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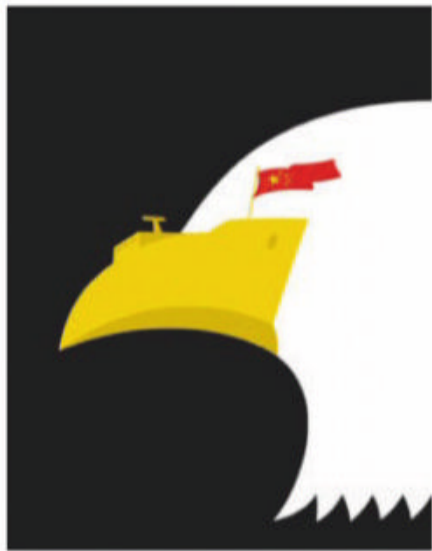
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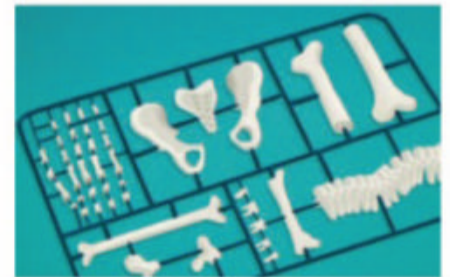
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The ruling African National Congress won **South Africa's** general election with 58% of the vote. The party had never before received less than 60% at a national poll. Many voters were put off by the corruption that flourished under Jacob Zuma, president from 2009 to 2018. The ANC might have done worse but for Cyril Ramaphosa, who replaced Mr Zuma and vowed to clean up his mess. The Democratic Alliance got 21% of the vote.

Violence flared in **Sudan** as the ruling military council and protest groups tried to reach a political-transition deal. At least six people were killed. It has been more than a month since the army toppled Omar al-Bashir amid large demonstrations against his presidency. Generals and civilians have yet to agree on how power will be shared.

A militia allied with the **Nigerian** government freed almost 900 children it had used in the war against the jihadists of Boko Haram, according to the United Nations Children's Fund. Of the 3,500 or so children in total who were recruited by armed groups to fight Boko Haram, more than 1,700 have now been set free.

At least 28 troops in **Niger** were killed in an ambush near the border with Mali, a region that is a hotbed of jihadist activity.

Tensions rose in the **Middle East**, as officials in the Gulf said four oil tankers, including two from Saudi Arabia, had been sabotaged off the coast of the United Arab Emirates. Unnamed American sources were quoted as blaming Iran or

its proxies, but they presented no evidence. America pulled all "non-emergency employees" from Iraq amid concerns about alleged threats from Iran.

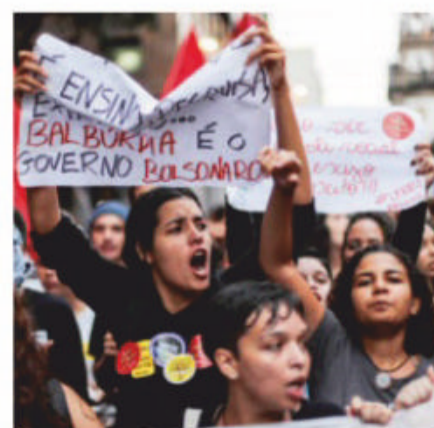
Yemen's Houthi rebels attacked two oil-pumping stations in Saudi Arabia with armed drones. Saudi Arabia supports the Yemeni government in its war against the Houthis, who are aligned with Iran. The UN held talks in Jordan aimed at consolidating a truce between the parties.

Policy tactics

Alabama's governor signed a law banning **abortion** in all cases except when the mother's life is in danger, the most stringent in a number of "heartbeat" bills that have been approved by Republican states. Pro-lifers hope the bills will eventually make their way to the Supreme Court, where they think they have a chance of overturning *Roe v Wade*.

A federal judge ordered 32 of **Florida's** 67 counties to provide election material and ballot papers for Spanish-speakers in time for the presidential primaries next year. Florida has started the process of supplying bilingual forms, but the judge wants that to speed up; he warned officials that complying with the order was "not optional".

Lower education



Hundreds of thousands of students and teachers took to the streets of **Brazil's** state capitals to demonstrate against a 30% cut in the federal funding allocated to universities. Brazil's president, Jair Bolsonaro, who was in Dallas meet-

ing Republican leaders, called the protesters "useful idiots".

Meanwhile, Mr Bolsonaro said he would nominate Sérgio Moro, his justice minister, to Brazil's **supreme court** in 2020. Mr Moro faced allegations of bias when he joined Mr Bolsonaro's government after sentencing Luiz Inácio Lula da Silva, Mr Bolsonaro's one-time political rival, for corruption.

Guatemala's constitutional court ruled that Zury Ríos, the daughter of a former dictator, could not stand in June's presidential election, in which she is a leading candidate. The court found that relatives of coup leaders are barred from the presidency. Efraín Ríos Montt took power for 18 months in the early 1980s in a coup. He died last year during a retrial of his quashed conviction for genocide.

May day

In **Britain** Theresa May was facing a humiliating defeat at the European Parliament elections. Ahead of the vote on May 23rd the new Brexit Party has sapped so much support from her Conservative Party that the Greens briefly polled higher, pushing the Tories into fifth place. The prime minister remains defiant, announcing that she will attempt for a fourth time to get her Brexit deal passed by the House of Commons in early June.

Sweden reopened a rape case against Julian Assange, who is currently in prison in Britain for evading bail. If the investigation ends with a request for extradition, Britain will have to decide whether to send him to Sweden or to America, which also wants to try him, for allegedly helping to hack classified documents.

The European Commission warned **Romania** to change new rules that will give the government more power over the judiciary and will shorten the statute of limitations for corruption charges. If it does not, it could face disciplinary

action similar to that dished out to Poland. Awkwardly, Romania currently holds the rotating presidency of the EU.

Rodrigo on a roll

Candidates backed by Rodrigo Duterte, the president of the **Philippines**, won nine of the 12 seats up for grabs in the Senate in mid-term elections, as well as a strong majority in the House of Representatives. The results should give fresh impetus to Mr Duterte's plans to overhaul corporate taxes and amend the constitution to institute a federal form of government.

Sri Lanka imposed a curfew after mobs began attacking mosques and Muslim-owned businesses. The attacks are in retaliation for the bombing of several churches and hotels at Easter by Muslim extremists.

Separatist gunmen in Balochistan province in **Pakistan** attacked a hotel frequented by Chinese visitors in the city of Gwadar. Four employees and one soldier were killed in the attack, but no guests. The separatists vowed more strikes on Chinese targets.

North Korea demanded the immediate return of a ship America had seized on suspicion of violating UN sanctions. America said the ship was being used to export coal illicitly. The North denounced the seizure as "gangster-like". Relations between the two countries have deteriorated recently as disarmament negotiations have stalled.

China's president, Xi Jinping, said it would be "foolish" to regard one's own civilisation as superior and "disastrous" to attempt to remould another. His remarks appeared to be directed at America. Two weeks earlier a State Department official, referring to China, said America was involved in "a fight with a really different civilisation" and for the first time was facing a "great power competitor that is not Caucasian".



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China said it would increase tariffs on a range of American goods. This was in retaliation for Donald Trump's decision to raise duties on \$200bn-worth of Chinese exports following the breakdown of talks that had tried to end the two countries' stand-off over **trade**. In addition, American officials said they were seeking to extend levies to all remaining Chinese imports to the United States. Both sides are holding off on imposing their punishing tariffs for a few weeks, giving negotiators more time to try to end the impasse. Even if there is a deal, it is unlikely to reduce tensions between the two powers over trade, and other matters.

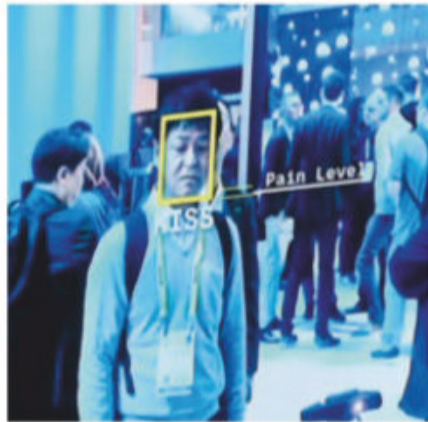
The transfer of technology is another contentious issue for China and America. A few days after the collapse of the trade talks, Mr Trump and the Commerce Department signed orders blocking **Huawei**, a Chinese tech giant, from involvement with American mobile networks and suppliers. America has pressed its allies to shun the firm, citing security worries, but has had only limited success.

The **Chinese economy** may be slowing more than had been thought, according to new data. China's retail sales grew at their slowest rate in 16 years in April. Industrial production expanded by 5.4%, the slowest rate in a decade.

Germany's economy grew by 0.4% in the first three months of the year compared with the previous quarter. That brought some relief for the government following a six-month period when the country almost slipped into recession. Officials warned that global trade rows could still knock the economy off course. In **Britain**, GDP rose by 0.5% in the first quarter, helped by businesses stockpiling goods ahead of the now-missed Brexit deadline of March 29th.

Bayer lost a third court case in America brought by plaintiffs claiming that a weedkiller

made by Monsanto, which Bayer took over last year, caused their cancer. This time the jury ordered the German conglomerate to pay \$2bn in damages to an elderly couple, a sum far greater than that awarded to the plaintiffs in two previous trials. Bayer's share price plunged.



Officials in San Francisco voted to make it the first American city to ban the use of **facial-recognition software** by the local government. Legislators worry that the technology, which is spreading rapidly, is unreliable and open to abuse.

What's up?

WhatsApp, a popular encrypted-messaging app owned by Facebook, reported a security flaw that allows hackers to install surveillance software on smartphones by placing calls in the app. It was reported

that a team of Israeli hackers-for-hire had used the vulnerability to inject spyware onto phones belonging to human-rights activists and lawyers.

America's Supreme Court gave the go-ahead for iPhone users to sue **Apple**. The case centres on whether Apple's App Store, which takes a 30% cut of all sales, constitutes an unfair monopoly. Unlike Android-based rivals, Apple's phones are designed to prevent users from installing apps from other sources.

Thyssenkrupp and **Tata Steel** abandoned a plan to merge their European steel assets because of stiff resistance from the EU's antitrust regulator. Pushed by activist investors demanding reform at Thyssenkrupp, the proposal had been announced in September 2017. The German company will now spin off its lifts division, its most profitable business.

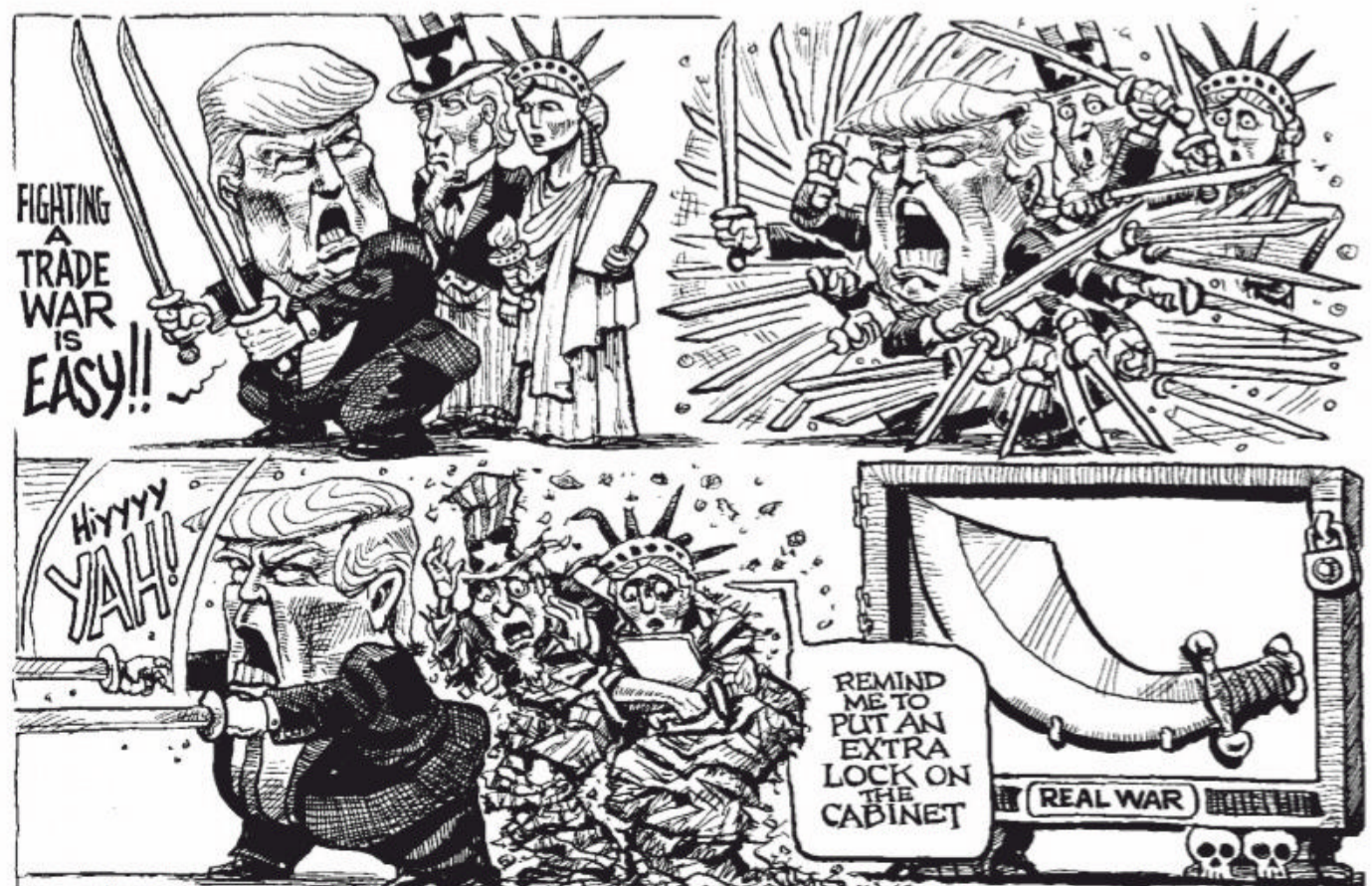
British Steel told the British government that it needs more state aid because of "uncertainties around Brexit". That is in addition to the £100m (\$130m) loan from the government the company had recently secured to pay its EU carbon bill. A no-deal Brexit would hit

British Steel hard, subjecting it to 20% tariffs under WTO rules.

Global investment in **renewables** has stalled, according to the International Energy Agency, taking the world further away from meeting the goals of the Paris agreement on climate change. This is aggravated by the continued expansion of spending on coal-fired power plants, especially in Asia. Investment in coalmining rose by 2.6% in 2018. By contrast, growth in new renewable installations was flat for the first time since 2001.

Taken for a ride

The most eagerly awaited stockmarket flotation in years turned out to be a damp squib. **Uber** priced its IPO at \$45 a share, the low end of the offer's price range, which did little to entice investors. The stock closed 8% down on the first day of trading, valuing the company at \$70bn, well below most expectations. Optimists pointed to the experience of Facebook, which, despite a poor IPO and share price that sagged for months, eventually became one of the world's most valuable companies. Pessimists said Uber's ride-hailing business will struggle to make sustainable profits.



A new kind of cold war

How to manage the growing rivalry between America and a rising China

FIGHTING OVER trade is not the half of it. The United States and China are contesting every domain, from semiconductors to submarines and from blockbuster films to lunar exploration. The two superpowers used to seek a win-win world. Today winning seems to involve the other lot's defeat—a collapse that permanently subordinates China to the American order; or a humbled America that retreats from the western Pacific. It is a new kind of cold war that could leave no winners at all.

As our special report in this week's issue explains, superpower relations have soured. America complains that China is cheating its way to the top by stealing technology, and that by muscling into the South China Sea and bullying democracies like Canada and Sweden it is becoming a threat to global peace. China is caught between the dream of regaining its rightful place in Asia and the fear that tired, jealous America will block its rise because it cannot accept its own decline.

The potential for catastrophe looms. Under the Kaiser, Germany dragged the world into war; America and the Soviet Union flirted with nuclear Armageddon. Even if China and America stop short of conflict, the world will bear the cost as growth slows and problems are left to fester for lack of co-operation.

Both sides need to feel more secure, but also to learn to live together in a low-trust world. Nobody should think that achieving this will be easy or quick.

The temptation is to shut China out, as America successfully shut out the Soviet Union—not just Huawei, which supplies 5G telecoms kit and was this week blocked by a pair of orders, but almost all Chinese technology. Yet, with China, that risks bringing about the very ruin policymakers are seeking to avoid. Global supply chains can be made to bypass China, but only at huge cost. In nominal terms Soviet-American trade in the late 1980s was \$2bn a year; trade between America and China is now \$2bn a day. In crucial technologies such as chipmaking and 5G, it is hard to say where commerce ends and national security begins. The economies of America's allies in Asia and Europe depend on trade with China. Only an unambiguous threat could persuade them to cut their links with it.

It would be just as unwise for America to sit back. No law of physics says that quantum computing, artificial intelligence and other technologies must be cracked by scientists who are free to vote. Even if dictatorships tend to be more brittle than democracies, President Xi Jinping has reasserted party control and begun to project Chinese power around the world. Partly because of this, one of the very few beliefs which unite Republicans and Democrats is that America must act against China. But how?

For a start America needs to stop undermining its own strengths and build on them instead. Given that migrants are vital to innovation, the Trump administration's hurdles to legal immigration are self-defeating. So are its frequent denigration of any science that does not suit its agenda and its attempts to cut science funding (reversed by Congress, fortunately).

Another of those strengths lies in America's alliances and the institutions and norms it set up after the second world war. Team

Trump has rubbished norms instead of buttressing institutions and attacked the European Union and Japan over trade rather than working with them to press China to change. American hard power in Asia reassures its allies, but President Donald Trump tends to ignore how soft power cements alliances, too. Rather than cast doubt on the rule of law at home and bargain over the extradition of a Huawei executive from Canada, he should be pointing to the surveillance state China has erected against the Uighur minority in the western province of Xinjiang.

As well as focusing on its strengths, America needs to shore up its defences. This involves hard power as China arms itself, including in novel domains such as space and cyberspace. But it also means striking a balance between protecting intellectual property and sustaining the flow of ideas, people, capital and goods. When universities and Silicon Valley geeks scoff at national-security restrictions they are being naive or disingenuous. But when defence hawks over-zealously call for shutting out Chinese nationals and investment they forget that American innovation depends on a global network.

America and its allies have broad powers to assess who is buying what. However, the West knows too little about Chinese investors and joint-venture partners and their links to the state. Deeper thought about what industries count as sensitive should suppress the impulse to ban everything.

Dealing with China also means finding ways to create trust. Actions that America intends as defensive may appear to Chinese eyes as aggression that is designed to contain it. If China feels that it must fight back, a naval collision in the South China Sea could escalate. Or war might follow an invasion of Taiwan by an angry, hyper-nationalist China.

A stronger defence thus needs an agenda that fosters the habit of working together, as America and the USSR talked about arms-reduction while threatening mutually assured destruction. China and America do not have to agree for them to conclude it is in their interest to live within norms. There is no shortage of projects to work on together, including North Korea, rules for space and cyberwar and, if Mr Trump faced up to it, climate change.

Such an agenda demands statesmanship and vision. Just now these are in short supply. Mr Trump sneers at the global good, and his base is tired of America acting as the world's policeman. China, meanwhile, has a president who wants to harness the dream of national greatness as a way to justify the Communist Party's total control. He sits at the apex of a system that saw engagement by America's former president, Barack Obama, as something to exploit. Future leaders may be more open to enlightened collaboration, but there is no guarantee.

Three decades after the fall of the Soviet Union, the unipolar moment is over. In China, America faces a vast rival that confidently aspires to be number one. Business ties and profits, which used to cement the relationship, have become one more matter to fight over. China and America desperately need to create rules to help manage the rapidly evolving era of superpower competition. Just now, both see rules as things to break. ■



South Africa

Now for the hard part

Cyril Ramaphosa must use the powers of the presidency to put country before party

MOST PARTIES would delight in a sixth successive election victory. But South Africans' endorsement of the African National Congress (ANC) on May 8th was tepid (see Middle East & Africa section). The ANC's share of the vote was 57.5%, the first time in a national ballot that it has fallen below 60%. More important, over half of South African adults could not be bothered to go to the polls. Twenty-five years after the jubilant vote that ended apartheid, South Africans are disillusioned. They are not quite ready to abandon the main party of the liberation struggle, but they wish it was better at running the country.

The result would have been worse for the ANC had it not been for Cyril Ramaphosa. Pre-election polls showed that South Africans admire their president more than his party. On the day, in each of the nine provinces, the ANC's share of the vote in the national poll was higher than in the provincial ballot held at the same time, suggesting that many South Africans like Mr Ramaphosa more than the idea of living in a region ruled by his ANC comrades. Although the president is picked by parliament, rather than directly by voters, Mr Ramaphosa has a clear mandate. He must use it.

He urgently needs to assert his authority in three areas. The first is his own party. The ANC is stuffed with inept and corrupt people. Under Jacob Zuma, Mr Ramaphosa's predecessor, who governed in 2009-18, state-owned enterprises were looted and crime-fighting institutions subverted. Many of those accused of corruption still hold senior positions in the party, including Ace Magashule, the secretary-general. Mr Ramaphosa needs a cabinet of his own choosing, with fewer members than today's 36. None of his ministers ought to be beholden to Mr Zuma. The president will be stronger if the most important parliamentary positions, such as whips and committee chairs, are held by those who believe in the cause of reform.

He must also see that corruption is rooted out. Since taking

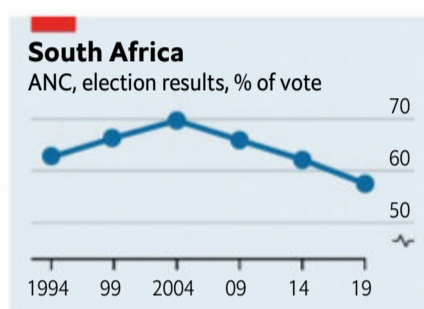
over in February 2018 Mr Ramaphosa has replaced cronies of Mr Zuma with new, clean leaders at institutions such as the National Prosecuting Authority (NPA) and the South African Revenue Service. These organisations need to be fully funded, with priority given to the unit set up within the NPA to go after crimes stemming from the era of "state capture" under Mr Zuma. (It would be good if private-sector lawyers volunteered to pitch in.) With Mr Ramaphosa's consistent political backing to pursue graft, wherever it is found, these units could make a real difference.

