4	-3.7
Russia (RTS, $ terms)	1,270.1	+1.5	+10.0	+10.0
Sweden (OMXS30)	1,549.7	-2.2	-1.7	-2.2
Switzerland (SMI)	8,783.7	-1.0	-6.4	-4.4
Turkey (BIST)	117,651.3	nil	+2.0	-1.4
Australia (All Ord.)	6,053.1	+0.2	-1.9	-2.3
Hong Kong (Hang Seng)	31,414.5	-0.1	+5.0	+4.6
India (BSE)	33,136.2	-2.1	-2.7	-4.8
Indonesia (JSX)	6,312.8	-1.1	-0.7	-2.1
Malaysia (KLSE)	1,865.8	+0.5	+3.8	+7.1
Pakistan (KSE)	44,646.0	+2.9	+10.3	+8.0
Singapore (STI)	3,511.1	-0.8	+3.2	+4.7
South Korea (KOSPI)	2,485.0	nil	+0.7	+0.6
Taiwan (TWI)	11,011.1	-0.3	+3.5	+5.5
Thailand (SET)	1,801.4	-0.7	+2.7	+7.2
Argentina (MERV)	32,369.6	-1.4	+7.7	nil
Brazil (BVSP)	84,976.6	-1.2	+11.2	+12.2
Chile (IGPA)	27,751.5	-1.3	-0.8	+0.6
Colombia (IGBC)	11,640.7	+2.4	+1.4	+6.3
Mexico (IPC)	47,521.8	-1.3	-3.7	+1.3
Peru (S&P/BVL)*	20,840.7	+0.8	+4.3	+3.8
Egypt (EGX 30)	17,147.1	+1.6	+14.2	+15.1
Israel (TA-125)	1,349.1	-0.7	-1.1	-1.8
Saudi Arabia (Tadawul)	7,761.7	-0.2	+7.4	+7.4
South Africa (JSE AS)	58,288.9	-0.2	-2.0	+1.8

Stockmarkets

Global markets wobbled earlier this year, having risen by around 30% on average since the start of 2017. The correction was triggered in part by bouncy American wage-growth figures, provoking fears that higher inflation would prompt a faster pace of interest-rate rises. Worries about a trade war have also rattled markets. Although the Federal Reserve did vote to raise rates this week, its signal that it is likely to stick with a total of three rises in 2018 will soothe investors. British equities have also been pushed down recently by a stronger pound, which rose in response to perceived progress in Brexit negotiations. Emerging-market equities have done better than rich-world stocks over the past year.

January 2nd 2017=100, local-currency terms



Source: Thomson Reuters *All-country

Other markets

	Index Mar 21st	% change on: one week	Dec 29th 2017: in local currency	Dec 29th 2017: in $ terms
United States (S&P 500)	2,711.9	-1.4	+1.4	+1.4
United States (NAScomp)	7,345.3	-2.0	+6.4	+6.4
China (SSEB, $ terms)	328.1	-1.9	-4.0	-4.0
Japan (Topix)	1,716.3	-1.5	-5.6	nil
Europe (FTSEurofirst 300)	1,467.1	+0.1	-4.1	-2.0
World, dev'd (MSCI)	2,109.2	-1.2	+0.3	+0.3
Emerging markets (MSCI)	1,209.6	-0.7	+4.4	+4.4
World, all (MSCI)	516.9	-1.1	+0.8	+0.8
World bonds (Citigroup)	966.1	-0.3	+1.7	+1.7
EMBI+ (JPMorgan)	812.2	-0.4	-2.9	-2.9
Hedge funds (HFRX)	1,274.7§	-0.3	-0.1	-0.1
Volatility, US (VIX)	17.9	+17.2	+11.0	(levels)
CDSs, Eur (iTRAXX)†	58.2	+15.4	+28.9	+31.7
CDSs, N Am (CDX)†	61.7	+12.0	+25.7	+25.7
Carbon trading (EU ETS) €	12.7	+13.0	+55.6	+59.0

Sources: IHS Markit; Thomson Reuters. *Total return index. †Credit-default-swap spreads, basis points. §Mar 20th.

Indicators for more countries and additional series, go to: **Economist.com/indicators**

The Economist commodity-price index

2005=100

	Mar 13th	Mar 20th*	% change on: one month	one year
Dollar Index				
All Items	154.3	150.0	-2.6	+2.5
Food	159.1	156.3	+0.8	+0.2
Industrials				
All	149.2	143.4	-6.2	+5.1
Nfa†	141.9	138.9	+0.2	-4.3
Metals	152.3	145.3	-8.6	+9.5
Sterling Index				
All items	200.6	194.6	-2.7	-8.7
Euro Index				
All items	154.7	152.0	-2.1	-9.7
Gold				
$ per oz	1,326.0	1,312.7	-1.8	+5.6
West Texas Intermediate				
$ per barrel	60.7	63.5	+2.8	+34.2

Sources: Bloomberg; CME Group; Cotlook; Darmenn & Curl; FT; ICCO; ICO; ISO; Live Rice Index; LME; NZ Wool Services; Thompson Lloyd & Ewart; Thomson Reuters; Urner Barry; WSJ. *Provisional †Non-food agriculturals.