A sustained anti-corruption drive would help change investors' pessimistic views of South Africa. The economy is perilously weak; official figures released on May 14th showed that unemployment rose from 27.1% to 27.6% in the first quarter of the year.

Output may have fallen during the same period, largely because Eskom, the state-run power firm, imposed the most severe blackouts in its history. Restoring investors' confidence also requires economic reforms, starting with energy—the third area that Mr Ramaphosa needs to change. Eskom is, in effect, insolvent. The president has a plan to break up its monopoly, bring forward auctions so that renewable energy can

add to the grid's capacity and ease regulations on small-scale electricity suppliers. Much will depend on whether he can follow through with his plan.

In all of these areas Mr Ramaphosa will face fierce opposition. A hefty minority of his own party does not want him to succeed, lest they lose their illicit incomes or end up in prison. It is possible that his preference for consensus over combat will cause him to fail. But Mr Ramaphosa has faced opposition before, most notably in leading the negotiations with the old white National Party over ending apartheid. Through that process he helped define the powers of the South African presidency. Now he should use them to sweep aside the crooks who captured the state and to restore the rule of law. ■



America's abortion laws

Supremely wrong

A majority of Americans want abortion to be legal in the first two trimesters. That is what the law should say

IF THE ALABAMA legislature gets its way, abortion will soon become illegal there. A doctor convicted of performing an abortion could be sentenced to up to 99 years in prison. With no exemptions in cases of rape or incest, this would be the most restrictive such law in the country. But other states with Republican-controlled legislatures have passed "heartbeat" laws that are almost as absolute—they ban abortion from 6 weeks, at which point many women do not yet realise they are pregnant. These laws will be struck down by lower courts because they contradict *Roe v Wade*, the 1973 Supreme Court ruling that made abortion legal throughout America. At which point the court will

have to decide whether it wants to look at *Roe* again.

In the abortion argument, both sides long ago drove each other to extremes. The pro-life, fundamentalist view behind the Alabama bill is that a fertilised egg is no different from a person, and thus should enjoy the same legal rights. Accept that, and what right does a woman have to take a morning-after pill, or to end a pregnancy after a rape? The pro-choice extreme is that any restriction on abortion is an unacceptable attempt by government to control women's bodies. With debate gridlocked, the focus is on the courts.

The latest abortion bills are about two things: preventing ►►

▶ women from making a choice that is properly theirs, and getting a challenge to *Roe* to the Supreme Court where, campaigners hope, they can smoke out the new conservative majority. Were Alabama's law to come into force, the price would be paid by women too poor or browbeaten to travel to where abortions are legal. Some of them will end up attempting to perform abortions themselves, with drink, drugs or worse.

Compared with other Western countries, America is not such an outlier on abortion as it sometimes appears. The number of abortions is, thankfully, in long-term decline as the number of teenage pregnancies falls. A large, stable majority of Americans favours keeping abortion legal in the first two trimesters and banning it thereafter, with some medical exemptions: a position that balances the rights of women with the intuition that a fetus able to survive outside the womb deserves some legal protection. This is roughly what the law says in Britain, where controversy about abortion is now largely over. Rather than reflecting public opinion, though, America's lawmakers have for decades found it more useful to inflame it.

Alabama illustrates how this happens. As in many other states, the only political competition most Republican members of Alabama's statehouse face is during primaries and comes from the right. In these races there is no political cost, and considerable advantage, in taking the most extreme position possible on abortion. Thus a fringe idea becomes a litmus test for primary candidates, handing power to a small but highly motivated group of cranks. Meanwhile in Democratic-run places,



lawmakers have some reason to fear that anything short of the relatively permissive approach followed in some states since *Roe* will infuriate their own activists.

Legislators should be aiming for a law that lives up to a decent ethical standard and commands general consent. But, because they cannot bear to compromise, the only way to resolve their disputes is for the courts to step in. That turns what should be a political decision into a legal one—as it also has with gay marriage and Obamacare. This does double damage to American democracy, first by absolving elected politicians of their proper responsibility to govern, and then by making the Supreme Court seem too politicised, which undermines its legitimacy.

Whatever the fate of the new abortion laws in the courts, this cycle looks likely to become more destructive. If the five conservative justices voted to overhaul abortion law in a way that contradicted public opinion, then Donald Trump would have fulfilled a campaign promise

to appoint justices who will overturn *Roe*, but at the cost of women's freedoms and of the further politicisation of America's highest court. If the justices take up a challenge but rule narrowly against the new abortion laws, activists will go back to their campaigns with the conviction that one more attempt or one more sympathetic member on the court is all they need to win.

The only way to stop this cycle is for lawmakers to compromise on what most Americans think reasonable. That looks unlikely now. But in democracies problems often look insoluble—until, suddenly, something changes. ■

Fiscal policy

Cocked and ready

Some governments could bear much more debt. That does not mean they should

NOT LONG ago there was a broad consensus that rich-world governments had become too indebted. How times change. Left-wing politicians today say that governments need to spend freely to counter climate change, and should not worry about borrowing more if necessary. America's Republicans, who not long ago warned of imminent budgetary catastrophe, have in office cut taxes enough to push the deficit above 4% of GDP, despite a healthy economy. Economists, meanwhile, are locked in debate over whether much higher debt-to-GDP ratios might be sustainable (see Finance section).

Is lunch free after all?

Changing attitudes to budget deficits are in part a backlash against the zealous fiscal rectitude that prevailed in much of the rich world after the financial crisis. America began deep and indiscriminate spending cuts in 2013 after a commission failed to agree on alternative measures to contain its deficit. Britain has spent most of a decade chasing balanced-budget targets that were postponed and then partly abandoned. In the euro zone, where currency union leaves countries much more vulnerable to debt crises, austerity pushed Greece into depression, and Germany's reluctance to loosen its purse-strings has slowed Europe's economic rebalancing.

With hindsight, the horror of deficits looks overblown. Amer-

ica will probably enter the next decade with a debt-to-GDP ratio seven percentage points higher than in 2013, but with long-term interest rates roughly unchanged. Japan has gross debts of almost 240% of GDP without any sign of worry in bond or currency markets. Amazingly, even Greek three- and five-year bonds now yield only around 2%.

In the short term, accurate judgments about fiscal firepower matter because deficits will be an important weapon in the fight against the next downturn. Central banks have little or no room to cut interest rates. The potency of alternative monetary-policy tools, such as bond-buying, is still up for debate. With few other options available, a reluctance to use fiscal stimulus to fight a recession could be self-defeating, because a lack of growth imperils fiscal sustainability at least as much as deficits do.

In the long term, low interest rates change the dynamics of debt. If growth and inflation together exceed the interest rate, existing debts shrink relative to GDP over time. Happily, this condition holds in many places today. In America it has been the historical norm. The dollar's dominance of the global financial system results in a seemingly insatiable appetite for safe, dollar-denominated assets. Were the Treasury to issue much more debt, investors would scramble to buy it.

For the left, especially those who want a "Green New Deal" to fight climate change, this is a reason to cast aside worries about ▶

▶ debt and focus on boosting spending. For the right it is a reason to cut taxes today and shrink the government later.

Both attitudes are dangerous. Throwing fiscal caution to the wind runs two risks. The first is that it kills off debate over how to allocate scarce resources, encouraging waste. Although debt-funded investments may be desirable, fiscal free-for-alls are not. The rich world already faces huge upward pressure on health-care and pension spending as societies age. Adding tax cuts and new spending programmes, with their own constituencies to defend and expand them, only makes the eventual necessary compromises harder to reach.

The second problem with disregarding deficits is that conditions change. Anyone who claims to know with certainty that interest rates will be low for decades to come has not learnt from history that economic paradigms eventually come to an end. When rates rise, heavily indebted countries will find that their

budgets are under much greater pressure. Countries can mitigate interest-rate risk by issuing debt at very long maturities today, but indebted nations will always have less room to borrow afresh to fight future emergencies. This applies even in America, because the dollar's dominance is not guaranteed to last indefinitely. Over the course of this century it could be threatened by the yuan, or even by the euro. When the pound sterling lost its pre-eminence in the early 1930s, Britain, with a debt-to-GDP ratio in excess of 150%, faced a currency crisis.

Sometimes the risks of debt are worth running. Book-balancing during downturns rarely pays off. Looked at from a global rather than national perspective, climate change is more worrying than fiscal profligacy—although a carbon tax could curb emissions while shrinking deficits. But public debt is not cost-free. Fiscal firepower is nice to have, but more often than not it is wisest to keep the powder dry. ■

Politicians and comedy

You couldn't make it up

Legislators are the unacknowledged comics of the world

A CURIOUS FEATURE of these turbulent times is the rise of comedian-politicians. Volodymyr Zelensky, president-elect of Ukraine, is only the most recent (see International section). But the anti-elite protest propelling comedians into politics is also nurturing comic talent in politicians. President Donald Trump is the master blender of performance and politics, replacing policy pronouncements with a routine of gags and put-downs. But other newcomers are showing talent—if only despite themselves.

Just as different leaders are inspired by different ideologies, so they lean towards different types of comedy. Vile despots are often their own best satirists. Nicolás Maduro and Abdel-Fattah al-Sisi, presidents of Venezuela and Egypt, find their voice in absurdist humour and their material in economic hardship. Under the hilarious “Plan Conejo” (Plan Rabbit), Mr Maduro set about solving poverty by distributing baby rabbits to the poor. “They will breed—like rabbits,” he quipped. Mr Sisi had the nation clutching its wallets when he suggested that people should fix the country's fiscal problems by texting him money every morning. He even offered to put himself up for sale. Showing their appreciation of their leaders' jokes, Venezuelans posted pictures of beribboned bunnies, while some Egyptians placed ads on eBay for one “slightly used field-marshal”.

Others fall back on verbal wit. The one-liner from Tony Abbott, a former Australian prime minister—“No one, however smart, however well-educated, however experienced, is the suppository of all wisdom”—is among the best in recent memory, though Victor Ponta, former prime minister of Romania, deserves an honourable mention for explaining on television that he lost an election because, in the tricky business of stealing and buying votes, “their system worked better than ours”. But the one to beat is still George W. Bush: “Our enemies are innovative and resourceful, and so are we. They never stop thinking about new ways to harm our country and our people, and neither do we.”

Sarcasm is politicians' favoured genre, for it allows them to poke fun at national prejudices. The former Polish foreign min-

ister, Witold Waszczykowski, enjoys taking the mickey out of the nationalist right. “We only want to cure our country of a few illnesses,” he told *Bild*, a German tabloid. “A new mixture of cultures and races, a world made up of cyclists and vegetarians, who only use renewable energy and who battle all signs of religion.” And it's not just politicians who have been showing satirical form: in a subtle dig at post-Soviet democracy, the Azerbaijani election commission published the election results the day before voting took place.

Italy's transport minister, Danilo Toninelli, has shown promise with his witty commentary on political hypocrisy. When his environmentally conscious party, the Five Star Movement, was pressing the government to use smaller, electric vehicles, Mr Toninelli announced that he had just bought a diesel SUV. But

Italy's current crop of politicians are not in the same league as their former prime minister, who adopted a fantastical persona, “Silvio Berlusconi”, embodying all that was hideous and predatory in Italian manhood, with implausible hair and “bunga bunga” parties at which he frolicked with young women paid to pretend to enjoy his company. Some critics said “Silvio Berlusconi” was too over-the-top to be credible, but

the skit was convincing enough to fuel Italian feminism.

For British self-satirists, class still provides the best material. Lord Young, a former minister, set the tone when he referred to the homeless as “the people you step over when you come out of the opera”, but a younger generation is outdoing him. Jacob Rees-Mogg, a Brexiteer, took pole position as the nation's most ridiculous toff with a brilliantly crafted denial of the charge that he took his nanny campaigning in a Bentley: “That was wrong. Well, the Nanny bit is right. Of course she came canvassing; she's part of the family after all...But we took my mother's Mercedes Estate. I don't think a Bentley's a suitable campaigning car.”

This is a wonderful age for comic performance in public life, but it would be wrong to claim that it is unique. It was Napoleon who once remarked: “In politics, absurdity is not a handicap.” ■



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In support of Modi

Your latest fulminations against Narendra Modi (“Agent Orange”, May 4th) follow a line of attack at *The Economist* based on innuendo and indefensible criticisms. Thus, you fault India’s prime minister for his handling of the dastardly Pulwama attack, masterminded by Pakistani terrorists, but neglect to tell the reader that his actions received unqualified approval from all Western democracies. You claim demonetisation caused “huge disruption” to farmers and small businesses, but cite no data or surveys substantiating it. In fact, a study co-authored by Gita Gopinath, the director of research at the IMF and a critic of demonetisation, finds that the effects dissipated within a few months and the growth rate during the year of demonetisation fell by no more than 0.5% on account of the measure.

Finally, in a delicious irony, you accuse Mr Modi of “controlling and bullying critics”, while basing your entire tirade against him on the commentaries by those same critics. It appears your magazine, too, has completed its descent into the post-truth world.

JAGDISH BHAGWATI
ARVIND PANAGARIYA
Both at Columbia University
New York

PRAVIN KRISHNA
Johns Hopkins University
Baltimore

The logistics of organising an election where almost a billion people will vote in this vast land is in itself worthy of praise by *The Economist*. So far the elections have been conducted peacefully and in one case officers travelled days to reach a village where there was only one voter.

The people of India want a leader who is not corrupt and who will bring peace and prosperity. Narendra Modi has provided that over the past five years. Bureaucracy has been trimmed, millions of people have been lifted from poverty, electricity has been provided to villages and towns. Mr Modi,

however, does not hide the fact that the concerns of the vast majority of Hindus should be taken into account while at the same time providing every opportunity to minorities. The left-leaning liberals cannot tolerate this. The prime minister promises to provide a strong, nationalist government that will no longer act weakly, instead putting India’s interests first. Left-wing liberals and academics are stuck in an ideological prism that in reality brought no progress to the minorities they champion the cause of. Under Mr Modi all Indians, irrespective of their caste or creed, will be given the chance to progress.

NITIN MEHTA
London

Thought for the day

It is a mistake to conclude that America’s young are not religious (“To be young is not quite heaven”, April 27th). They are, in practice, extremely so. It is just that the accoutrements, creeds and god have changed. Their prayer books and rosaries have been replaced by iPhones, their prophets are in Silicon Valley, and their god is the one they see each morning in the mirror, but their devotion to all of these is religious.

REV. DOUGLAS BUCHANAN
Virginia Beach, Virginia

History won’t be kind

It wasn’t the UK Independence Party’s good result in the European Parliament election of 2014 that panicked David Cameron into calling the Brexit referendum (Bagehot, April 27th). Mr Cameron had already announced his proposal in January 2013. Before that, in 2009, the Tory leader withdrew his party from the centre-right federation in Europe, the European People’s Party.

I observed Mr Cameron’s approach to Europe from 2001, when he entered the House of Commons. It was always to denigrate, sneer at or mock any EU proposal and brand Tony Blair and Gordon Brown as puppets of Brussels.

It is fashionable to blame

Brexit on Nigel Farage, and he dons the mantle willingly. But in truth, it was the relentless pandering of the Conservative Party to simplistic anti-Europeanism between 1997 and the beginning of the Brexit campaign in 2016 that created the culture of hostility to European partnership that led to the vote to leave Europe.

If Lord North lost America, David Cameron lost Europe. Nigel Farage was a bit player.

DENIS MACSHANE
Former Europe minister
London

The shock of the not-so-new

Regarding the tricky task of policing YouTube (“Now playing, everywhere”, May 4th), I recall that newspapers printed pictures of the hanging of Mussolini, the shooting by a pistol to the head of a young (alleged) Vietcong, a naked girl fleeing her bombed Vietnamese village and innumerable other comparable events, some of which won prizes for the photographer. You can still see on YouTube film footage of the arrest and trial of the Ceausescus in Romania and view their recently killed bodies.

All these were on the front pages of serious newspapers or reputed television programmes, sometimes with warnings for the more fragile viewers, but with few thinking that they should not have been shown. The triumphalism of Islamic State’s media certainly grates on the Western viewer, but what exactly makes their execution videos so self-evidently unshowable? Not just “the oxygen of publicity”, as we well knew the term decades ago when it referred to the IRA.

HILARY POTTS
London

The claim of thrones

There are two additional factors to the ones you mentioned in “Sovereign immunity” (April 27th) that explain why constitutional monarchies have survived modernity. First is the concept of the “loyal opposition”, an

important and underappreciated element of the British constitution. In the lead up to the Iraq war, Britons who opposed the military getting involved were not accused of being unpatriotic, as opponents to the war in America were. The distinction between loyalty to country and loyalty to a particular government is much stronger in Britain, and it is the monarchy that underpins this.

Second, when democracy is threatened, a monarch’s historical gravitas can help protect it. For all his later elephant-shooting foibles, Juan Carlos of Spain laid the foundations of Spanish democracy in the late 1970s and played a crucial role in ending an anti-democratic attempted coup in 1981.

WILLOUGHBY JOHNSON
Westwood Hills, Kansas

It is much easier to get rid of a monarch than to install one. If you are lucky enough to have retained one, hang onto it. Restoration will be impossible. The power of constitutional monarchies depends on circumstances and history but is often underestimated. The monarch not only provides a psychological centre but can sometimes provide discreet guidance to help overcome difficulties in forming a government.

JACK AUBERT
Falls Church, Virginia

At a conference in Cairo in 1948, King Farouk of Egypt told a British diplomat that, “The whole world is in revolt. Soon there will be only five kings left—the King of England, the King of Spades, the King of Clubs, the King of Hearts and the King of Diamonds.” Farouk was right; he was overthrown by a coup in 1952.

GERARD PONSFORD
White Rock, Canada

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Changing parliamentary perspectives

ATHENS, BRUSSELS AND LINZ

The effects a decade of crises has had on European politics make the coming European elections look oddly consequential

UNDER POWDER-BLUE Peloponnesian skies, amid the olive groves and cypress trees where zealous athletes once competed for glory, Manfred Weber, a centre-right Bavarian politician, raises a hand to touch one of the ancient columns of Nemea, affecting contemplative wisdom. Kyriakos Mitsotakis, leader of the Greek centre-right, welcomes him to the “home of democracy”, a fitting place for him to launch the campaign which hopes to see him elected one of Europe’s most powerful leaders. Photographers diligently seek out angles that will make the opportunity offered them look vaguely interesting.

Elections to the European Parliament, the EU’s legislature, will take place between May 23rd and 26th in the 27 countries committed to staying in the EU, as well as in one which is purportedly trying to leave (see Britain). Over 5,000 candidates are standing for around 400 parties, the vast majority of them national ones (there are some European Parliament-specific outfits and a

few independents). Once in the parliament, these parties sort themselves into broad ideological groups. The European People’s Party (EPP), to which Mr Weber’s Christian Social Union and Mr Mitsotakis’s New Democracy party belong, has long been the largest such grouping.

Once ensconced in Brussels—except for the 48 days a year when, in an absurd transhumance, they decamp to Strasbourg—the 751 MEPs discuss, amend and pass legislation proposed by the European Commission, the EU’s executive, and oversee its budget. In doing so, they have typically divided up along two axes; the universal left/right and the more parochial pro- and anti-Europe. The rise of populist parties in the wake of the euro crisis and the migration crisis of 2015 has prompted excitement and trepidation about the anti- side doing well this time round.

The parliament also elects the commission’s president, a position with much more power than any in the parliament

proper. The candidates for the job used to be selected by backstage deals between the member states. In 2014 the parliament, keen to matter more, decided that, instead, each parliamentary grouping should choose a preferred candidate (*Spitzenkandidat*) from within its ranks, and that the candidate of the largest grouping should get the job. The EPP’s *Spitzenkandidat* is Mr Weber. Hence his visit to a site of ancient wisdom and athletic competition. “You can’t fault our ambition,” one aide says with a suitably sporting smile.

Nemea offers a wealth of resonance and metaphor for the state of Europe. There is work going on there which plays some unclear role between emergency preservation and eventual restoration. The shut-down factories seen when driving out from Athens, and the 30% of local youth without jobs, recall the crisis in the euro zone which pushed Greece to the brink of leaving. The same road was an artery for refugees leaving Turkey during the migration crisis. The distant cranes of the port of Piraeus across the Gulf of Elefsina have been, in part, sold off to China.

The abyss and back

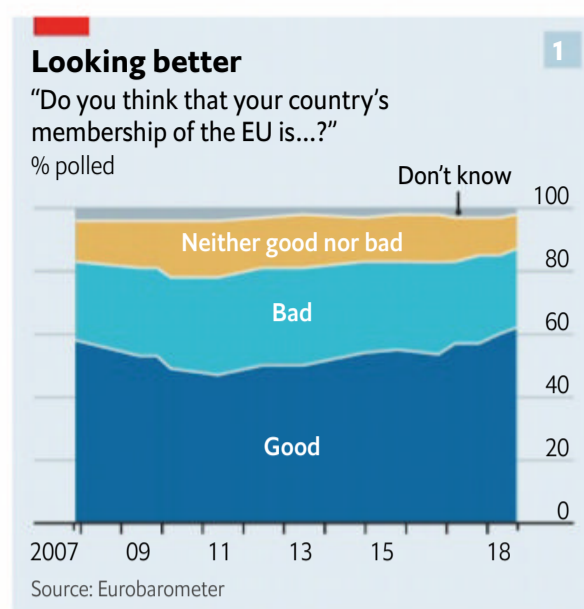
A particularly telling symbol is an absence. There are no voters here, no supporters, no excitement. It will be as unprecedented for a Greek to be able to pick Mr Weber out of a line-up tomorrow as it was yesterday. And ►►

► Greeks are far from unique in this inability. Surpassed only by polls in India, the European Parliament elections are the second-largest democratic exercise in the world. But that does not mean the electorate much cares about the personalities concerned, such as they are. Indeed, many hardly care about the elections' actual results at all, seeing them more as a way of affirming likes and dislikes based squarely on their own national politics. In the previous elections, in 2014, eight countries saw turnouts of less than a third.

Since then, though, there have been changes. The crises of the past decade have tested the union and found it wanting. They have also revealed its resilience. Whenever it came close to breaking up, its institutions and governments took painful and politically contentious decisions to hold it together. The European Central Bank, for example, prevented the euro's collapse with a promise to do "whatever it takes" that horrified thrifty Germans—who nevertheless, because of the value they placed on the union's survival, stuck with the strategy. Since the Brexit referendum in 2016 the EU's response to the once-unthinkable shock of a large nation deciding to leave has both illustrated and strengthened its underlying cohesiveness.

Possibly as a result of having peered over more than one brink, possibly as a result of an increasingly alarming world beyond their borders, Europeans are regaining some faith in the EU. In a survey of union-wide opinion taken last September, 62% of respondents said that membership was a good thing, the highest proportion since 1992. Only 11% said it was a bad thing, the lowest rate since the start of the financial crisis (see chart 1). The Brexit mess has doubtless put off other would-be leavers; the parties which once promised referendums on leaving in France and Italy have quietly dropped the idea. But the rise in support began in 2012, four years before Britain's referendum.

Which is not to say that the union is hunky-dory. As well as being, in its way, the world's second-largest democracy, the EU is also the world's second-largest economy, but it has a range of dire problems on which action is needed: sluggish growth, carbon



emissions, rising authoritarianism both in the rest of the world and within its own precincts, underperforming armies, a paucity of world-class technology companies and an inability to manage migration.

Not Martian, European

A visitor from Mars—or, for that matter, Beijing or Washington—might see further integration as a prerequisite for sorting out such problems. But Europe is not America or China. It is a mosaic of nation states of wildly varying size and boasting different languages, cultures, histories and temperaments. Its aspiration to be as democratic as a whole as it is in its parts is profoundly hampered by the lack, to use a term familiar to the ancient Nemeans, of a "demos"—a people which feels itself a people. Few want a superstate with fully integrated fiscal and monetary policy, defence policy and rights of citizenship. For all that Mr Weber and other parliamentarians may want to make the elections pan-European and quasi-presidential, voters will continue to be primarily parochial.

Nevertheless, the decade of living dangerously seems to have reshaped European politics into something a bit more cohesive, if not coherent. Europe is no longer in the business of expansion, or of integration come what may. It is in the business of protection. "A Europe which protects", a phrase you cannot avoid in the corridors of Brussels, is increasingly heard on the campaign trail, too. Policy differences now play

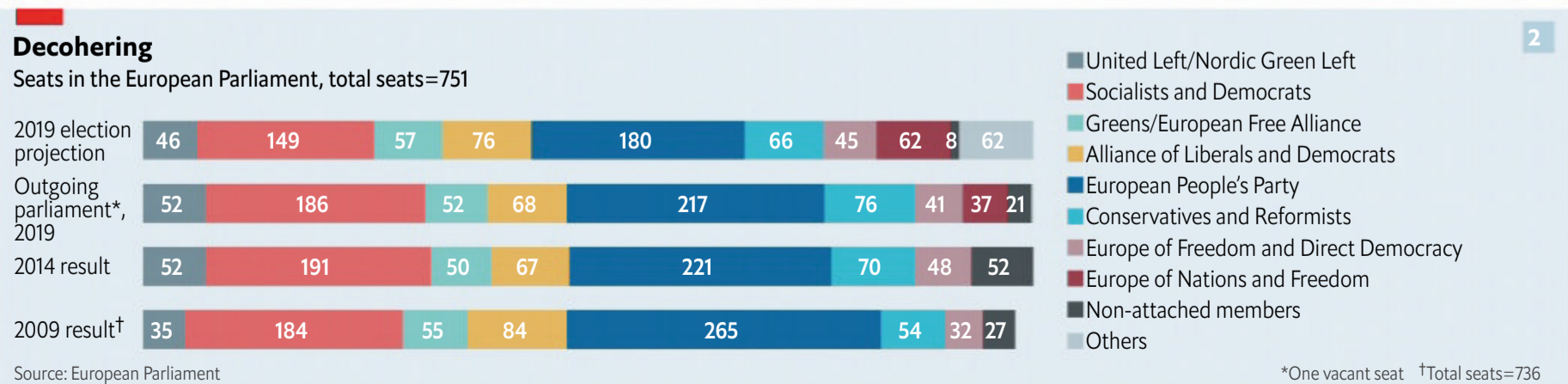
out within a broadly shared conviction that Europe's citizens need, and want, defending from outside threats ranging from economic dislocation to climate change to Russia to migration. Some politicians offer integration as protection; others prefer simple co-ordination. But even parties once resolutely anti-EU, such as Austria's hard-right FPÖ, now demand the EU do more, not less—at least in areas like border control and anti-terrorism.

At the same time, a new divide has opened up, one that cuts across the old left/right and pro/anti battle lines. It is between gradualists unwilling to risk the status quo and those who seek rapid and fundamental change—in various different directions.

To see a demos that demonstrates these changes, come to Linz, a working-class city in Upper Austria and a decent barometer for Europe's mood. On May 1st, international workers' day, a rally held on the baroque Hauptplatz by the pro-European, centre-left Social Democrat party (SPÖ) rang with brass bands and appeals to the "comrades". In a stuffy beer tent less than a kilometre away an FPÖ gathering was getting into full swing. The customary left/right and pro/anti divides might have been expected to set the two apart as clearly as the waters of the Danube did.

Look closer, though, and things are more complex. At both events the politicians are tellingly half-hearted when talking about the sort of things they might normally be expected to harp on about. The praise heaped on good public services by Klaus Luger, Linz's SPÖ mayor and the moaning about EU interference in the width of tractor seats by Manfred Haimbuchner, the FPÖ's state leader, received scant applause. Where they fired up their audiences, it was on two more nuanced matters that are central to European, not just Upper Austrian, concerns.

Both the SPÖ and the FPÖ argued that Europe should do more to protect the little guy. The SPÖ crowd clapped when told that "only as a Europe of co-operation can we solve common problems"; the FPÖ tent cheered Mr Haimbuchner as he said he wanted to do something about the fact that "people no longer feel at home in their own streets and towns". And they also cheered ►►



his proposed solution to this purported problem—not a retreat from Europe, but a revolution within it. “We will position ourselves in the middle of Europe. We want to go to the heart of Europe.” The “Europe of nations” he imagines being at the heart of is not at all what the ralliers over the Danube want. But for a party which in the 2000s sought to leave the union completely to now want a central role in it is striking.

Obviously, the means by which the parties are offering to create their more protective Europe differ. In Austria as elsewhere, the left offers more economic protectionism, the right more cultural protectionism, the centre a blend of the two. But the policy offerings start not from a liberal-versus-socialist divide on the role the market and private ownership should play in the economy, but from a shared feeling that Europeans want to be defended. The European election manifesto of Spain’s left-wing Podemos uses the word “protection” on every other page; when Germany’s centre-right Christian Democrats proclaim “Our Europe makes us strong”, the first-person plural applies to Germans and Europeans both. The FPÖ’s leaflets, somewhat sinisterly, show a European flag proudly flying from a barbed-wire fence.

The level of upset imagined as necessary to bring about the promised protection differs, too. “The European election is a choice of direction,” intoned Mr Lüger. “If Europe falls to nationalism it will hurt a city like ours.” His message: steady as she goes. But in the FPÖ tent a crowd pumped up on high-tempo accordion music cheered the news that Europe’s transformation was on its way: “We haven’t even got started!” bellowed Heinz-Christian Strache, Austria’s hard-right vice-chancellor. Many wore colourful vests in support of the anti-establishment *gilets jaunes* protests that swept French cities during the winter and early spring.

The question of how to protect cuts across the question of how much to change. This election pits parties that have long dominated the European Parliament—the EPP and its centre-left counterpart, the S&D—against those that would shake up the system. The shakers-up are both more interesting and more diverse, ranging from leftists like Jean-Luc Mélenchon in France to outfits like the FPÖ and the hard-right Lega, an Italian group of leavers-turned-overturers-from-within.

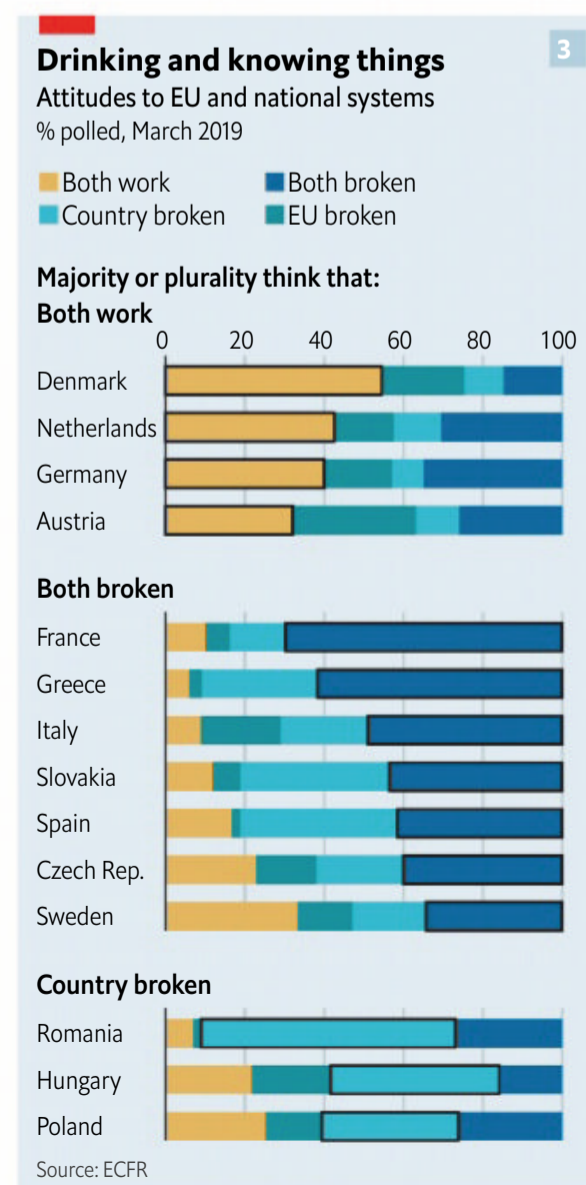
But this is not a doughnut, composed entirely of the peripheral. Some centrists, too, such as the German Green Party, seek radical change. Most strikingly of their number is Emmanuel Macron and his La République en Marche party. Like Matteo Salvini of the Lega, Mr Macron has published a continent-wide manifesto. Mr Salvini’s calls for tougher borders and protections for “European culture”; Mr Macron’s

for overhauling the borderless Schengen area, introducing a European minimum wage, investing more in artificial intelligence and creating a European Security Council. Both leaders want to create new groups in the next European Parliament after the election to further the realignments they seek.

The old-school incrementalists are likely to lose seats (see chart 2 on previous page); the shakers expect to gain them. The fragmentation that has visited many of Europe’s national parliaments in recent years will thus come to its international one. And in doing so it will reflect new divisions in the electorate.

Still better than Westeros

A recent study by the European Council on Foreign Relations, a think-tank, divides Europe’s voters into four groups named catchily, if not entirely convincingly, for factions from “Game of Thrones”, a television series about failures in governance. People confident in both their national governments and the EU sit in the stalwart House of Stark; those who think that their country is broken but that Europe works are Daeneryses. Both will tend towards incrementalism. Those confident in their national government but not the EU are the Free Folk; those who think both are broken are the millenarian Sparrows. Both those factions tend towards radical reform.



All four factions exist in different proportions in different countries (see chart 3). Countries with a Stark plurality cluster in the continent’s core, those dominated by Sparrows are scattered all around, Daeneryses have a stronghold in the east. Tellingly, there is no country where the electorate is dominated by the Free Folk who believe the nation is fine but Europe is broken.

A fractious parliament reassembling its power blocs to take some account of all this will make it harder for Mr Weber—whose EPP will probably come first again—to stake his claim to the commission presidency. The idea has no constitutional foundation, and came into its own only with the election of Jean-Claude Juncker to the presidency in 2014. A number of national leaders disliked either the idea of a *Spitzenkandidat*, Mr Juncker, or both, and some still object to giving the parliament control. Mr Weber’s persistent defences of, and excuses for, Viktor Orbán, Hungary’s authoritarian leader, could queer his pitch. It may be that Michel Barnier, also of the EPP and the commission’s Brexit negotiator, ends up as president. Margarethe Vestager, who has had an impressive run as competition commissioner, is a credible liberal candidate. There is some enthusiasm for Christine Lagarde, currently head of the IMF.

And then what? The new commission, which will come into being in November, looks likely, like the new parliament, to be a lively and possibly quite dysfunctional body. The 28 commissioners are appointed by the member states, and several of the populists who have won power since 2014 will want to put a torch under the EU by sending arsonists to Brussels.

An early sally may be over the outgoing commission’s proposals for the next five years, including focuses on defence, research, social rights, climate change and Europe’s neighbourhood, agreed on by EU leaders at a summit in Romania last week. There will be a running competition between establishment types and insurgents in the parliament, the council—which is made up of national governments—and perhaps the commission, too.

New crises are brewing. But these could yet be the making of the EU. Jan Techau of the German Marshall Fund of the United States, a think-tank, imagines a war with Russia, a new euro crisis and a surge of migrants forcing Europe to integrate properly and, by 2040, to be a power to be reckoned with. That is outlandish, but his underlying point is right. Europe is struggling. But it has survived a very tough decade. Its voters have learned that economic battles are reliant on European debates, and that European co-operation is not in itself a bad thing. The club has developed a new sense of its own self-interest and learned in the process that it can move forward through crises still to come. Probably. ■



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Working

Better at the bottom

MADISON AND MERRILLVILLE

Life is improving for the lowest-paid

BRAD HOOPER quit his previous job at a grocery in Madison because his boss was “a little crazy”. The manager threatened to sack him and other cashiers for refusing orders to work longer than their agreed hours. Not long ago, Mr Hooper’s decision to walk out might have looked foolhardy. A long-haired navy veteran, he suffers from recurrent ill-health, including insomnia. He has no education beyond high school. Early this decade he was jobless for a year and recalls how back then, there were “a thousand people applying for every McDonald’s job”.

This time he struck lucky, finding much better work. Today he sells tobacco and cigarettes in a chain store for 32 hours a week. That leaves plenty of time for his passion, reading science fiction. And after years of low earnings he collects \$13.90 an hour, almost double the state’s minimum rate and better than the grocer’s pay. His new employer has already bumped up his wages twice in 18 months. “It’s pretty good,” he says with a grin. What’s really rare, he adds, is his annual week of paid holiday. The firm

also offers help with health insurance.

His improving fortunes reflect recent gains for many of America’s lowest-paid. Handwritten “help wanted” signs adorn windows of many cafés and shops in Madison. A few steps on from the cigarette shop is the city’s job centre, where a manager with little else to do points to a screen that tallies 98,678 unfilled vacancies across Wisconsin. In five years, he says, he has

never seen such demand for labour. He says some employers now recruit from a vocational training centre for the disabled. Others tour prisons, signing up inmates to work immediately on their release.

Unemployment in Wisconsin is below 3%, which is a record. Across America it was last this low, at 3.6%, half a century ago. A tight labour market has been pushing up median pay for some time. Fewer unauthorised immigrants arriving in America may contribute to the squeeze, though this is disputed. Official figures show average hourly earnings rising by 3.2% on an annual basis. “Right now, part time, it seems like everyone is hiring. Every American who wants a job right now can get a job,” says another shop worker in Merrillville, in northern Indiana.

In any economic upturn the last group ▶▶

Bottom’s up

United States, usual weekly nominal earnings of a full-time worker* at the tenth percentile
% change on a year earlier



Source: US Bureau of Labour Statistics

*Aged 25 years and over

of workers to prosper are typically the poorest earners, such as low-skilled shop-staff, food preparers, care-givers and temps. Their pay was walloped in the Great Recession a decade ago, and the recovery since has been unusually slow. Pay has leapt recently—with the lowest-paid enjoying faster gains than the better-off.

The benefits are not equally spread. In Wisconsin, as in much of the country, more jobs are being created in urban areas and in services. Laura Dresser, a labour economist, points to a “very big racial inequality among workers”. Wages have been rising fastest for African-Americans, but poorer blacks, especially those with felony convictions, are also likelier to have fallen out of the formal labour market, so are not counted in unemployment figures.

The wage recovery is not only about markets. Policy matters too. Some states, typically Republican-run, have been reluctant to lift minimum wages above the federal level of \$7.25 an hour. In Merrillville, a worker in a petshop carries a Husky puppy to be inspected by a group of teenage girls. Staff are paid “a dollar or two above the minimum wage”, says his manager. Despite his 13 years’ employment, and over 40 hours’ toil each week, his pay and benefits amount to little. He calls occasional bonuses a “carrot at the end of the road”.

He could munch on bigger carrots in other states. Lawmakers in some states are more willing to lift minimum wages. Where they do, the incomes of the lowest-paid rise particularly fast. Thirteen states and the District of Columbia raised the minimum wage last year. (Some cities, like Chicago and New York, occasionally raise it too). Elise Gould of the Economic Policy Institute told Congress in March that, in states which put up minimum wages at least once in the five years to 2018, incomes for the poorest rose by an average of 13%. In the remaining states, by contrast, the poorest got a rise of 8.6% over the same period.

In neither case, however, do the increases amount to much better long-term prospects for the worst-off. By last year, the poorest 10% were still earning only a miserly 4.1% more per hour than they did (in real wages) 40 years ago. Median hourly pay for America’s workers was up a little more, by 14%.

One study in Wisconsin suggests that caretakers, for example, took home over \$12 an hour by last year, so were only just getting back to their (real) average earnings achieved in 2010. Expansion at the bottom of the labour market “is finally pulling some wages up. But it’s certainly been much slower in this boom than any other,” argues Tim Smeeding, a poverty expert at the University of Wisconsin, in Madison. He describes “capital winning over labour” for several decades, and expects the trend to continue, given weak unions, more

automation and other trends.

The poorest get some hard-to-measure benefits in addition to higher hourly pay. Mr Hooper is not alone in daring to walk away from an exploitative boss. More of the low-paid get a bit more say on how and when they toil. Many crave a reduction in the income volatility that afflicts them, since sudden swings in earnings are associated with poor mental health, high stress and worry over losing access to financial assistance or food stamps.

One study of 7,000 households, by Pew, found in 2015 that 92% of them would opt for lower average incomes, if earnings were predictable. Follow-up research late last year suggested the same trends are still present. Low- and middle-income households remain anxious about volatile earnings. Most have almost no savings. Many would struggle with a financial shock of just a few hundred dollars.

Abortion laws

Alabama shakes

WASHINGTON, DC

Republican states are longing to challenge *Roe v Wade*

NEVER HAS the war sparked by *Roe v Wade*, the 1973 Supreme Court ruling that declared abortion a constitutional right, been as intense as it is now. Lawmakers in conservative states are passing “heartbeat” bills banning abortion from the moment a heartbeat is detectable, around the sixth week of pregnancy—flagrantly violating *Roe*. To defend abortion rights, some liberal states are extending them, making it easier to have abortions in the third trimester. That has encouraged

Lots of jobs that are being created are in or near flourishing cities like Madison, where low-paid workers are squeezed by high housing costs. Pew has estimated that 38% of all tenant households spend at least 30% of their income on rent. Living in more affordable places, such as Janesville, an hour south of Madison, may be an option for the lower-paid. But that means commuting to the city, or taking local jobs with less pay and fewer benefits. Few workers earning less than \$12 an hour get health insurance from their employer, whereas most do so above that threshold.

Katherine Cramer, who studies the long-standing causes of simmering anger among poorer, rural Americans, says “resentment is worse than before”, despite the recent better wages. Rural folk complain that “it’s been like this for decades”, she says. A year or two catching up has not yet been enough to change their minds. ■

President Donald Trump to mount a fresh assault on late abortions, which he routinely characterises as babies being “ripped” from their mothers’ wombs.

The most uncompromising attack on *Roe* has been launched in Alabama. On May 14th the state’s Senate passed a bill that would, in effect, ban abortion outright. Signed into law by the governor the following day, it constitutes the harshest abortion legislation passed in America in half a century. “The heartbeat bills don’t really tackle what *Roe* is about,” says Eric Johnston, president of the Alabama Pro-life Coalition, alluding to *Roe*’s protection of abortion until a fetus is viable, at around 24 weeks. “It seemed like the right time to challenge it properly.”

The bill, which the softly spoken Mr Johnston wrote, does not mess around. Comparing abortion to the most murderous atrocities of the 20th century—“German death camps, Chinese purges, Stalin’s gulags, Cambodian killing fields, and the Rwandan genocide”—it makes performing one a felony, punishable by up to 99 years in prison. Because the bill defines a fetus as “a human being...regardless of viability” its sponsors resisted attempts, by Republican as well as Democratic senators, to allow exceptions in cases of rape or incest.

The law will be struck down in the courts, just as heartbeat bills have been elsewhere, most recently in Kentucky and



Debate prep

Iowa. Similar laws passed earlier this year in Mississippi and in Georgia will meet the same fate, as will several more making their way through state legislatures if they become law. That is the purpose of extreme abortion laws—to prompt legal cases in the hope that one might come before the new conservative majority at the Supreme Court, which will use it to overturn *Roe*.

Until recently anti-abortionists were engaged in a stealthier battle. Rather than challenging *Roe* directly they chiselled away, introducing state-level regulations so burdensome that clinics were forced to close. As social conservatives retreated in the culture war over gay marriage, they advanced over abortion. Between 2011 and 2017, more than 400 abortion restrictions were introduced across America—more than a third of the total since 1973, according to the Guttmacher Institute. Eight states have only one abortion clinic left.

Mr Trump's appointment of two conservative Supreme Court justices has emboldened some pro-lifers to adopt a more aggressive strategy. Their hopes of directly overturning *Roe* were boosted on May 13th when the justices voted 5-4 along ideological lines to overturn a 40-year-old precedent in a case unrelated to abortion. The move, wrote Stephen Breyer, one of the liberal justices, "can only cause one to wonder which cases the Court will overrule next." Lest anyone wondered what sort of case he had in mind, he cited *Planned Parenthood v Casey*, a ruling from 1992 that upheld *Roe*.

Some pro-life activists are cautious about the prospects of overturning *Roe*. Clarke Forsythe, senior lawyer for Americans United for Life, which has drawn up successful state-level abortion regulations, says his organisation watches carefully every time the court overturns a precedent: "it happens more often than many imagine". But he also points out that the court, and in particular Chief Justice John Roberts, seem in no hurry to overturn *Roe*. He does not expect the justices to take on a direct challenge for "two or three years".