The last of Vaudeville

Sir Ken Dodd, comedian, died on March 11th, aged 90

THEY couldn't say they weren't warned. Thick and fast the gags came. "The first thing the manager said to me was, 'Crack on, Dodd. I've got to get this theatre cleared by 2am.' I told him, 'Looks like we'll have to do the second half outside the town hall, then'." "Are you looking at your watch, sir? You don't need a watch, you need a calendar. We should be finished by Tuesday." "The sooner you laugh at the jokes, the sooner you can go home. But they say the breakfast here is good." "This isn't television, Mrs. You can't turn me off."

They couldn't turn Doddy off (or not for five hours or so) because once the audience was warmed up he couldn't bear to stop. "You all represent the *crème de la crème*. That's French for evaporated milk." "Hello, Mrs. Is this your husband with you, or is it novelty night?" Between the 1960s and the 1990s he averaged 100,000 miles a year, playing nearly every theatre in Britain. Though he starred on TV too, it didn't suit him. The Varieties at Liverpool's Shakespeare Theatre, his boyhood passion, were his ideal. He was the last of the front-cloth comedians, meaning they dropped a cloth behind you while they cleared up the stage from the Liberty Horses and got it ready for the man who pulled doves out of his jacket, and there you were, but with an act that had been burnished until it was a jewel. And he knew he was the last, for all the greats, from Max Miller on, had crossed the boards before him.

Not that this lessened his plumptiousness. "What a beautiful day!" he would cry. A wonderful day to beat a big drum, in true trouper style, in a shaggy red greatcoat or a mustard-yellow suit ("My tailor is colour-blind"), his hair like a bats' nest and his teeth, bucked when he'd tried to ride a bike with his eyes closed, going proud before. ("My mother used to use me for crimping the pastry.") His chief prop was a tickling-stick, a red, white and blue feather duster extendable into the stalls to get those chuckle-muscles working and reduce the hall to that beautiful thing, helpless laughter. "How tickled I am, under the circumstances! Tell me, Madam, have you ever been tickled under the circumstances?" He brought on dancing children as the Diddymen of Knotty Ash, his home suburb in Liverpool, and smoothed his hair to sing sentimental ballads in a light baritone. One of these, "Tears", topped the charts for five weeks in 1965; he was good at crying songs. But then he resumed the gags. He held the world record for cracking them, 1,500 in 3 hours 7 minutes, with no script. Just off the top of his wild tousled head.

Jokes about fat ladies."An official told my big Auntie Nellie to come off the beach, because the tide was waiting to come in." Repairmen: "On Friday there was a tap on the door. Funny sense of humour, that plumber." Mothers-in-law: "I haven't spoken to mine for 18 months. I don't like to interrupt her." Men: "How many men does it take to change a toilet roll? Nobody knows, it's never been tried." And himself. "I do exercises every day in front of the television. Up, down, up, down, up, down. Then the other eyelid." "It's ten years since I went out of my mind. I'd never go back." His life (in fact coal-merchant's son, left school at 14, sold pans and detergent out of a van, first professional gig as Professor Yaffle Chuckabutty at the Nottingham Empire in 1954) was made as mythical as Knotty Ash itself, which acquired treacle wells and black-pudding plantations. "I was born one day when my mother was out. We were so poor, the lady next door had me."

It seemed scatty, but every joke and gesture was rehearsed and re-rehearsed. In each new town he scoured the public library for books about comedy and the psychology of wit. His house in Knotty Ash was full of them. He read Schopenhauer and Freud. "Freud said, Laughter is the outward expression of the psyche. But he never played the Glasgow Empire on a Saturday after both Celtic and Rangers lost." In dozens of notebooks he recorded his jokes, where told, and how they'd gone down. In the Black Country he had to unfold them slowly. Nottingham liked picture gags. The south coast enjoyed a bit of spice, but Wigan didn't. His favourite photo of himself was a back view, walking across a theatre car park in red-and-white striped stockings, tickling-sticks in hand, thinking: "I could have told that one better."

Cash in the attic

His buoyancy was tempered only once, when the Inland Revenue in 1989 found that in his attic, together with Charlie Brown, his first ventriloquist's puppet, and a life-raft, and a giant bottle of stout, and box upon box of scripts, there was also £336,000 in cash that he hadn't declared for tax. More sat in shoe-boxes under the bed. He'd put some of his earnings in offshore accounts, but he didn't trust banks. He kept his money close to remind him that he'd played the London Palladium for 42 weeks in the mid-1960s, another record. To prove he was somebody. Everyone acquitted him, and the joke-book benefited. "Self-assessment? I invented that." "I told the Inland Revenue I didn't owe them a penny, because I lived by the seaside."

By then he was invulnerable, part of the national fabric. It was just the music-hall tradition, old-style variety, that was dying on its feet. And jokes about death never went down well. Apart from the one about the mother-in-law and the sharks...the taxman and the boa constrictor.... ■

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