That is probably right. Casting himself as a pro-life warrior is useful for Mr Trump, who needs to keep the support of conservative evangelicals in 2020. But actually overturning *Roe* before the next presidential election would be an electoral disaster for Republicans, since a large majority of Americans believe abortions should be legal up to the third trimester.

Undermining early abortion rights can be risky for state lawmakers, too. Georgia, which last week became the fourth state this year to pass a heartbeat bill, has long been deeply conservative. But it is becoming more diverse and urban, as the inroads made by Democrats in November's midterms attest. A recent poll found that more voters in the state opposed the heartbeat bill than supported it. ■



Amy Coney Barrett

Justice-in-waiting

NEW YORK

If Donald Trump gets another Supreme Court pick, a staunch anti-abortion judge appears to be next in line

CONSERVATIVES MAY not love everything about Donald Trump, but the 45th president's record of installing federal judges has delighted them. In barely two years in the White House, with guidance from the Federalist Society, a conservative legal organisation, Mr Trump has seated 104 judges on the district and circuit courts and won confirmation battles for two Supreme Court justices. The high-court picks—Neil Gorsuch replacing a like-minded Antonin Scalia and Brett Kavanaugh taking the seat of the more moderate Anthony Kennedy—have bolstered a 5-4 conservative majority. With one more appointment, Mr Trump could capture a third of the highest court and tilt it conservative for generations.

Will he get the chance? Clarence Thomas, who at 70 is the longest-serving and most thoroughly conservative justice, recently swatted away rumours of retirement. Two of the four liberal justices, Stephen Breyer and Ruth Bader Ginsburg, are octogenarians. In January a third bout with cancer led Ms Ginsburg to miss work for the first time in a quarter of a century. When she returned to the bench her posture and voice were perkier. But some liberals rue Ms Ginsburg's decision not to retire a few years ago, when Barack Obama could have chosen her successor. If she leaves the bench under Mr Trump's tenure, she could be replaced by a rising star of the conservative judicial movement.

Amy Coney Barrett was born in 1972, just as a young Ms Ginsburg started teaching law at Columbia and was launching the Women's Rights Project at the American Civil Liberties Union. Now in her second year as a judge on the Seventh Circuit Court of Appeals in Chicago, Ms Barrett was a short-lister last June when Mr Kennedy announced his retirement. A mother of seven and a devout Roman Catholic with ties to People of Praise, a charismatic Christian community, Ms Barrett is the product of a Catholic girls' school in New Orleans. She is a Phi Beta Kappa graduate of Rhodes College, a Presbyterian liberal-arts institution in Tennessee, and received top honours as a law student at Notre Dame. She clerked for two prominent conservative jurists, including Mr Scalia, and, after a brief stint practising law in Washington, DC, returned to Notre Dame to teach in 2002.

Ms Barrett's academic writing sparked concerns among Democrats when Mr Trump nominated her to the Seventh Circuit in 2017. "I would never impose my own personal convictions upon the law," Ms Barrett insisted when quizzed about "Catholic Judges in Capital Cases", a 1998 law-review article she wrote with John Garvey, now president of Catholic University of America. Senator Dianne Feinstein told Ms Barrett she was concerned that it seemed "the dogma lives loudly within you". She fretted that—in light of Mr Trump's goal of ▶▶

▶ appointing judges who would “automatically” overturn *Roe v Wade*—she would threaten abortion rights. Ms Barrett had a ready answer. She would have “no opportunity to be a ‘no’ vote on *Roe*”. As a circuit-court judge, she said, “I would faithfully apply all Supreme Court precedent.”

The same constraint does not bind Supreme Court justices. And in several law-review articles, Ms Barrett has argued for a more flexible conception of *stare decisis*, the principle that justices should ordinarily respect the court’s previous decisions. There may be a “very strong presumption” that precedents should stand, she wrote in 2003, but when “a prior decision clearly misinterprets the statutory or constitutional provision it purports to interpret”, judges “should overrule the precedent.”

Stare night

Couple that declaration with Ms Barrett’s favourable—even fawning—view of Mr Scalia’s jurisprudence, and there is little reason to believe she would vote to uphold *Roe* and *Planned Parenthood v Casey*, a 1992 decision re-affirming abortion rights. In an article in 2017 in the *Notre Dame Law Review*, Ms Barrett detailed the instances when Mr Scalia “repeatedly urged the overruling of *Roe v Wade*” and closed with an embrace of the late originalist. “Nothing is flawless”, she wrote, “but I, for one, find it impossible to say that Justice Scalia did his job badly.”

In speeches, Ms Barrett shares her belief that life begins at conception. As a circuit-court judge, though, she has yet to brush up against reproductive rights—or many hot-button controversies. She has mainly seen eye-to-eye with her colleagues: of the 46 opinions she has written on three-judge panels, only three have been dissents. All but three of her 43 majority opinions have been unanimous. But on the few occasions where she has departed from her fellow judges—or inspired a colleague to dissent—Ms Barrett has shown flashes of strident conservatism. In May 2018 she took a narrower view of a criminal’s constitutional right to a lawyer than two of her colleagues (the Seventh Circuit’s only judges appointed by Democratic presidents). In February she took another hard line against a criminal defendant, dissenting from a ruling for a convict who complained that the state had withheld evidence favourable to his case.

In March Ms Barrett filed a forceful 37-page dissent from a judgment against a Wisconsin felon whose crime, under state and federal law, barred him from owning a gun. According to Supreme Court precedent, the right to bear arms may be denied to “dangerous people”, she wrote, but not to all felons. Since there is no evidence that “disarming all non-violent felons” does much good—and the criminal in question

showed no “proclivity for violence”—it is a violation of the Second Amendment to strip all felons of their firearms.

Ms Barrett’s expansive view of gun rights—juxtaposed with a narrower interpretation of immigrants’ rights—puts her to the right of the two Reagan appointees who formed the majority in the case. But her dissent is couched in dispassionate, straightforward terms, with none of the

barbs that often spiked Mr Scalia’s opinions—and are now popping up in other Trump appointees’ rulings. In the view of Ross Guberman, an expert on legal writing, Ms Barrett’s prose is “relentlessly clear and logical”, free of “political diatribes” and betrays little “that would pin her as an ideologue”. There may be method to her caution. “You’d almost think”, Mr Guberman says, “she has her eye on a higher court.” ■



Education policy

Class struggle

NEWARK

Cory Booker helped turn round Newark’s schools. Taking credit for that in the Democratic primary is tricky

ON SEPTEMBER 24TH 2010 “The Oprah Winfrey Show” hosted the unlikely trio of Cory Booker, who was then the Democratic mayor of Newark, Chris Christie, who was then the Republican governor of New Jersey, and a skittish-looking Mark Zuckerberg. They were there to announce a \$100m donation from the Facebook founder to help Newark’s beleaguered schools. Mr Booker promised it would be a “bold new paradigm for educational excellence in the country”, and helped raise another \$100m in matching donations.

Now that Mr Booker is a New Jersey senator running for president in a crowded Democratic primary, he seldom brings up the Zuckerberg donation. That is not because the schools have failed to improve. They have done so significantly, though not to the degree envisioned by Mr Booker, who exclaimed that “you could flip a whole city!” Instead, it is because the ingredients of Newark’s education turnaround—the

closing of bad schools, renegotiating teacher contracts to include merit pay, and expanding high-performing charter networks—are anathema to the Democratic primary voting base.

Outside Newark, the public perception of the school reforms remains widely negative. Much of that is due to Dale Russakoff, a journalist, who wrote an influential and stinging portrayal of the efforts in her book, “The Prize”. Cami Anderson, the hard-charging superintendent appointed to oversee the plan, was widely criticised, and then resigned after Mr Booker decamped from Newark to Washington in 2013. Ras Baraka, a former high-school principal who is the current mayor, won election after making the contest a referendum over Ms Anderson’s popularity.

A review of the recent evidence suggests this pessimism is misplaced. For district schools, the high-school graduation rate has climbed to 76%, up from 61% in 2011. A ▶▶

▶ study done by researchers at Harvard found an initial drop-off in test scores, and then, after the reforms set in, a big improvement in English tests, though not in maths. Two-thirds of the growth was attributable to changes in the composition of schools—the closing down of a third of the city's public schools and expansion of high-performing charters. Today, 31% of black pupils attend schools that exceed the state average, compared with 10% in 2011. All this, even though Newark remains profoundly poor. Nearly 40% of the children live with families making less than the federal poverty line (currently \$21,300 for a family of three). The vast majority, 79%, of schoolchildren are poor enough to qualify for free or reduced-price school lunches.

If Mr Booker believes deeply in anything, it is school choice. In 1998, when he was still a little-known city councillor, he founded Excellent Education for Everyone, which advocates charter schools and voucher programmes. He sat on the board of Alliance for School Choice, a national organisation, alongside Betsy DeVos, who would become education secretary under President Donald Trump.

School choice has always scrambled the usual left-right divide in American politics. Mr Booker's belief in it differs strongly from Ms DeVos's and as a senator he voted against her confirmation. Whereas those on the right see parental choice as a good in itself—and as a way to expand religious education—progressives favour charter schools as a path to opportunity for poor black and Hispanic children whom urban school systems have failed for decades. "What do middle-class people do? They don't wait for the district to fix itself. If [school choice] is good enough for middle-class people, then poor people should be able to as well," says Shavar Jeffries, a civil-rights lawyer who runs Democrats for Education Reform, a pro-charter group.

Ms Anderson, the former superintendent, who now runs a school-discipline initiative, feels vindicated. "The results speak for themselves," she says. "The fact that the establishment has been quiet is because it's working." The rhetoric from Mr Baraka, the mayor who pushed her out, has changed from outright hostility to comfortable neutrality. Ms Anderson describes an ingrained culture of cronyism before she arrived: requests to hire as a teacher the girlfriend of someone politically connected, even though she could not write a cover letter; or not to sack another grandee's nephew for punching someone in a school cafeteria. Ms Anderson fired most of the district's principals, whom she found unsatisfactory, and hired her own hand-picked ones.

Disruption was also especially threatening because the school district was one of the largest employers in the city. The

budget was nearly \$1bn a year—meaning that even the impressive-seeming \$200m donation, which was spent over five years, represented only a 4% annual increase in funding. Some of the jobs supported by the big budget seemed superfluous. In her book Ms Russakoff describes a Gogol-like setting in which the clerks had clerks. More than half of the district's funding—a not-paltry \$20,000 per pupil—was gobbled up in central-bureaucracy costs before it reached classrooms.

It's up to you, Newark

A third of pupils in Newark now attend charter schools. According to an assessment done by CREDO, a research outfit at Stanford University, in 2015 Newark's charters were the second highest-performing in the country. They delivered gains in maths and reading almost equivalent to a full additional year of instruction, the researchers estimated. The latest state assessments for reading and maths for pupils in the third to eighth grades (roughly between the ages of 8 and 14) still show stark differences—60% of pupils in Newark's charter schools were proficient in English, compared with just 35% in the traditional public schools. For maths, the numbers were 48% compared with 26%. In both cases, the charters beat the state average—a remarkable achievement given the impoverishment of Newark and the high quality of the state's other schools.

As a result, demand for charters from parents is high. Before a common enrolment system was in place, the waiting list for KIPP schools, a high-performing charter network, had 10,000 children on it, says Ryan Hill, the co-founder. One of the top-ranked high schools in the state of New Jersey is North Star Academy Charter, which is 98% non-white and 85% poor. Its most recent valedictorian is heading to Princeton.

Not all charters are so good. On average,

their outcomes are similar to those of traditional public schools. They do better in cities, and worse elsewhere. The problem is that teachers' unions are at their strongest in precisely the places where charters are best, making the politics of school reform treacherous for Democrats. Elizabeth Warren, the Massachusetts senator also running for the Democratic nomination, favoured school choice before she was a public figure, on similar progressive-minded grounds (she worried that the zero-sum race to buy property near good schools was endangering middle-class finances). But she opposed a referendum to increase the number of charters in Boston, despite the fact that these are the highest-performing in the country.

Mr Booker is trying to navigate these treacherous waters. His proposed education manifesto for 2020 is to increase funding for educating special-needs children and to pay teachers more. These proposals are fine. Yet Mr Booker is the only candidate with a serious educational achievement under his belt—and the essential ingredients of that turnaround are not what he is promising now. His campaign replies that there is no one-size-fits-all solution for education reform.

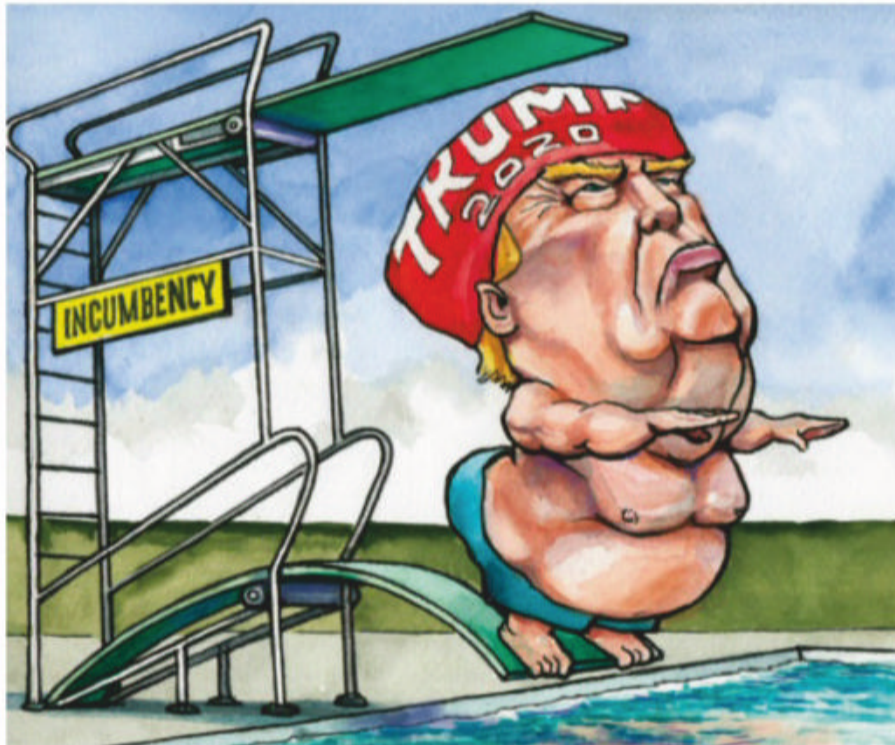
Mr Booker is already taking flak for his record in Newark. "Cory Booker Hates Public Schools" blusters a headline from *Jacobin*, a widely read democratic-socialist magazine. He has some defenders too, though. "It is a shame to deride the good work that was done in Newark as a defect of his candidacy or his worldview," says Derrell Bradford, a long-time advocate of education reform who worked with Mr Booker early in his career. "Newark now is better than when I took my job in 2002. If you're a poor kid, a black kid, your opportunity to succeed is much higher than before. Is it what it should be, or ought to be? Still no—but there's been tremendous progress." ■



Cory's campaign ride

Lexington | Incumbency ain't what it used to be

The president is using his office to impress his supporters, and annoy everyone else



DONALD TRUMP'S campaign rallies have had a makeover. Though most of their signature features are still evident—the MAGA hats on sale, the testaments to Mr Trump's generosity by warm-up speakers, his dramatic arrival by helicopter, Elton John and the Stones blaring out to make everyone feel young again—the production has been brought up to presidential standards. The merchandise stands at the Trump rally Lexington attended last week in Panama City Beach, in Florida's Panhandle, were NFL quality; everyone in the large crowd seemed to have visited one. The praise singers, who once consisted of a bunch of oddballs and Jeff Sessions, were Florida's congressional delegation. "Thank God for President Trump!" hollered Senator Rick Scott. "He cares about Florida like nobody else!" The helicopter is now Marine 1. To the seventies music Mr Trump's stage managers added a magnificent firework display. When Trump comes to town, it's the 4th of July!

In a Panhandle county that gave him 71% of the vote in 2016, he could count on a warm welcome. Even so, the emotions the president induced in the lily-white crowd, wearing Trump-branded T-shirts and shorts on a balmy evening, were impressive. "I love him, I love, I love him," said Darrell, an air-force veteran. "I love him because he cares the most about the people. Democrats don't care. They want to take money away instead of giving it to our people." He must have liked what he was about to hear. Mr Trump began his speech by boasting of the "billions" in disaster relief his administration "has given" to Florida, after its recent hurricanes. And he promised there would be more to come, despite (he falsely claimed) Democratic efforts to stop him.

By way of a gratuitous comparison, he then slammed Puerto Rico, which has suffered even worse storm damage, unleashing a vast exodus of islanders to Florida, for being greedy and corrupt. Candidate Trump dog-whistled on race by making wild claims about immigration; as president, he can merely cite his spending priorities. Ninety minutes into Mr Trump's speech, in which he talked up the latest jobs numbers, lambasted his enemies and joined in the hilarity that a heckler caused by suggesting he "shoot" Latino immigrants, the crowd was still cheering him.

There has been much speculation about the electoral boost Mr Trump could get next year from being the sitting president. This is

understandable. He won in 2016 by a whisker, few of his supporters have since deserted him, and the benefits of incumbency, in terms of name recognition, the mystique of the office and the many opportunities it presents to blend governing and campaigning, have long been recognised. Throughout presidential history, by one calculation, incumbency has been worth around three percentage points on average. No president has failed to win re-election since George H.W. Bush in 1992, and before him Jimmy Carter in 1980, both of whom were saddled with an economic downturn. Moreover, as his performance in Florida suggested, Mr Trump will milk his office for every advantage he can.

He will claim to have done things for his audiences that he has not (the disbursement of relief spending to Florida has in fact been slow), and promise incredible things. He will mix politics and governing shamelessly. The pretext for his Panhandle visit was his desire to inspect a storm-damaged air-force base that the Pentagon thought about closing but which he has vowed to rebuild at vast cost. Yet though he stands to benefit from such ploys, the incumbency effect in 2020 will probably be weaker than in the past.

That is because what Mr Trump's supporters love about him—including the bullying public persona he has used his office to inflate—almost everyone else loathes. He has therefore gained even fewer supporters than he has lost. His approval ratings are as stable as they are low. And the Democrats, as their bumper turnout in the mid-terms indicated, are as motivated to remove him as his supporters are to keep him in place. Mr Trump is therefore unlikely to get a three-point boost from his incumbency, or anything close to that, because it is unclear whether such a large group of swing voters even exists. The election is likely to be decided by whichever side does a better job of mobilising its supporters—just as Barack Obama's re-election was in 2012—with the presidency among the tools that Mr Trump will have at his disposal.

This is risky for a Republican because the Democrats have more supporters, which is why they tend to win the popular vote. Yet the electoral college mitigates that advantage (which is how Mr Trump won in 2016). It should also be noted that, even if Mr Trump's hyper-partisanship makes him an extreme case, his two immediate predecessors both ran less inclusive campaigns the second time round. This underlines the fact that the depletion of swing voters, and consequent reduction in the incumbency advantage, is a long-running trend. Even in the alternative universe in which Mr Trump could restrain himself and count on incumbency and the strong economy to see him home, there might not be enough persuadable centrists left for the strategy to pay off.

The bully pulpit

Despite his low ratings, Mr Trump's more divisive style could turn out to be a better bet at this juncture. In particular, it might be his best hope of tying in the voters who have gone most wobbly on him: a group of working-class whites—the so-called Obama-Trump voters—in Midwestern states such as Michigan and Pennsylvania which he won by tiny margins and needs to win again. Given that these voters have not felt much of a boom in their wages and had no great qualms about Mr Trump's boorishness in 2016, it is not obvious that they would be likelier to stick with him if he were to tone it down and lead with the economy. Ripping into his opponents, after all, is what Mr Trump is best at—and he is anxious to get on with that. "I'll take any," enthused the president in Florida, after denigrating the main Democratic primary contenders. "Let's just pick somebody please, and let's start this thing." ■



Argentina's politics

All through my wild days

QUILMES

Cristina Fernández de Kirchner threatens to upend Argentina again

FOR DECADES the city of Quilmes, a 40-minute drive south of Buenos Aires, has had the distinction of being the name of Argentina's national beer. A German immigrant, one Otto Bemberg, started his brewery there, on the edge of the River Plate, in the 1880s; today Quilmes (now part of the AB InBev empire) is sold from Iguazú falls to Tierra del Fuego. But there is more than beer brewing in the city.

From the fall of Argentina's dictatorship in 1983 to 2015, the Peronists, a populist movement, ruled Quilmes and its 650,000 inhabitants for all but eight years. Then President Mauricio Macri's Cambiemos movement ousted the mayor and city government, which had been loyal to his Peronist predecessor, Cristina Fernández de Kirchner, in a landslide.

Little more than a year ago, Mr Macri seemed assured of another victory in this year's elections, due in October. Then investor confidence in his economic policy of gradual reform collapsed along with the peso, prompting him to secure a record \$57bn bail-out from the IMF. With inflation at 56% and unemployment having grown by half, the chances of Mr Macri winning again now seem slimmer. On May 9th Ms

Fernández launched a new book (which became an instant bestseller), seemingly signalling that she will enter the race. Quilmes is a battleground for their starkly different philosophies. Can Mr Macri's promise of technocratic reform still beat Ms Fernández's populist nationalism?

A national poll last month by the Isonomía group, which has worked for Mr Macri, showed him losing badly to Ms Fernández. That triggered turmoil in the markets; the peso lost almost 9% against the dollar in a week. On April 29th Mr Macri won permission from the IMF to allow the central bank to prop up the falling peso.

An election today would be too close to call, according to a fresh Isonomía poll. In Quilmes, a small-sample survey from Gustavo Córdoba Associates, a pollster, suggests Mr Macri's mayor is just ahead of a candidate from Ms Fernández's militant youth wing, La Cámpora. That is led by her son Máximo, a congressman who campaigned in Quilmes on May 11th, calling Mr Macri's leadership "a debt disaster".

At the Casa Rosada, the presidential palace in Buenos Aires, Mr Macri's chief of staff, Marcos Peña, argues that the election is a choice between reform or a reversion to

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Argentina's dysfunctional past. If Ms Fernández were re-elected, it would be a return to the "broken country" she left behind, he says. "That would be a tragedy."

Mr Peña acknowledges that market instability represents the biggest threat to the president's survival now. With a firm "no", he dismisses any possibility that Mr Macri will step aside for a candidate better placed to defeat Ms Fernández, a persistent suggestion from some within the Cambiemos movement in recent weeks. "He's a fighter, and he's going to fight for this, just as she will, because she's a fighter too."

According to Mr Peña, if Mr Macri wins, it "can be a message to other countries which have had populist governments that you can rebuild, recover, and go forward." He reckons the country is about evenly split: some 35% are for Ms Fernández, another 35% are for his boss and the rest are undecided. "We're confident that there's a majority of Argentines who don't want to go back to an authoritarian, populist past, and that they won't go back to Cristina."

They may turn to one of several possible Peronist moderates. But it helps both Mr Macri and Ms Fernández to try to polarise the race between them. In the working-class suburb of Agronomía, the Cristina team is coming together under the slogan "order out of chaos". Unsurprisingly there is no mention of the currency controls, import controls, protectionism and unsustainable subsidies that characterised Ms Fernández's second term. That she will at some point be put on trial for corruption doesn't merit a mention either (she denies wrongdoing). On May 14th the trial was de- ▶

► layed, outraging Mr Macri's team.

Instead Axel Kicillof, who served as finance minister in the former president's second term, attacks the results of the Macri economic programme. He says that "the Macri years have been a train-wreck for our country and for our people. They spent the first half of their mandate blaming us for all the problems. Now they use the second half trying to scare everyone if we win. They are bankrupt of ideas."

Mr Kicillof says that the Peronists are not the economic arsonists Mr Macri claims. He stresses that under a re-elected Ms Fernández, Argentina would not default on its international debts. But, he says, "what we need is this government and the IMF to renegotiate their unsustainable deal." To this he adds breezily: "ask not what you can do for your creditors, but what your creditors can do for you."

In Quilmes Daniel Kaploian, who runs a small family firm making curtains, expresses a mix of sadness and weariness. "I voted for Macri," he says, but he is reluctant to do so again. His wife will vote "positively" for Ms Fernández because she is dismayed by seeing hunger on the streets of Quilmes. "But I can't vote for Cristina," he concludes. "It's a rotten choice, and this country deserves better." ■

Colombia's peace process

Sorry, Uncle Sam

BOGOTÁ

Colombia's peace tribunal defies an American extradition request

JESÚS SANTRICH was supposed to become a member of Colombia's congress in July 2018. As a former FARC commander, he was chosen to take up one of the ten congressional seats promised to the guerrilla group by the peace deal that ended the country's 50-year armed conflict. But Mr Santrich, whose real name is Seuxis Hernández Solarte, could not be sworn in because he was arrested in April last year as part of an American-led undercover operation. A New York court indictment accuses him of conspiring to ship 10,000kg of cocaine to the United States. The Department of Justice has asked for his extradition.

Mr Santrich has put Colombia in a difficult position. The country signed an extradition treaty with the United States in 1979. But Mr Santrich is protected by the peace deal, which says FARC members can be extradited only if they committed a crime after December 1st 2016. President Ivan Duque, who was elected on a campaign pledge to modify the peace deal, wishes to extradite Mr Santrich. But his hands are



Jesús saved

tied. On May 15th the extradition was blocked by Colombia's peace tribunal, known as the JEP, which investigates and judges members of the FARC and the armed forces for war crimes and crimes against humanity.

The decision has pitched the JEP against the attorney-general, Néstor Humberto Martínez, who resigned in protest. He said the ruling was a "coup d'état against justice" and called for a mobilisation to "re-establish legality in Colombia". The JEP accused the attorney-general's office of allowing the United States to conduct an illegal undercover operation in Colombia. It also asked the attorney-general's office to hand over Mr Santrich's case file.

Supporters of the peace deal praised the JEP's decision. Mr Santrich, they claim, was framed in an American-led attempt to sabotage the peace deal. But the decision might damage Colombia's relationship with the United States. President Donald Trump is already losing patience with Mr Duque, who he says is doing nothing to curb the flow of drugs.

A month ago the State Department revoked the American visa of John Jairo Cárdenas, a Colombian congressman. Mr Cárdenas had revealed details of a meeting with the American ambassador, Kevin Whitaker, in which Mr Whitaker supposedly warned of reprisals if congress did not curtail the JEP's power to shield former FARC fighters. The visa revocation has prompted many Colombians to accuse the United States of political blackmail. It also seems to have emboldened peace supporters in congress and in the courts against Mr Duque's efforts to modify the peace deal. It looks as though for now, at least, Mr Duque must focus on mending fences with the United States. Mr Santrich will take his seat in congress at last. ■

Education in Mexico

Class, dismissed

MEXICO CITY

Andrés Manuel López Obrador seeks to expel merit from schools

HOW QUICKLY winds change. The school reforms signed in 2013 by Enrique Peña Nieto, then Mexico's president, were to be the only popular legacy of an unpopular man. No longer. On May 8th the senate scrapped them. In mere months a reform deemed vital to reduce poverty lost many of its most ardent defenders. Even senators from Mr Peña's cowed Institutional Revolutionary Party assented to the death of a law they recently favoured. So did the national teachers' union, the STNE, despite having backed the reforms six years ago.

That is a testament to the power of Andrés Manuel López Obrador, Mr Peña's populist successor, who has long opposed the reforms. It is also bad news for the millions of pupils who might have benefited, had the reforms been allowed to continue. The "new" education measures passed in their place represent a return to old ways.

Mr Peña's project was an attempt to curb overmighty teachers' unions. It revoked their power to hire teachers, giving it to an independent body that picked applicants through examinations. Teachers had been accustomed to jobs for life, and the right to sell their posts or bequeath them to their children upon retirement. Suddenly, they were subject to performance evaluations, and those who went on strike risked losing their jobs. And the federal government assumed responsibility for managing a payroll that blew as much as 16bn pesos (\$1.2bn then) a year on salaries for teachers who were retired, dead or non-existent.

The reforms had little time to work. Just 171,000 teachers—less than 10% of the total—were hired on merit. A further 36,000 head teachers and supervisors were promoted on ability rather than loyalty to union bosses. But even this may leave a mark. A study published this year by the Development Bank of Latin America found that teachers hired on merit not only had better high-school grades than union-picked ones, they also helped their pupils learn faster. That inspires hope that Mexico may have improved its lowly ranking in the next round of PISA tests, an international measure of student proficiency in maths, reading and science, the results of which are due in December.

Mr López Obrador has long complained that the old reforms infringed on teachers' "dignity", and that national evaluations were "punitive" and unfair to poorer states. In fact, veteran teachers who failed evalua- ►►

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OPERATING WORLDWIDE

tions three times in a row were not laid off. Instead they were transferred to administrative roles. Such a fate befell less than 1% of those assessed. But the haphazard implementation may have hastened the reforms' demise. The Peña administration overspent its marketing budget but under-spent its teacher-training budget. To appease strikers, the government gave deputy head-teacher positions to union commissioners, undermining the meritocracy it was trying to build, says Marco Fernández of Tecnológico de Monterrey.

The new reform as written allows for a

“selection process” that will be specified in secondary legislation. Mr López Obrador has intimated that the CNTE, a dissident teachers' union dominant in four poor southern states, will play a role in drafting the details. Experts expect the reforms to dispense with the notion of merit-based hiring altogether.

Mr López Obrador's supporters argue that the new reforms will cause fewer teachers to strike. “We need to pacify the education system,” says Rubén Rocha, a senator for the president's Morena party who chairs the chamber's education com-

mission. But unions will still have an incentive to walk out to extract bigger budgets and salaries, as they have done every year since the early 1990s. The CNTE's members began another strike on May 15th, when Mexico observes Teachers' Day, as part of a warning to the government.

The president promised Mexican voters drastic change, and often dismisses his detractors as people clinging on to privilege. It is ironic that one of his most consequential achievements to date is to return old privileges to Mexico's mollycoddled teachers' unions. ■

Bello Cuba braces for belt-tightening



Far from speeding change, toughened American sanctions are likely to slow it

FOR THE past few months Cubans have faced shortages of some foodstuffs, as well as sporadic power cuts and fuel shortages that have affected never-abundant public transport. “We have to prepare for the worst,” Raúl Castro, Cuba's communist leader, told his people last month. On May 10th the government announced that it would ration several staples, including rice, beans, chicken and eggs, as well as soap and toothpaste.

These are the first results of Donald Trump's tightening of the American economic embargo against Cuba, as part of his effort to overthrow the dictatorship of Nicolás Maduro in Venezuela. Mr Trump's administration is trying to halt the shipment of oil from Venezuela to Cuba. Last month it imposed fresh restrictions on tourism and remittances to the island from the United States and opened the way for thousands of lawsuits by Americans against foreign companies operating in Cuba. After ousting of Mr Maduro, Cuba's government “will be next”, promised John Bolton, Mr Trump's national security adviser.

The Cuban regime has survived six decades of American sanctions, and there is little reason to believe it will buckle now. But Mr Trump's offensive does come at a complicated moment for Cuba. It coincides with a gradual hand-over of power from Mr Castro, who is 87, to a collective leadership including Miguel Díaz-Canel, who took over as president last year and who was born after the revolution in 1959 that installed communism. It also comes when the economy is stagnant.

Older Cubans look back to the years when the island was a heavily subsidised Soviet satellite as ones of relative abundance. The collapse of the Soviet Union in 1991 was followed by what Fidel Castro,

Raúl's older brother, called the “Special Period” of austerity. That ended when Hugo Chávez of Venezuela gave Cuba subsidised oil. When the oil price fell in 2014 and mismanagement cut Venezuela's oil output, Mr Maduro scaled back the aid; it is now at less than half its peak.

The blow was softened, explains Pavel Vidal, a Cuban economist at Javeriana University in Cali, in Colombia, partly by a rise in American tourism following Barack Obama's thaw towards Cuba and by a modest increase in foreign investment as a result of Raúl Castro's mildly liberalising economic reforms. Mr Trump's measures target these two shock absorbers. Mr Vidal expects the economy to shrink by up to 3% this year and imports to fall by 10-15% (after a 20% drop since 2015).

Harder times “do not mean returning to the most acute phase of the Special Period”, Mr Castro insisted last month. That was marked by systematic shortages and regular power cuts, the memory of which is traumatic. Since then Cuba has diversified its economy somewhat. It now produces a third of the oil it consumes. It

has also hoarded foreign reserves.

The immediate impact of the Trump offensive has been to send the Cuban regime into a defensive crouch. Progress in market-opening reforms has all but halted. While not doing anything to jeopardise the system's iron political control, Mr Díaz-Canel had brought a more relaxed style, going around with his wife and talking to ordinary Cubans. Now the veteran Stalinists in the politburo are more visible again. On May 11th police broke up an unauthorised march by gay-rights activists in Havana.

That march was a sign that society, too, has changed as a result of Raúl's reforms and Mr Obama's thaw, much scorned though it is by Mr Bolton. A third of the workforce now labours in small private businesses or co-operatives. Around 20% of Cubans, mainly younger ones, are globalised and connected to social media, reckons Rafael Rojas, a Cuban historian at CIDE, a university in Mexico City. With the other 80%, the regime “will be fairly successful in blaming a deterioration of economic conditions on the United States”, he says. “I don't see a popular uprising or social unrest because of shortages.”

For the Cuban regime, Venezuela has been a means to divert American pressure away from the homeland. A bolder leadership might cut its losses, and accept a democratic transition there in return for guarantees that it will still get some oil. But there is no sign that diplomatic overtures by Canada and the Lima Group of Latin American countries will draw that response from Havana. A different administration in Washington might seek to negotiate with Cuba about Venezuela. As it is, under Mr Trump's assault the Cuban regime is likely to become even more rigid in its resistance.





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State departure

KANDAHAR

Why the government is losing the war with the Taliban

SITTING ON A dusty rug beside their lorries at the edge of Kandahar, Afghanistan's second city, a group of middle-aged drivers explain the difference between the Taliban and the government. Both groups take money from drivers on the road, says Muhammad Akram, leaning forward in a black kurta; both are violent. But when the Taliban stop him at a checkpoint, they write him a receipt. Waving a fistful of green papers, he explains how they ensure he won't be charged twice: after he pays one group of Talibs, his receipt gets him through subsequent stops. Government soldiers, in contrast, rob him over and over. When he drives from Herat, a city near the Iranian border, to Kandahar, Mr Akram says, he will pay the Taliban once. Government soldiers he will pay at least 30 times.

Afghanistan has been mired in conflict for some 40 years. It has been almost 18 years since America and other NATO members invaded to kick out the Taliban in the wake of the September 11th attacks. The two sides have been negotiating directly since October over an American withdrawal in exchange for a commitment from the Taliban not to harbour terrorists. The latest round of talks, in Qatar, where the Taliban

maintain an embassy of sorts, concluded on May 9th, with what the militants described as "some progress".

As the two sides haggle, the war has intensified. Last year was the deadliest on record for civilians, according to the United Nations. America's air force dropped more bombs in 2018 than at any other point in the war. Despite that support, the government is slowly losing ground. It now controls barely half the country's territory, albeit two-thirds of its people. The Taliban regularly overrun police and army outposts, and occasionally whole cities. Nowhere is completely safe. At illicitly boozy parties in Kabul, the capital, rich Afghans make dark jokes about the impending arrival of the jihadists at their gates.

Cops are robbers

That the Taliban are winning is in part the result of the complaints of people like Mr Akram, the truck-driver. Some 18 years after its creation, the Western-backed government in Kabul remains incapable of providing basic services. It has a huge security apparatus, a big bureaucracy and plenty of smart-suited, American-accented technocrats. But where it matters, the state is, in

the words of the American Department of Justice, "largely lawless, weak and dysfunctional". There are schools and clinics in some places, but teachers are not always paid and seldom turn up to work. Other public services are non-existent. The most visible branch of the government is the police, which does much of the thieving itself.

The difficulty of building a functioning state is clear in Kandahar. It is, along with the neighbouring province, Helmand, the country's breadbasket and was the centre of the precursor to modern Afghanistan, the Durrani empire of the 18th century. Whereas most of the country is mountainous and rugged, here irrigation canals feed a patchwork of small farms. Most of the population are Pushtun, Afghanistan's dominant ethnicity. Kandahar province is where the Taliban movement was born in the 1990s. It was also where the Taliban regrouped and began fighting NATO's occupation. As Hayatullah Hayat, the provincial governor, says, "If Kandahar is safe, Afghanistan is safe."

Today, Kandahar is far from safe. On the road towards Helmand, in Zhari district, a local police sergeant who goes by only one name, Shamsullah, explains that his job is "to kill Taliban". Surrounded by guns, he says that things have calmed down since he and his team of 80 cops arrived. But the Taliban are in control just a few kilometres away. The last attack was just eight days ago, on one of the police checkpoints on the road. The Taliban also plant roadside bombs. Shamsullah insists he is capable of fighting them—he has been doing it for years. But he also says that they are often ►►



▶ better equipped than his own troops, for example with night-vision goggles.

The Taliban control only rural areas at the edge of the province. But their influence is far more widespread. When asked who the Taliban are, Shamsullah says that they are Pakistanis who employ “uneducated” locals with Gulf cash. That is not wholly wrong, but it is not the whole story. The Taliban also raise money themselves rather effectively, and not just from roadside extortion. In the village outside the police post, children play in fields of tall white and pink opium poppies. Faiz Mohammed, a farmer, says he sells his crop to men who come on motorbikes and take it to factories up the road in Taliban territory. They pay him in Pakistani rupees.

The Taliban are certainly not the only drug dealers; plenty of people on the government side are involved in the trade too. But they are efficient operators. Not only do they run many of the factories and smuggling routes, they also manage farming. Taliban troops expect poppy-farmers to pay taxes on their crop, but they also provide seed capital and other support. In many areas, they help to police water use, managing disputes and limiting the over-exploitation of groundwater. Over the past few years the size of the opium crop has grown remarkably—especially in Taliban-controlled areas (see next story).

And in their fight against the government the Taliban find it easy to win support, because they attack institutions that are deeply unpopular. A few miles on the other side of Kandahar city, in Panjwai district, Faizal Muhammad Ishakzai, the district governor, says he is worried that fighting could start again soon. “The Afghan army keeps asking people for money,” he explains, “They mistreat us.” In particular, he argues, the Noorzai clan are exploited. Two influential Noorzai men were recently killed by police, he says, passing a phone with pictures of the bodies: “That creates anger.” In Kandahar, the security services are dominated by Achakzai, the clan of the provincial police commander, Tadeen Khan. Mr Khan was made commander after

the assassination of his brother, General Abdul Raziq Achakzai, a famous anti-Taliban fighter who turned Kandahar into his own personal fief.

That is where local problems connect to national ones. Afghanistan, despite its enormous diversity, has one of the most centralised systems of government in the world. The provincial commander, together with at least 3,000 other officials, is directly appointed by and answerable to the president, Ashraf Ghani. Most are chosen in Kabul on the basis of personal relations. When they use their power to settle scores or build empires, there are few ways for people to express their dissatisfaction. If petitioning appointed leaders does not work, siding with the Taliban is one of the few means of protest they have left.

The Taliban are no more accountable than the government, stresses Ashley Jackson, a researcher at the Overseas Development Institute, a think-tank in London. Their attacks on civilians make them deeply unpopular, especially in cities. But in rural areas they are seen as efficient, at least, and willing to challenge arbitrary government power. For example, according to one UN study, land disputes may account for 70% of violent crimes. In government-controlled areas, well-connected figures often grab land with impunity. The Taliban, in contrast, have judges who deal with such cases brutally, but much less corruptly.

Kabul rules

Mr Ghani, the president, a former academic (and a former American citizen), has plenty of ideas about how to fix failed states; indeed, he wrote a book on the topic. In Kabul, diplomats rave about the work he has done introducing systems designed to reduce graft, such as using blind tests to recruit teachers. Tax revenues have gone up from around 8.5% of GDP to 11%, thanks to greater efficiency at border posts.

But because people close to the president seem immune, Mr Ghani’s anti-corruption drive is seen by some as a power grab, with an ethnic tinge. “There have been some genuine efforts,” says one high-up official in Kabul. “But in terms of legitimacy, the president has created division. People say this administration is only from three provinces.”

America’s negotiations with the Taliban reflect President Donald Trump’s insistence on reducing money spent and lives lost in Afghanistan before next year’s election. On April 2nd Mr Trump said America’s presence in the country was “ridiculous” and should be brought to an end. But Mr Ghani views the negotiations as a betrayal. In Washington in March, his national security adviser, Hamdullah Mohib, said America was giving legitimacy to the Taliban by talking to them.

The government’s misgivings are far

from absurd. America and the Taliban seem to be groping towards a deal in which America would withdraw most of its troops, bar a small force to hunt for terrorists, while the Taliban would call a ceasefire. The implications for the government, its army and its American-inspired constitution are unclear. Mr Ghani seems to assume that America will not actually let him fall. But Mr Trump may not care that much who runs the country. At the truck stop in Kandahar, the drivers certainly don’t—as long as they can work unthreatened by men with guns. ■

Afghanistan’s opium trade

Making the desert bloom

ZHARI

Cheap solar panels are boosting the poppy crop

IN HIS FIELD in Zhari district, about ten miles outside Kandahar city, Abdul Samad, a farmer of uncertain age, tends to his onion crop. Sitting on his haunches, a blanket on his shoulders to protect him from the dusty wind, he points to his latest investment: an array of solar panels at the end of the field. They are connected to a pump which pulls up groundwater, for use when the irrigation canals dry up. Before, he used to run the pump with a diesel generator, but the fuel was very expensive. Now he can pump all day. “When there is no water you cannot grow anything,” says Mr Samad.

Solar panels are transforming the landscape of southern Afghanistan. Only 12% of the country is suitable for growing permanent crops, mostly in the valleys of the ▶▶



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▶ Arghandab and Helmand rivers (see map on previous page). Even there, most farming is dependent on irrigation systems that date back to the 1950s, when dams were built with American aid, if not earlier. The ability to drill wells and, more recently, to extract water from them cheaply with solar power has changed all that. Not only are farmers getting more out of their existing farms, according to a study by David Mansfield of the London School of Economics, they are also creating new ones. Between 2002 and 2018 some 3,600 square kilometres in south-western Afghanistan was

reclaimed for cultivation from the desert.

The trouble is that unlike Mr Samad, most farmers buying pumps are not growing onions. His neighbours' fields are full of pink and white poppies. They are used to make heroin, which is sold to middlemen and shipped to Europe and elsewhere via Iran and Pakistan. According to the United Nations, poppy cultivation in Afghanistan is close to its highest level since monitoring began in 1994. Muhammad Salim, a poppy farmer in another part of the province, says that he cannot afford to grow any other crop. Mr Samad says that he too

would grow poppies, but his land is fertile and near a road, so he is better off growing vegetables. "It is best to grow poppies in the desert," he says.

Entire new communities have grown up of late to do just that, according to Mr Mansfield. In a country where a typical woman has five children, and where land is fought over, the expansion of arable land is invaluable. As many as 2.5m people may now live in what used to be desert. The price of desert land has soared, from as little as \$35 for a *jereb* (about 2,000 square metres) to over \$1,000 now. That has made ▶▶

Banyan Love money

Why dowries persist in South Asia

THE WORD for dowry in Bangladesh is an English one: "demand". It is the price, in other words, that the groom's family demands in order to admit the bride to their household. In theory, such transactions are illegal in both Bangladesh and India, and limited in value by law in Pakistan. The legislators who enacted these rules (in 1961 in the case of India) thought dowries would go the way of *sati*, the horrific practice in which Hindu widows were encouraged to throw themselves on their husband's funeral pyre to show their devotion.

Economics militates against dowries, too. India has 37m more males than females, so it ought to be women, not men, who are paid to marry (if they wish to marry at all). Moreover, recent decades have seen a sharp rise in levels of female employment in Bangladesh and Pakistan, at least, undermining the notional justification for a dowry: to defray the cost of providing for the bride.

In China similar factors have worked to women's advantage. Not so in South Asia. Perhaps nine-tenths of all marriages are arranged, and dowries are involved in well over half of these, academics estimate. The authorities barely bat an eyelid. Newly married couples in rural Tamil Nadu still tour their village to display the bride's dowry—typically cooking vessels and a little gold. Far from hastening dowries' demise, the explosive growth of the middle class has spurred their evolution. Many families may not be so gauche these days as to make explicit demands of a prospective bride's parents. But the least an Indian bride is expected to bring to a lower-middle-class family is a new motorcycle. For a filthy rich one, it might be a Mercedes-Benz, say, or an American residence permit.

Why does dowry persist, even in

Bangladesh, which development specialists praise for improvements in female health, education and employment? Over marriage, women remain at a disadvantage. Tasaffy Hossain, an activist in Bangladesh, says it is still nearly unimaginable for a woman never to marry. The longer a young woman goes unmarried, the greater the risk of "dishonour" for her family—if she has a romance with someone, say. Equally, the more educated a woman is, the more restricted the pool of desirable husbands, especially when religion and caste come into the equation.

Despite the rise in female employment, men still have many more choices and, on average, earn much more than women. Even for the bride's parents, it can make sense to invest in the son-in-law with cash to start a business or, say, pay for a degree.

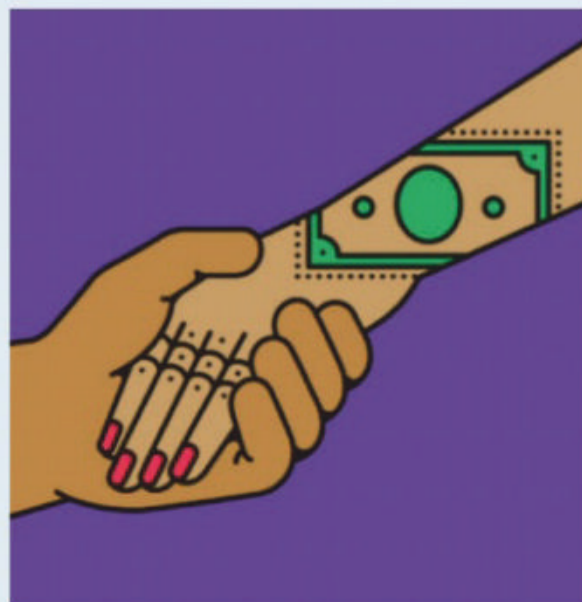
Sarah White of the University of Bath argues that, in the case of rural Bangladesh, far from being at odds with the modern model of development, dowries are consistent with it. She is surely right to call Bangladesh's market economy "red in tooth and claw". While many have pros-

pered, many others have been losers—for instance, from land appropriated with inadequate compensation. Access to jobs is not free and fair but governed by networks of patronage, explaining, in large part, the country's endemic political violence. In this context women working in the multiplying garment factories of Dhaka, the capital, may not be securing their independence so much as supplementing the income of their husband's family. Others may even be saving up for their own dowry.

Ms White calls dowries a "collective investment in advancement". That applies to the better-off, too. Well-off Indian families, a member of one explains, go into marriage negotiations as if the merger of two companies is at issue.

All this comes at a high price, of course. When Shirin, a young garment-worker in Dhaka, got married and moved into her new husband's home, her parents paid the groom's family "a good dowry—as much as they could afford", she says. Yet her in-laws demanded more, and her husband took to beating her senseless when her family couldn't supply it. Eventually neighbours rescued her, and she filed a case against her husband. That was five years ago; the authorities have yet to press charges.

"Dowry torture" of women like Shirin is common, claiming on average over 20 lives a day in India. Dowry's baneful effects are also assumed to contribute to sex-selective abortion, female infanticide and malnutrition among girls. Encouragingly, a growing number of wives are walking out on violent husbands. More and more educated women attempt to avoid arranged marriages altogether. But in a world where dowries persist, most women understandably conclude they are better off having one.



▶ landowners rich, not to mention politicians and senior police officers.

There are drawbacks, however, even locally. Opium helps to fund the Taliban, as well as pro-government warlords who are scarcely better. The reclaimed territory is mostly untouched by the government: indeed, many of the settlers are people who are rather hostile to state-building. Other Helmandis call them “the wildmen”, Mr Mansfield says.

There is also a big cost to the environment. Though there are no hard data, excessive drilling is “100%” lowering the water table, says Muhammad Wali, a turban-clad elder in Panjwai district who serves as the local *mirabu* or water manager. “Groundwater is for drinking, not for farming,” he says. Drinking wells are increasingly contaminated with nitrates from cheap fertilisers, which have spread alongside pumps. Shallow wells have gone completely dry. If the groundwater is exhausted, millions will have to move again.

Perhaps the best hope is that the appeal of planting poppies wilts before too many wells dry up. A huge harvest in 2017 pushed prices down 56% last year, according to the UN, to their lowest level in over a decade. For farmers like Mr Samad, that takes some of the buzz out of planting poppies. ■

Democracy in Kazakhstan

A dissident with nothing to say

ALMATY

The police inadvertently become conceptual artists

ASLAN SAGUTDINOV had a hunch. The authorities in Kazakhstan are so intolerant of dissent, he reasoned, that it does not really matter what protesters write on their placards. Simply holding up a sign of any sort is considered subversive enough to merit arrest. After all, two democracy activists, Asya Tulesova and Beybaris Tolymbekov, had been arrested in April for unfurling a banner at a marathon in Almaty, the financial capital, that read “You cannot run from the truth #forafairelection #Ihaveachoice”. They were jailed for ten days for breaching rules on public assembly, even though the authorities insist that the presidential election on June 9th will be fair, and that people will have a choice.

To test the government’s paranoia, Mr Sagutdinov stood in the middle of the city of Uralsk and held up a big blank sheet of paper. Sure enough, the police took him into custody. They could not think of anything to charge him with, however, so they soon let him go. A police spokesperson later helpfully explained that Mr Sagutdinov



Protest flourishes in the white spaces

had been detained not for holding up a piece of paper, but for the opinions he expressed as he did so.

The protesters at the marathon and Mr Sagutdinov have spawned a series of imitations. A man who hung a banner quoting the constitution over a road in Almaty was briefly jailed, then fined. A schoolboy in Nur-Sultan—the capital, which was recently renamed in honour of Nursultan Nazarbayev, the septuagenarian former president—staged a blank-paper protest of his own. Activists have been posting photographs of themselves on social media holding up nothing at all. People frustrated with three decades of authoritarian rule have also held small street protests to demand democracy. Many have been arrested; some have been jailed for short spells.

The authorities are especially touchy at the moment because Kazakhstan, an oil-rich former Soviet republic of 18m, is in the midst of a delicate transition. Mr Nazarbayev resigned in March after three decades in charge. The election is being held to affirm his chosen successor, Kassym-Zhomart Tokayev, the interim president.

Mr Nazarbayev’s support in elections varied wildly, from a meagre 81% to a respectable 98%. It helps that he never had to face a credible opponent. One potential rival shot himself twice in the chest and once in the head, police say. Another was disqualified for taking part in an illegal protest, as it happens. Others boycotted the polls as stitch-ups. This time, however, the authorities have allowed a candidate with a record of political opposition to register. No one expects Amirzhan Kosanov to be allowed to win. Many fear he will simply legitimise the election, while toning down his criticism of the powers-that-be. It is not even clear whether his supporters will be allowed to hold up placards. ■

Calculating age in South Korea

A two-year month

SEOUL

Politicians mull national rejuvenation

WHEN KOREANS meet a new acquaintance, one of the first questions they ask is, “How old are you?” What may seem surprising or even rude to foreign visitors is necessary to comply with Korean standards of politeness. The language has a multi-tiered system of honorifics. How you address somebody depends on their status, which is determined first and foremost by age, though sex and professional standing also play a role. Getting it wrong can be awkward.

Getting it wrong is also easy, given the country’s confusing mix of systems for calculating age. To start with, most Koreans consider babies one year old when they are born. What is more, everyone collectively turns a year older on January 1st. This used to happen on lunar New Year, which falls about a month later, when people still eat a bowl of beef soup with rice cakes in celebration. (Babies marking their second birthday despite having been born only weeks before have milk.)

The “Korean age” calculated in this way has traditionally been more important than the Western-style age recorded on people’s passports. Many older Koreans do not even know their birthdays. To add to the mess, yet another method is used to determine whether someone is old enough to drink alcohol, or when they should perform military service: their birth year is subtracted from the current calendar year, so a person born on January 1st is considered the same age as someone born 364 days later.

All this not only confuses visitors but also stymies bureaucrats, who are often uncertain which number to use for what purpose. Popular apps designed to convert one type of age into another help the numerically challenged, but hardly clarify the rules. Studies suggest that most Koreans would prefer a simpler system.

Some politicians have decided that the way forward is rejuvenation. Earlier this year a group of lawmakers submitted a bill to abolish the Korean way of measuring age for administrative purposes. The National Assembly has yet to consider the proposal. If it is approved, the whole country could become a year or two younger at the stroke of a pen—a handy trick in a fast-ageing society.

Australia's election

Heated debate

MELBOURNE

Voters are increasingly concerned about climate change

WHENEVER HE FLIES out of Melbourne, Steve Stefanopoulos gets a view of wilting grass. The reservoirs supplying the city's water are low. It relies on a desalination plant to meet its needs. This worries Mr Stefanopoulos, the mayor of an affluent eastern suburb. In a federal election on May 18th, he wants someone "to stand up and do something about the environment".

The vast majority of voters in his constituency, Higgins, agree. It has always been held by the ruling Liberal Party, which is right-of-centre. But lots of youngsters have moved in, and frustration at the government's failure to cut emissions of greenhouse gases is running high. The Liberals have spent a fortune boosting their candidate and plonking placards outside posh houses. Yet they might lose the seat to the Greens.

Few rich countries are as severely affected by climate change as Australia. Storms and cyclones strike the tropical north with increasing ferocity, and droughts are hitting harder and for longer. Since the last federal vote, warming waters have killed much of the Great Barrier Reef.

This summer seemed particularly apocalyptic. A million native fish washed up dead in the Darling river, part of Australia's longest river system, which is drying out. Flooding in northern Queensland killed several people and half a million cattle. Fires ripped through the southern island of Tasmania, destroying ancient forests.

Even conservative farmers are increasingly inclined to attribute these horrors to man-made climate change. Neil Westcott grows wheat and barley on a property of 25 square kilometres in New South Wales. Over the past 30 years, he has watched annual rainfall drop by four inches. "That's a lot," he says, "when you only had 20 inches to start with."

Mr Westcott might once have been laughed out of his local town for talking about climate change. These days he makes a habit of perusing scientific papers. He is struggling to bring himself to vote for the Liberals' coalition partners, the Nationals, who are the main right-wing party in rural areas and who want to open new coal-fired power plants. "I've never had to think about my vote so long and hard," he says.

One recent poll found that over 60% of voters believe that climate change presents a "critical threat" to Australia. Yet it is the world's biggest exporter of coal, the fuel

that causes the most pollution. Most of the country's power is still generated by the stuff. Relative to its population, Australia produces more emissions than almost any other rich economy.

Politicians have been at war over what to do about this for a decade. Labor lost two prime ministers to the problem before the Liberals came to power in 2013. The quagmire has since deepened. Tony Abbott, who was then the Liberal leader, axed a carbon tax introduced by Labor. His government also pared back a renewable-energy target and cut funding for climate science.

Climate-changeable

No other rich country has put a price on carbon only to scrap it again, says Kelly O'Shanassy of the Australian Conservation Foundation. Unsurprisingly, emissions have since been rising. In 2015 a more moderate Liberal, Malcolm Turnbull, replaced Mr Abbott as prime minister. He proposed a binding scheme to cut emissions from power plants, which prompted Mr Abbott's right-wing acolytes to turf him out.

Mr Turnbull's successor, Scott Morrison, once declaimed an ode to a lump of coal in parliament. His main policy on climate change is to lambast the Labor Party for promising to funnel subsidies to renewables, which it wants to see producing half of Australia's electricity by 2030, and to tighten vehicle-emissions standards, to

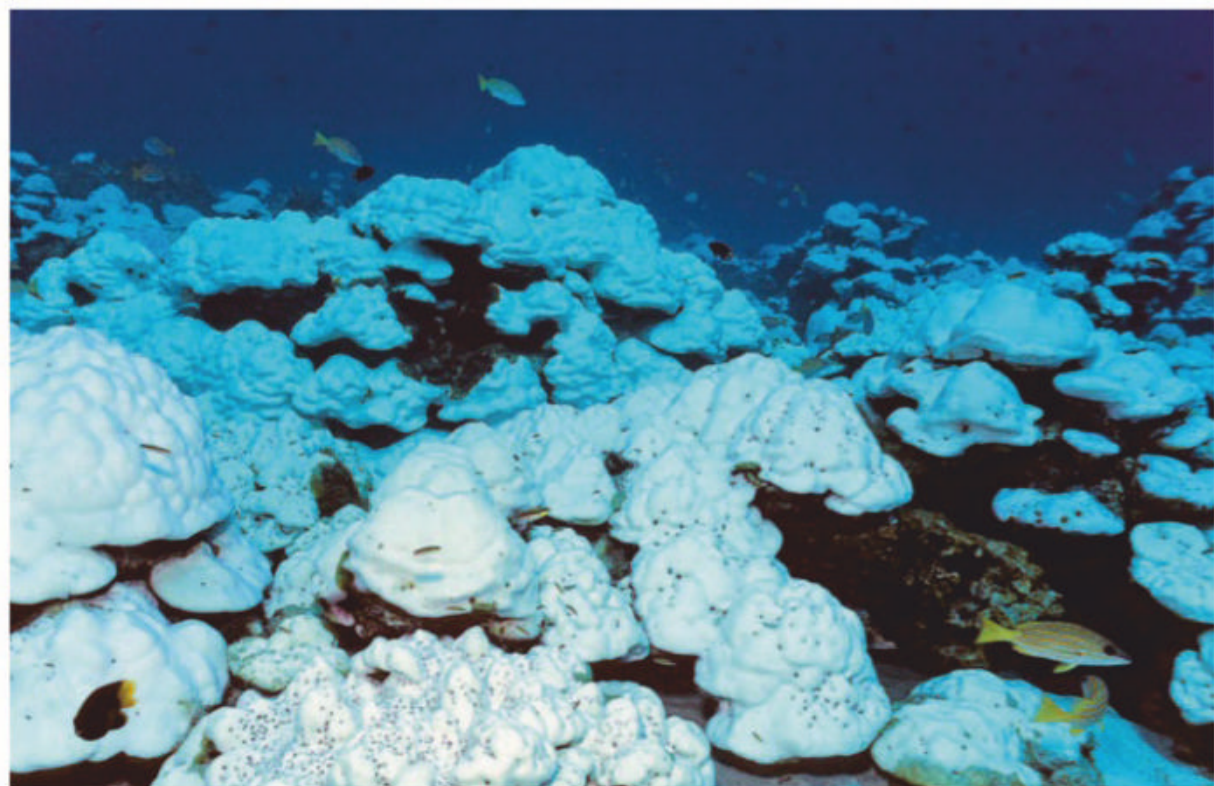
speed the uptake of electric cars. This will hurt the economy, Mr Morrison says, and is a "war on the weekend" because it would disadvantage outdoorsy cars.

Young voters, who tend to care more about climate change than their parents, are on the warpath. "We've not been listened to," says Anthony James, an 18-year-old voting in the suburbs of Melbourne. Mr James was a member of the Liberals' youth arm for two years, but recently left. He will vote for Labor, despite horrified remonstrations from his parents, "until the Liberals have a proper environmental policy."

Many environmentalists are frustrated by the limits even of Labor's policy. It hopes to win seats in resource-dependent parts of Queensland, and so has not committed to phasing out coal-mining, they grumble. In particular, it has waffled about a vast new mine that Adani, an Indian conglomerate, wants to open in outback Queensland.

Hence the appeal of independent candidates, who promise more action. A leafy tram-ride north of Higgins is the even wealthier seat of Kooyong. It is held by Josh Frydenberg, the treasurer (in effect, the finance minister), by what should be an unassailable margin of 13 percentage points. But the party is nervous. The seat is under attack from both the Greens and a prominent independent, Oliver Yates, who used to head a state-owned fund that invests in clean energy. "There's no future for coal," Mr Yates says, as he hands out flyers at an early-voting centre.

Australia's political system makes it tough for such candidates to get elected. Mr Frydenberg will probably cling to his seat. Other right-wing luminaries, including Mr Abbott and Peter Dutton, the home-affairs minister, may not. The real question is whether the Liberals' reactionary stance on climate-change survives the election. ■



Poor policies produced a polyp apocalypse



Taming deserts

Dust to dust

MINQIN, GANSU

A “green Great Wall” being planted to control north China’s deserts may not be doing much good

AN EX-ARMY LORRY chugs across the desert outside Minqin, a town in the north-western province of Gansu. It is delivering water to a team of about 20 people planting saxaul—a squat, spiky tree native to the area—on the banks of towering dunes. The hope is that the vegetation will anchor the ground and help prevent sand from sweeping through Minqin during wind storms in spring. Without these efforts, says one of the planters, the oasis town could be “eaten by the sand”.

Minqin is the seat of a county of the same name which is half the size of Belgium. It is surrounded on three sides by the Gobi desert (see map on next page). On a warm evening the town’s neat central plaza is thronged with locals practising dance routines for exercise and entertainment. But their livelihoods are threatened by the desert, which in recent decades has been advancing on the town at an average rate of several metres a year. To help hold it at bay, officials plan to have shrubs and trees planted in the county. These will eventually form a belt more than 400km long, say reports in the state-controlled media.

The planting in Minqin is one small part

of a huge afforestation project that has been under way for four decades. It aims to form a belt of trees and shrubs along the edge of the Gobi, which covers a vast area of northern China, and of the Taklamakan desert in the far western region of Xinjiang. The scheme involves about one-quarter of China’s provinces. Officials call it the Three North Shelterbelt Programme (“three north” refers to the country’s north, north-east and north-west). They liken it to building a “green Great Wall”. China wants to promote its desert-taming expertise around the world. But there is little evidence that the green wall is working as well as the government claims. Some scientists believe that it may be making the desertification problem worse.

Eating up farmland

The Communist Party began battling deserts not long after it seized power in 1949. Mao believed they could be beaten back with grand engineering projects, and that arable land thus created would boost har-

vests and create space for ethnic-Han settlers in border areas (who, officials hoped, would help fend off the Soviet Union and keep restless minorities under control). In fact, China’s deserts slowly expanded. Fragile environments on their fringes have been damaged both by climate change and human mismanagement. Government-sponsored research found that between the 1950s and the 1970s China lost about 1,500 square kilometres of land to deserts each year, an area the size of Houston. By 2000 the rate had more than doubled.

Work on the green wall began in 1978, the year Deng Xiaoping became China’s paramount leader (a decade later Deng showed support for its progress by writing the characters for green Great Wall in calligraphic brush strokes—a gesture still recalled with pride by forestry officials). By the time the project is completed in 2050, tree cover in areas near the Gobi and Taklamakan is supposed to increase from 5%, as it was 40 years ago, to 15%. The government says the target has nearly been reached. Officials hope that the forest belts (the one around Minqin is planned to be 1km wide) will prevent dust-storms, control the spread of deserts and help turn desertified areas back into farmland. Officials say more than 300m people have helped with green-wall building by planting trees across an area the size of Italy. Spending on the project this decade is expected to exceed 90bn yuan (\$14bn).

The work around Minqin is funded by the government and donors. Much of it is outsourced to the private sector. The work- ▶

— Chaguan is away

ers planting trees there have been hired by a local businessman who says he has been in this kind of business for about six years. They start by creating a grid in the sand of straw-lined cells, each about one metre square. Saxaul saplings are planted in some of them. The grid helps stabilise the surface long enough for the trees, which are watered with a hose, to take root. The government provides the land and pays one-third of an agreed fee upfront. The final two instalments follow later, as long as enough of the saxauls survive.

The government says China's total desert-covered area began shrinking in 2004 and that it continues to do so at a rate of 2,400 square kilometres a year. It says the greatest improvements have been in the Three North zone. Officials say China is the first country to have reduced the size of its deserts, and that foreigners could learn from its experience.

Most experts agree that parts of the north are indeed growing greener, but they disagree why. In 2010 academics from Beijing Normal University and the Chinese Academy of Sciences said the green wall's impact was being "exaggerated for propaganda purposes". They noted that sandstorms in several regions had become less frequent even before the green-wall scheme began (one such storm is pictured in Zhangye, a city in Gansu, in November). There was "no firm evidence" that the project was working, they said. In 2015 Chinese scientists examined satellite photos taken since 1983 and concluded that afforestation had contributed less than 3% to changes in vegetation cover seen in Three North provinces with the biggest desert areas. The experts said fluctuation in rainfall accounted for about one-third. Other factors include controls on grazing and agriculture.

Researchers looking for the green wall tend to find far fewer trees than local governments report. Corruption may be one reason. Officials may have been overstating the planted area in order to impress their superiors or pocket funds allocated for tree planting. Another reason is high rates of failure. Only about 15% of the trees planted in the Three North Zone since 1949 have survived. Errors made throughout this period have included planting the wrong types of tree, planting the right types in excessive concentrations and planting in places without enough water. Poorly sited forest-belts have often killed off grasses and other naturally occurring vegetation. Once they have used up the remaining water they have died themselves, leaving the land even more barren than before. In some areas they may have encouraged desertification.

Elsewhere in the world, governments that once backed the green-wall approach are now having second thoughts. Scientists have largely succeeded in persuading lead-



Goodness gracious, a Great Wall of sand

ers in the Sahel, an African region abutting the Sahara desert, that a proposal by the African Union in the early 2000s to plant a forest belt would not deliver hoped-for benefits. Instead officials there are experimenting with more sophisticated agricultural and water-use policies. Some of these aim to increase existing vegetation.

Cao Shixiong of Minzu University of China says that limited and careful tree-planting can help to defend small settlements, roads and railways from sandy winds. But he says that reversing desertification on a larger scale requires methods tailored to the ecology of each location, and that in some places it might be wiser to let land heal on its own. Experts note that the green-wall project still uses tree-cover targets set when scientific understanding of desertification was far less advanced.

Planting trees often does little to remedy the underlying causes of desertification. Minqin's fortunes are closely tied to how much water is used by more populous places nearby. Wen Jiabao, China's prime minister from 2003-13, who had spent his early career in the region, drew attention to

this problem. As a result, better co-ordination between cities close to Minqin helped to increase groundwater levels. But local bosses may be returning to bad habits now that pressure from the central government has subsided, warns a Chinese scientist familiar with the area.

China's planning documents now tend to acknowledge a need for more diverse methods of desert control, notes a paper by Hong Jiang of the University of Hawaii. Foresters are being instructed more clearly how to plant trees at the right densities. But boosting tree-cover in order to hit national targets remains the priority. Tree-planting programmes support many jobs in the forestry administration (since the 1970s the organisation has taken to planting trees with the same reckless abandon with which it once chopped them down). Sticking saplings in the sand is easier than carrying out agricultural reforms or enforcing change in water use. It also makes for better photo opportunities for officials. The party likes to argue that its autocratic system helps it carry out mega-projects taking several generations to complete. It does not want to encourage people to think that it is also capable of doggedly making the same mistakes for decades.

Recent bureaucratic changes could help. During a government shake-up last year the forestry administration took over environmental responsibilities from other parts of the government. This may encourage officials to take a broader view of the project's ecological impact. They may eventually become less fixated on planting trees: officials say they are running ahead of their targets and that the green wall will soon be "basically built". But at a press conference in December they promised to keep working hard on the wall until the project's mid-century end-date. The leader of a study-group reviewing its first 40 years said it had passed its "mid-term exam". ■





South Africa

Over the rainbow

JOHANNESBURG

South Africa's election results reflect widespread disillusion

"THIS IS A vote that reminds us of 1994," said Cyril Ramaphosa as he cast his ballot on May 8th in Soweto, a township on the edge of Johannesburg. According to South Africa's president, voters "were just as excited as this" 25 years ago. If so, they have a funny way of showing it.

The first election after the end of apartheid in 1994 saw 86% of adults go to the polls. In his autobiography Nelson Mandela recalled: "The mood of the nation during those days of voting was buoyant." But in 2019 just 46% of South Africans over the age of 18 bothered to vote. The overwhelming emotion was neither excitement nor buoyancy, but despondency.

The rainbow nation has suffered a lost decade and a disappointing quarter-century. Under Jacob Zuma, Mr Ramaphosa's disastrous predecessor from 2009 to 2018, corruption became endemic and the economy stagnated. Average income is lower than in 2013. Levels of unemployment and inequality are among the highest in the

world. Many young people feel disillusioned with the post-apartheid settlement.

All of which could have meant disaster for the African National Congress (ANC), which has ruled since 1994. But Mr Ramaphosa, who, opinion polls suggest, is more popular than his party, helped the ANC to its sixth successive victory in national elections. He also ensured that the ANC kept control of eight of South Africa's nine provinces in regional ballots. In Gauteng, the most populous province, the ANC's victory was so slim that Mr Ramaphosa's appeal almost certainly made the difference.

Yet the ANC's performance was still its

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worst ever. The party won 57.5% of the vote, down from 62.2% in 2014. It was the first time that support for the ANC fell below 60% in a national ballot (see chart on next page). The decline can be explained by two trends, says Dawie Scholtz, a psephologist. The first is that, compared with the previous national election, turnout fell by even more in townships, which are mostly black, than in suburbs, which are disproportionately white. Since the vast majority of ANC support comes from the 81% of South Africans who are black, its overall share of the vote was squeezed.

The second reason is that the ANC won a lower share of the black South Africans who did vote. Mr Scholtz estimates that the party took 79% in 2014, but just 73% in 2019. Most of these "lost" votes went to the Economic Freedom Fighters (EFF), a far-left black-nationalist offshoot of the ANC.

The EFF won 10.8% of the vote, up from 6.4% in 2014. It is now the second most popular party in three provinces. Given that its base is younger than the ANC's, it is well placed to do better in future. These voters are not just uneducated young people, as is commonly assumed, but include many students and graduates, too.

At a polling station near where Mr Ramaphosa voted, Tshego Kgasago, a 28-year-old office worker, explained that while she ▶▶

objected to some EFF policies, such as Zimbabwe-style land seizures, she was voting for the party because it best embodies the idea that black people still get a raw deal. So long as that sentiment endures, the EFF will be a political force.

The EFF was not the only race-based party that increased its share of the vote. The Freedom Front Plus (FF+) won 2.4%, narrowly surpassing its previous high of 2.2% in 1994, when an earlier version of the party campaigned for an autonomous *volkstaat* (homeland) for white Afrikaners, the ethnic group that dominated the apartheid state. The party has a green, orange and white emblem, evoking the flag of the South African Republic, which lasted from 1852 to 1902.

In 2019 the slogan of the FF+ was *slaan terug*, or hit back, as it appealed to mostly white, conservative voters in the South African hinterland. They are angry at policies such as affirmative action and land expropriation. They are also anxious about what they see as the victimisation of Afrikaners and the alleged failure of the main opposition party, the Democratic Alliance (DA), to stand up for them. The FF+ siphoned off perhaps 250,000 votes from the DA.

It was probably inevitable that the DA would at some point lose conservative Afrikaner voters to the FF+. What is more worrying for the DA is that it saw its overall share of the vote fall for the first time, to 20.8%, compared with 22.2% in 2014. In part this reflected a failure to make much progress among blacks. It won the support of 4.7% of black voters, estimates Mr Scholtz, just 0.4 percentage points more than in 2014.

Mr Ramaphosa is a tougher opponent for the DA than an easy target like Mr Zuma. But in recent years the party has made an effort to win over more black voters. This makes sense: it cannot otherwise loosen the ANC's grip on national politics. Yet its attempt has left it looking incoherent. The DA has long championed liberal policies that would help all South Africans, regard-

less of race. Today it partially embraces race-based policies such as affirmative action. Its (black) leader, Mmusi Maimane, has spoken of the need to deal with "white privilege and black poverty". Such moves have proved too much for some erstwhile white supporters, while seeming insufficient (or irrelevant) to potential black voters. Philosophical confusion has, in turn, exacerbated tensions among the party's ill-disciplined leadership.

The optimistic take is that these elections showed the durability of South Africa's political centre. Mr Ramaphosa's ANC and the DA won nearly four of every five votes. But warning signs for the country's democracy are flashing. Identity-based parties on the far left and right gained ground, while a majority of eligible South Africans did not even bother to vote. It now falls to Mr Ramaphosa to restore their belief in politics. ■



How to spend it Golden fleeces

DAKAR

Why people in Senegal pay a fortune for fancy sheep

IF I HAD \$100,000, I'd spend it all on sheep," says Abib Seck, a sheep-dealer. Such enthusiasm is not unusual in Senegal. People there adore sheep. Not only are they delicious, they can also be status symbols. Every year during *Tabaski*, a religious festival, hundreds of thousands of them are sacrificed (and then gobbled up). Poorer families often take out crippling loans to buy one so they don't lose social standing.

The latest craze is for a particularly fancy breed. *Ladoum* sheep are huge and majestic—rams can weigh as much as three grown men. Startlingly, they are also without wool (which is not a problem in west Africa as it is too hot to wear jumpers). Some *Ladoum* look more like small horses than sheep.

They are too valuable to be sacrificed to any god. Instead, dealers sell them to rich folk—businessmen, religious leaders and government ministers—who keep them as pets. They are so popular that there are beauty pageants for them on tv with prizes worth thousands of dollars. At an agricultural fair in Dakar, Senegal's capital, well-heeled couples check the pedigree of sheep they see as an investment. Several dealers claim to

supply the president of Senegal himself.

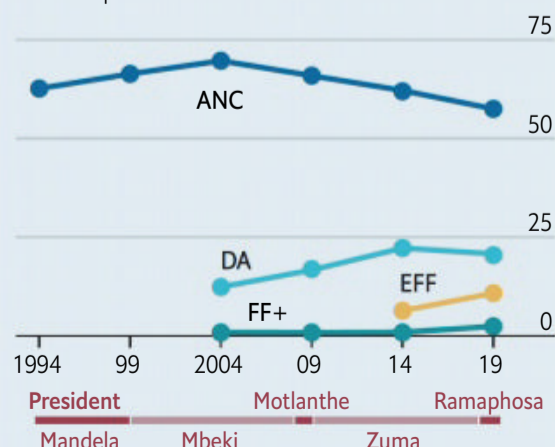
Prices for *Ladoum* sheep have rocketed. New breeders are flocking to the trade. Mr Seck bought his first three sheep in 2016 for a total of \$8,500 and bred them. Just one of their offspring, a huge ram called *Cronus*, is now worth around \$70,000, he estimates. In a country where GDP per head is \$1,000, some think such prices are sheer madness. But *Ladoum*-lovers insist they are worth it.

"They make me feel happy," says Mr Seck. "The breed has a lot of charisma." He now has over 40 in his home. He employs two men to look after them but still chooses to spend most of his time with them. He says that his wife doesn't mind because the animals are so lucrative. He frequently sells *Ladoum* lambs for \$2,500-5,000. He hopes to buy a separate house for his ovine chums.

Breeding such treasures can be perilous. "[Sheep thieves are] our biggest problem," says Mamadou Touré, another dealer. One night, he says, armed men rammed into his friend's house and stole six ewes worth \$85,000. Whether they will still be worth that much in a year's time remains to be seen. Some economists think *Ladoumania* is doomed.

Trouble at the top

South Africa, national elections, % of vote
Selected parties



Sources: Electoral Commission of South Africa; GroundUp

Farming in Rwanda

After subsistence, what?

RYARUHANGA

In a densely populated country, farming competently is not enough

BY AFRICAN STANDARDS, Rwanda is an agricultural success story. Yields of bananas, beans, cassava and maize—the four main crops by land area—have all risen substantially since the turn of the century. Over the five years to 2017, the country's maize fields were more productive than those in neighbouring Burundi, Kenya or Tanzania, according to the Food and Agriculture Organisation, an arm of the UN.

A third of Rwanda's small maize farmers and more than two-thirds of small rice farmers plant improved hybrid seeds in the main growing season, which begins in September. Fertiliser imports are rising; in Western province, an agricultural hub, most farmers use it. Smallholders get sound advice from an army of government-trained "farmer promoters" and from One Acre Fund, a large charity. If you believe the government's figures, extreme poverty is falling. Even if you do not, more houses have metal roofs and cement floors.

But talk to Marie, who grows beans and maize on steeply sloping land in the village of Ryaruhanga, and it becomes clear that this is not nearly enough. Although Marie has planted improved seeds and used some fertiliser, her crops have fared poorly. Some seeds rotted in the ground, while others grew slowly because of a lack of rain at a critical time. Necessity has driven her to work as an agricultural labourer, for which she receives a mere 800 Rwandan francs (\$0.88) a day. She is struggling to keep her children in primary school.

Even competent farmers like Marie live close to the edge—a single bad harvest can drive them into destitution. That is partly because their farms are tiny. Rwanda is more densely populated than the Netherlands, with 490 people to each square kilometre. In contrast to the Netherlands, almost everyone is a farmer. Rural population growth means that land holdings are shrinking. A government survey in 2011 found that 52% of farms in Western province were smaller than 0.3 hectares. Six years later the proportion had reached 63%.

What are smallholder farmers to do? They could up sticks and move to a city. But that may not change their fortunes much. Researchers have found that African cities are less productive than Asian or Latin American ones, perhaps because they lack large industrial employers. A paper by Patricia Jones of Oxford University and others detected a significant wage premium in the

biggest cities of Nigeria and Tanzania, but not in other cities in those countries. Only men received the premium.

A smallholder can try to improve the soil. Like much of western Rwanda, Marie's land is highly acidic. She has tried adding lime, which helped a little. But lime is expensive and heavy, and pays for itself only slowly. Nor can Marie add much organic matter to the soil, which would help it retain water. In the past she cut grass for a compost heap. Now her neighbours compete for the same tufts.

The Rwandan government's policy is to encourage smallholders to grow more valuable crops. It is promoting fruit trees, which can be highly profitable, if slow to mature. One Acre Fund distributed 6m tree seedlings last year. Many were grevilleas, which grow fast and straight and can be used to make furniture or plant supports. Bean farmers can often boost productivity simply by growing the plants up taller poles, says Eric Pohlman of One Acre Fund.

Not all farmers struggle. A few miles from Marie, Innocent Niyongira grows maize, beans, soya and tomatoes so successfully that he has taken on two workers. He has experimented with plant spacing, finding that sowing maize seeds farther apart produces bigger, more marketable cobs. Having acquired more land, he is thinking of getting into macadamia nuts. How did a man with only five years of schooling become such an excellent farmer? Innocent says that he has been influenced by inspirational stories on the radio, and that he works all the time. Some people are simply better at farming than others. The problem is that poor people in rural areas have almost no alternative. ■

America and Iran

Strange manoeuvres

CAIRO

A mysterious attack raises war jitters

WHEN DONALD TRUMP hired John Bolton to be his national security adviser, he reportedly joked that the mustachioed hawk was "going to get us into a war". It is easy to see why. When serving under George W. Bush, Mr Bolton embellished intelligence on Cuban and Syrian weapons and lobbied hard for the invasion of Iraq. After leaving government he argued that America should bomb Iran to set back its nuclear programme. Now he is back in government, and on the warpath.

It was Mr Bolton, not the commander-in-chief, who announced on May 5th that America had dispatched an aircraft-carrier



strike group to the Persian Gulf. This was in response to undisclosed intelligence which, unnamed officials claimed, showed that Iran and its proxies were planning attacks on American forces or their allies. On May 9th Mr Bolton reviewed war plans, updated at his request, that call for deploying up to 120,000 troops if Iran attacks or restarts work on nuclear weapons, according to the *New York Times*. Such planning is not a sign of imminent conflict. But Mr Trump is reported to be telling that joke again, now with more seriousness, as Mr Bolton also ratchets up pressure on Venezuela.

Some fear Mr Bolton is looking for a provocation by Iran, adding ominous undertones to recent events. On May 12th four oil tankers were damaged in a "sabotage attack" off Fujairah, part of the United Arab Emirates (UAE). Gulf officials claim the ships—two Saudi, one Emirati and the other Norwegian—had holes blown in their hulls, near the waterline. The incident remains murky; as *The Economist* went to press, investigators were still looking into the blasts. But unnamed American officials quickly fingered Iran or its proxies as the likely culprit, without presenting evidence. Fujairah lies just outside the Strait of Hormuz, a choke point that Iranian officials have threatened to block.

That was not the only flare-up. This was meant to be a moment of optimism in Yemen. The UN said on May 14th that the Houthis, rebels who control much of the country, had left Hodeida, the largest port. The pullout was a condition of a ceasefire reached last December.

On the same day, though, the Houthis attacked two oil-pumping stations for the East-West pipeline in Saudi Arabia. The damage was limited, but the blasts were a worrying sign of vulnerability in the kingdom's vital oil industry. The facilities, more than 700km north of the Yemeni border, were probably hit with long-range drones the Houthis acquired last year. They are fighting a Saudi-led coalition, supported by America, that backs the Yemeni government. The coalition promised to retaliate. ►►

▶ Meanwhile, fighting resumed in Hodeida.

America and Saudi Arabia accuse the Houthis of being Iranian puppets. Although that is an exaggeration, the Houthis have received arms from Iran, which has a record of supporting allied militias—and of attacks on ships. The so-called tanker war between Iran and Iraq ravaged international shipping in the 1980s.

But the timing of the incident in Fujairah, and the speed with which American officials blamed Iran, has raised eyebrows. Max Boot, a hawkish foreign-policy scholar, wondered whether Mr Bolton was “trying to provoke Iran into striking first”. He and others are reminded of the Gulf of Tonkin incident—a murky naval skirmish in 1964 used by America as a pretext for expanding its involvement in Vietnam.

Some officials have urged calm. John Abizaid, America’s ambassador to Saudi Arabia and a former general, called for a “thorough investigation to understand what happened [and] why it happened”. Mr Abizaid says it is not in America’s interest to have a conflict. Many officials in the Gulf quietly agree. It is not in theirs, either.

European officials are nervous. Germany and the Netherlands suspended training operations in Iraq. Spain withdrew its frigate from the American strike group heading towards the Gulf. Major General Christopher Ghika, Britain’s senior officer in the American-led coalition against Islamic State, said: “There’s been no increased threat from Iranian-backed forces in Iraq and Syria.” His comments drew an unusual rebuke from America’s central command. On May 15th America ordered many of its diplomats to leave Iraq.

Tensions are unlikely to abate. Last year Mr Trump pulled out of a deal, made in 2015, that curbed Iran’s nuclear programme in return for economic relief. Now he wants to undermine what remains of the pact. He has restored crippling sanctions on Iran. On May 8th President Hassan Rouhani said Iran would abrogate parts of the deal and gave the remaining signatories—Britain, China, France, Germany, Russia and the European Union—60 days to help Iran’s oil and banking sectors do business abroad. If they fail, Mr Rouhani warned that Iran could resume enriching uranium to higher levels of purity, which would shorten its path to a nuclear bomb.

Mr Trump, for his part, runs hot and cold on Iran. He has told Iran’s leaders to call him (Mr Rouhani has spurned many such requests). He said the Fujairah incident would be “a bad problem for Iran” if it was involved yet dismissed the reported war plans as “fake news”. If America did go to war, he added, it would send “a hell of a lot more” than 120,000 troops. Such language may cheer Mr Bolton. But it leaves many feeling nervous about a cycle of escalation that looks hard to control. ■



Russia in the Middle East

Putin’s road to Damascus

MOSCOW

The Kremlin’s military gamble in Syria is paying off more handsomely than it dared imagine. But for how long?

THE GREAT victory train clattered across eight time zones and back before groaning into a military-exhibition ground outside Moscow last month. It pulled car after car of trophies from Syria, as well as wagonloads of patriotism and conspiracy theories. Here was a pockmarked American-made Humvee; there pickup trucks turned into battering-rams for suicide car-bombers. Various home-made bombs included one hidden in a can of Russian beer.

Amid the fanfare of military bands, veterans on the platform recounted how Russia had intervened in 2015 to stop Syria falling into the hands of jihadists, notably Islamic State (IS), who had been secretly armed by NATO. “A lot of what you’re seeing here could have been delivered directly by the Americans,” explains one guide. “It’s not just my opinion. Many think so.” Never mind that Russia fought mostly against non-IS groups, or that America did much to crush the IS “caliphate”.

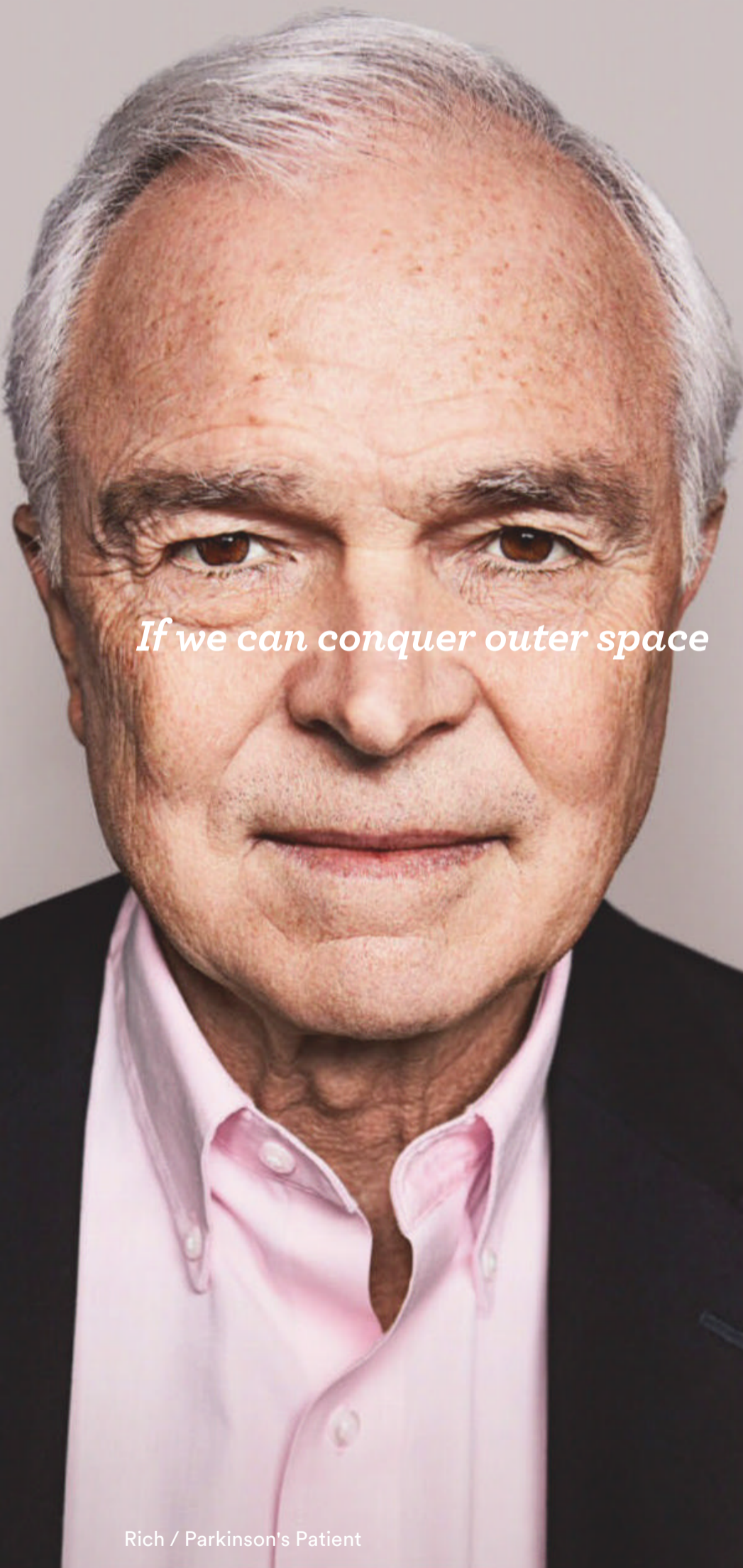
Another display purported to show a chemical-weapons lab with barrels of precursors labelled in English—an apparent attempt to accuse rebels of using chlorine gas in Douma in 2018. Western powers blamed the regime of Bashar al-Assad and bombed Syrian air bases in retaliation.

Propaganda aside, Russia is elated by the outcome of its intervention. It saved Mr Assad at relatively small cost to itself, became the kingmaker in Syria and returned as a power-broker in the Middle East for the first time since the dissolution of the Sovi-

et Union. All this is gratifyingly different from the experience of America, whose invasion of Iraq turned into a bloody debacle; or of western Europeans, whose air campaign in Libya to topple its dictator, Muammar Qaddafi, sundered the country. Most important, breaking America’s hegemony in the Middle East shows that Russia is not merely a “regional power”, as Barack Obama once put it, but a global one.

The “Syrian Breakthrough” tour revives the long tradition of *agitpoezd* (agit-trains). Stalin, for instance, used them to show off Soviet victories against the Nazis. When the latest train arrived in Moscow, young army cadets clambered onto a tank chanting “To Berlin!” Many Russians—more than one million, according to officials—have come to ogle the loot. “They’re fighting not against some tribesmen shooting arrows, but against people with serious technical capabilities—tanks, armoured vehicles and mortars,” said Anton Sidorov, a salesman and veteran of the Russian navy, who brought his four-year-old son. To stop terrorism in Russia, “we have to battle terrorism outside of our territory.”

Russia has surprised itself with its prowess. Many Russians recall how the intervention in Afghanistan in 1979 helped destroy the Soviet Union. Russia’s war in Georgia in 2008 exposed many inadequacies, not least the poor performance of the air force. Its annexation of Crimea and its undeclared war in eastern Ukraine in 2014 brought Western sanctions and isolation. ▶▶



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▶ “The military success was much bigger than anyone expected,” says Fyodor Lukyanov, a foreign-policy adviser to the Russian government. “Russia demonstrated in Syria that it has a degree of efficiency in using military force, compared with the two previous experiences in Georgia and Ukraine. Politically, it was an even bigger surprise.”

Moscow has turned into a centre for Middle Eastern diplomacy. In 2017 King Salman became the first Saudi monarch to visit Russia. Binyamin Netanyahu, Israel’s prime minister, has met Vladimir Putin, Russia’s president, a dozen times since the intervention. Russian diplomats who spent decades as spectators to America’s management of the Israeli-Palestinian peace process delight in knowing that America must now watch as Russia, Turkey and Iran negotiate the future of Syria. Deaf to warnings of a looming humanitarian catastrophe, the Syrian government, backed by Russian bombers, this month resumed operations to retake Idlib province, the last major area still in rebel hands.

Strikingly, Russia has been able to keep friends with all sides of the region’s bitter rivalries: Israel and Iran; Turkey and the Kurds; Saudi Arabia and Qatar. For Russian military commanders, the war in Syria has been a proving ground for new tactics and weapons, and a showcase for arms exports.

Russia and Saudi Arabia struck an unprecedented deal in early 2017 to limit oil output. The so-called OPEC-plus accord has helped lift prices, which fell below \$30 a barrel in 2016, to their current level above \$60. In Mr Lukyanov’s view, the deal would not have been possible without Russia’s enhanced regional status.

There is a new swagger about Russia in the wider world. Mr Putin has used his Syrian success for advantage elsewhere. He plans to host a summit with African leaders in October, and has sent advisers and private military companies to help some of the continent’s despots. Russia is also helping to prop up the regime of Nicolás Maduro in Venezuela. These days it is America that complains of Russia meddling in its sphere of influence, not the other way round.

This contest is less the product of ideological conviction than of self-interest. But if America until recently championed democracy, Russia is becoming, in effect, the foremost defender of autocracy—at least in the view of Arab rulers.

Kremlin-watchers reckon little of all this had been in Mr Putin’s mind when he ordered his forces into Syria. His priority had been to avert the collapse of Mr Assad’s regime, and the risk that Syria might become an exporter of jihadism to Russia. Another reason was to break out of the diplomatic isolation he faced over Ukraine.

How did Russia succeed where others failed? In part, it absorbed the lessons of America in Iraq, relying mostly on its air

Arms and the MENA

Arms exports to the Middle East and north Africa
Trend indicator value*, bn



power and on local proxies on the ground: the Syrian army, Iranian troops, Hizbullah fighters from Lebanon and others. It also drew on the experience of its Arabists. “Damascus is closer to Sochi than it is to most European cities,” says one Russian think-tanker. “Russia feels a close connection to the Middle East, partly because of the legacy of the Byzantine empire.”

Israel remembers that the Soviet Union had been the first country to recognise the infant Jewish state de jure, and provided it with vital weapons via what was then Czechoslovakia. Saudis note that the Soviet Union had been the first country to establish diplomatic relations with the new Saudi kingdom in 1926 (alas, the Soviet ambassador was executed during Stalin’s purges).

Mr Putin is also less troubled than Western leaders are by public opinion or civil-society groups making a fuss about Russia’s actions. He does not ask about democracy and human rights. “We have a common interest in non-intervention in our internal affairs,” says an Arab diplomat. In the view of Arab leaders, Mr Obama forsook Egypt’s dictator, Hosni Mubarak, whereas Mr Putin stood by the



Tanks for the memories

vile Mr Assad. Even if Donald Trump is more partial to strongmen than Mr Obama was, they find him mercurial. “We disagree with Russia on many things,” says the diplomat. “But when Putin makes a commitment, he delivers.” Strangely, Israeli and Gulf leaders keep mum about Russia’s role in providing air power to the reviled “Shia axis”; instead, they say Russia is a counterweight to Iran’s influence in Syria.

Perhaps the main reason that Russia can talk to all players in the region is that it is not America. For most of them America remains the all-important protector, so their dismay is all the greater when it appears to be losing interest in them. Israeli and Gulf leaders feared betrayal when Mr Obama negotiated a deal in 2015 to limit Iran’s nuclear programme in exchange for a partial lifting of sanctions. They care much less that Russia is selling Iran civilian nuclear technology, or has set up barter deals to help Iran circumvent sanctions. If the region’s rulers are flirting with Russia, it is mostly to regain America’s commitment.

Amid the swelling pride in Moscow, there is also much nervousness. Russia’s land may be vast but its economy is only the size of South Korea’s. Real disposable incomes have fallen five years running. For all the shows of patriotism, support for the war is soft: according to the Levada Centre, a pollster, 35% do not approve of Russia’s policy in Syria, against 51% who do. Most think the operation ought to be wound up.

Opinion could turn more hostile if things go wrong in Syria, which Russian officials know is all too possible. They are learning another lesson from America’s ill-begotten war in Iraq: it is easier to win a short-term military victory than to create a lasting political settlement. Few outsiders want to pay to repair the damage it has wreaked. And Russia is ensnared by its local ally. Mr Assad is strong enough to resist Russian entreaties to make political concessions, but too weak to be threatened without risking his collapse. Then there are more catastrophic risks: a confrontation with Turkey over Idlib, say, or a Turkish invasion to push back Syrian Kurds, or even a war between Israel and Iran. A surprising number of Russian experts worry about the venture “collapsing like a house of cards”.

In short, the power that Mr Putin tries to project abroad, in the hope that it will enhance his standing at home, is brittle. The multipolar world he has sought to bring about may yet leave Russia on the sidelines; it boasts neither the military power of America nor the economic strength of China. Tellingly, few in Moscow want to see America leave Afghanistan, fearing that might destabilise Russia’s southern flank.

Right now, Mr Putin may like patriots chanting “To Berlin!” The danger for him is that they may yet start crying: “Bring our boys home!” ■

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China and America

→ May 18th 2019

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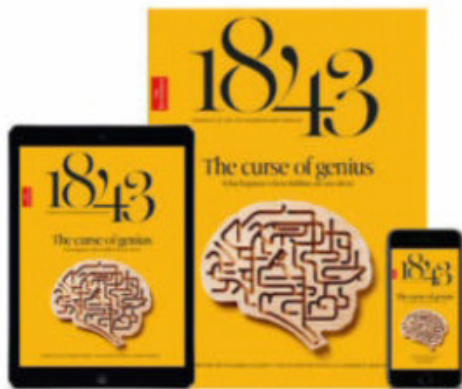
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A new kind of cold war

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A new kind of cold war

Trade has long anchored the relationship between China and America, but it is no longer enough. The world should be worried, says David Rennie

SINCE CHINA emerged from the wreckage of Maoism 40 years ago, the profit motive has become a pillar of stability in its relations with America. Presidential candidates might accuse China of stealing jobs. Spy scandals could simmer. Then corporate bosses and politicians in Beijing and Washington would decide that all sides were making too much money to let relations sour. This focus on mutual self-interest involved queasy compromises. Soon after troops massacred hundreds, possibly thousands, around Tiananmen Square in June 1989, President George H.W. Bush wrote discreetly to Deng Xiaoping to urge joint efforts to prevent “tragic recent events” from harming relations. The financial crash of 2008 revealed a dangerous co-dependency between America the importer of cheap goods and China the thrifty exporter. New terms tried to capture this symbiosis: “Chimerica”, or “the G2”.

Suddenly, however, making money is not enough. In the past couple of years, debate about how to get engagement to work has given way to talk of strategic competition and security threats. Rather than catchy neologisms, scholars are reaching for historical analogies. Some talk of 1914, when clashing British and German ambitions swept aside deep bonds of commerce. China analysts obsess over the “Thucydides trap” that supposedly dooms upstart nations to fighting incumbent powers, as the Greek historian wrote of Sparta and Athens.

China’s rise was always going to cause turbulence. The same country is America’s most daunting strategic rival, its biggest economic challenger and a giant trade partner. That is new. The Japan shock of the 1970s and 1980s triggered demands from politicians

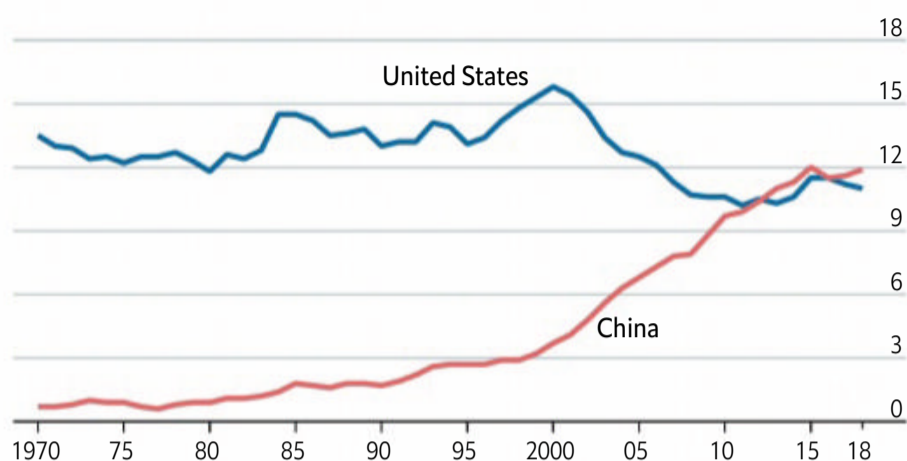
for protectionist barriers, as America’s trade deficit in goods with Japan rose 25-fold in a decade. But it was a lopsided political fight: Japan was a dependent military ally. As for the Soviet Union, it was an ideological but not a commercial rival: in 1987 bilateral trade was worth \$2bn a year, or less than 0.25% of America’s total trade with the world. In 2018 two-way trade between America and China hit \$2bn a day, or 13% of America’s world trade.

Critics argue that elites should have seen this coming. Western leaders had hoped that joining the global economy would make China more like the West, as a growing middle class demanded free speech and more accountable government. They were wrong. The crash of 2008 and spasms of Western populism emboldened Communist Party leaders, notably President Xi Jinping, to reject those norms and assert the party’s supremacy.

America’s shock is made worse by trade in technologies that blur the lines between commerce and national security. The Trump administration’s opposition to letting Huawei, a Chinese technology firm, build 5G telecommunications networks for America or its allies is a taste of that future. Such debates are, at root, about trust, a commodity that mattered less when China exported tennis shoes and televisions rather than microchips that can keep self-driving cars on the road and planes in the air. Yet clumsy forms of self-defence cause harm. Define sensitive technologies too broadly and, in the words of Henry Paulson, a former secretary of the treasury, an “economic iron curtain” may come to divide China and America, choking flows of goods, capital, people and technology, with grave implications for the rest of the world. ▶

Now it gets complicated

Global merchandise trade, % of total



Source: UNCTAD

▶ China's growing tech prowess is putting new strains on globalisation, beyond old arguments about stolen jobs. The fact that General Motors sells more cars in China than in America used to help both countries manage ideological differences. Today's supply chains, carrying semiconductors from China to devices in America, actually raise the political stakes.

Million-dollar American weapons rely on microchips sourced from firms around the globe. Critical infrastructure may contain components from a dozen nations, require software updates from a provider on one continent and send streams of real-time data to another. In April a Pentagon advisory board warned defence chiefs to plan for "zero-trust" commercial internet networks. A growing number of business transactions require a lifetime commitment to distant service-providers. In this world, trade relations cannot be quarantined from hard questions about whether countries are partners, rivals or foes.

China has every right to want to grow stronger. Its success in helping hundreds of millions of people to raise themselves from poverty is admirable. It is the relentlessness of its methods that has turned business from a safe space to a field of contention. Western firms worry that before China truly opens up, they will be thrown out—as soon as Chinese firms have learned, bought or stolen enough Western knowhow to become self-reliant.

Nothing to lose but your supply chains

Few Americans have better access to Chinese leaders than Mr Paulson, a longtime proponent of engagement. So it was noticed when in February he declared that, because China has been slow to open its economy since joining the World Trade Organisation in 2001, "the American business community has turned from advocate to sceptic and even opponent of past US policies toward China". Bosses do not seek a tariff war, he said, but do want a "more confrontational approach". Businesses are getting that from the Trump administration.

In part, this is explained by the change in occupant of the Oval Office. President Barack Obama also denounced Chinese trade cheating and pressed China to stop stealing commercial secrets. Belatedly, his Pentagon chiefs grew alarmed as China turned disputed reefs in the South China Sea into military outposts. But ultimately Mr Obama put more weight on tackling global challenges, from climate change to pandemics to nuclear proliferation, for which he needed Chinese help. Get-tough policies were endlessly discussed, then often dropped. Mr Trump, by contrast, boasts that solving the world's problems is not his job.

In part, America has become more confrontational because multinational businesses that oppose barriers to trade have lost

clout in a populist age. A new round of export controls for sensitive technologies and still-tougher investment-screening rules loom. That process will not end with a truce in Mr Trump's trade war.

The American president is as much a symptom as a cause of a change in the way that America thinks about its openness to the world. Voters elected a might-makes-right leader who scorns alliances, who is cynical about the rule of law and universal values and who believes that national interests always come first. Amid espionage fears, visa rules for Chinese students of science and technology have tightened. FBI agents have quizzed scholars visiting from Chinese state-backed think-tanks about government links, and cancelled the visas of some. Rather than China becoming more Western, America is becoming more Chinese.

Meanwhile, officials in Beijing see a sore loser of a superpower, bent on keeping them down. They scoff at the idea that rich, spoiled America really feels threatened, seeing a ploy to extract better terms for American firms to make money. This misses how many people in Washington believe that the China threat is real and matters more than profits or free-market purity. Indeed, officials accuse firms of keeping quiet when Chinese spies steal intellectual property, to preserve face and access to Chinese markets.

A senior American official says that China "emphatically" lied when it promised Mr Obama in 2015 that state-backed actors would stop spying on America for commercial gain. The official laments that, in the frenzied Washington news cycle, few noticed a Department of Justice indictment in December 2018 accusing China's ministry of state security of ties to a long-standing campaign by the APT10 hacking group, stealing secrets from firms in aviation, space, pharmaceuticals, oil and gas, maritime and other technologies. "They basically got the crown jewels of hundreds and hundreds of the world's biggest companies," he says.

The pendulum risks swinging too far. Some sniggered in March when the Committee on Foreign Investment in the United States (CFIUS), a government agency that screens foreign deals for security concerns, asked a Chinese internet firm to sell Grindr, a gay dating app with 3.3m daily users. Actually CFIUS may have a point. A gay app could be a blackmailer's trove, and Chinese police routinely grab data from social media at home. It is harder to take seriously Senate attempts to ban Washington, DC, from using federal money to buy metro trains made in America by a Chinese state-owned company lest on-board security cameras are used for spying.

Although China lacks the formal alliances that made the Soviet Union a global threat, its rise dominates Pentagon debates about the future of war. Since the 1980s America has pursued a "forward presence" doctrine, meaning that its forces were confident about operating close to enemy defences. China's growing strength confronts Pentagon planners with their hardest decision in years: to find new ways to make combat in the Western Pacific viable, or pull back and force adversaries to fight far from home.

Karl Eikenberry was a China expert in the army who became a lieutenant-general, then ambassador to Afghanistan. Now at Stanford University, he describes commanders grappling with the end of overwhelming American superiority: "There is an intense debate within the American armed forces about how to counter the PLA's accelerating efforts to control the South China Sea."

This report will look at clashing views in Washington and Beijing about how to manage the technological, military, economic and political aspects of a great-power contest so new that the two sides do not even agree on what successful relations might look like. Rules must be found. Mr Eikenberry's summary of the military challenge applies to the whole: "A new doctrine is required." ■

Rather than China becoming more Western, America is becoming more Chinese

The view from Washington

I spy

Talk of a China threat cuts across the political divide

LAST OCTOBER bosses from some big, innovative companies were invited to an annexe of the White House. Amid the high-ceilinged pomp of the Indian Treaty Room, the executives signed one-day non-disclosure agreements allowing them to see classified material. Then the Director of National Intelligence, Dan Coats, and two senators told them how China steals their secrets.

The unpublicised event was the idea of Senator Mark Warner of Virginia, the senior Democrat on the Senate Intelligence Committee and himself a successful technology investor. He was joined by Senator Marco Rubio of Florida, a Republican on the committee.

Recent arrests of alleged Chinese spies reveal only a small fraction of what is afoot, Mr Rubio says. China “is the most comprehensive threat to our country that it has ever faced”. The aim, he insists, is not to hold China down but to preserve peace. He sees an imbalance in relations between America and China that, if left unaddressed, “will inevitably lead to very dangerous conflict”.

Speaking with rapid precision in his Senate office, Mr Rubio criticises an economic model that presses chief executives to maximise short-term profits. China has learned to use that system to turn firms into “advocates”, he charges. Too often politicians would vow to get tough on Chinese cheating. “Then these CEOs would be deputised by China to march down to the White House.”

Venture capitalists have also been invited to Warner-Rubio China road shows. Mr Rubio grumbles that the business plan of some Silicon Valley tech firms is to get bought up, without necessarily caring if the investors are Chinese.

Members of Congress have drafted proposals for a series of new export controls on products deemed important to national and economic security, notably from industries named as priorities in the “Made in China 2025” plan. That is a Chinese map for building

world-beating companies in ten high-tech fields. Chinese investments face ever-tighter scrutiny by the Committee on Foreign Investment in the United States (CFIUS). The Foreign Investment Risk Review Modernisation Act recently extended the remit of CFIUS to new areas, such as property purchases near sensitive sites. A pilot scheme mandates reviews of foreign stakes in a wide array of “critical technologies”. Mr Rubio names telecommunications, quantum computing, artificial intelligence and any industry that collects large data sets as ones he wants closed to China.

The staging of that October road show—a bipartisan endeavour involving Congress and the intelligence agencies, close to the White House but not inside it—is revealing. Views on China have hardened across official Washington. A tough new consensus unites what might be called America’s foreign-policy machine, including members of both parties in Congress, the State Department, Pentagon, Department of Justice, spy agencies and the president’s own National Security Council. The machine includes the vice-president, Mike Pence, who turned a speech last October into a charge sheet of Chinese misdeeds. Mr Trump stands apart.

Pentagon chiefs and members of Congress are ever more publicly sounding the alarm about China’s intentions towards Taiwan, the democratic island of 24m people that America calls an ally but China claims as its own, saying it must be united with the motherland, by force if necessary. To China’s disquiet, Congress has passed laws signalling solidarity with Taiwan, urging the government to allow cabinet secretaries and American warships to visit the island. Some of President Donald Trump’s closest aides are long-time advocates for Taiwan. As president-elect in 2016 he was persuaded to talk by telephone with the island’s president, Tsai Ing-wen. Since then Mr Trump has blocked proposals for high-profile visits to show support for Taiwan as a democratic ally. He sees allies as a burden, and mighty China as America’s peer.

Whose side are you on?

Discerning a united view of China within Team Trump is hard. Trump aides use harsh language about the country. Referring to repression of Uighur Muslims in the north-western region of Xinjiang, the Secretary of State, Mike Pompeo, called China “one of the worst human-rights countries that we’ve seen since the 1930s”. That tone is a sign of their boss’s willingness to trample diplomatic

niceties. But while Mr Trump’s views on China overlap with the Washington machine’s, they are not identical. Many officials are sincerely disgusted by Xinjiang, where perhaps a million Uighurs are being held in “re-education camps”. Asked how business ties between America and China may co-exist with get-tough policies, a senior administration official replies: “Concentration camps do spoil the mood, don’t they?”

Yet cold-war-style discussions of human rights are of little interest to Mr Trump. Michael Pillsbury is a China specialist at the Hudson Institute, a think-tank, and an outside adviser to the White House. In his view, “the president is not a super-hawk on China”. Such issues as Taiwan or Xinjiang do not resonate with Mr Trump as much as trade does, he admits. Even on trade, Mr Pillsbury calls him more cautious than advisers such as Peter Navarro, who would like American firms to leave China. Mr Trump has often said he does not want to hurt China’s economy, notes Mr Pillsbury. “He sees China as a ▶▶



Impressive Chinese trains, built on foreign tech

▶ source of profit and investment.”

The machine wants to change the fundamental principles guiding China's rise. In contrast Mr Trump praises President Xi Jinping for putting China's interests first.

Yet Mr Trump can be riled by aides telling him that China is “stealing our secrets”. He also sees political risks in any trade deal that can be branded a climb-down. “The president understands very clearly that the Democrats are waiting for him to be soft on China,” says Mr Pillsbury. Senator Chris Coons, a Democrat, agrees that being a hawk on China in today's Congress is “comparable to the 1950s when there was no downside, politically, to being anti-Soviet”.

Tellingly Mr Trump's China tariff escalation on May 10th was accompanied by defensive tweets asserting that China yearns for a “very weak” Democrat to win the 2020 election instead. A senior Trump administration official endeavours to reconcile the different camps. The aim is not economic decoupling, he says. But in sensitive industries, “the political and financial risk associated with doing business in China will continue to rise”.

Modern-day Chinese mandarins obsess over differences within the Trump administration, not realising that the hardening of the Washington mood predates and will outlast Mr Trump. Evan Medeiros of Georgetown University, a former principal Asia adviser to President Barack Obama, notes that “the bureaucracy of a much more competitive relationship” is being put in place.

Taking a proper gander

Last November the Department of Justice established a China Threat Initiative, staffed by prosecutors and FBI investigators, to detect Chinese attempts to steal trade secrets and influence opinion, in particular on university campuses. At the Department of Homeland Security, a new National Risk Management Centre watches for high-risk firms working on critical infrastructure. A State Department office formerly focused on terrorism, the Global Engagement Centre, has a new mission countering propaganda from China, Russia and Iran.

Pentagon anxieties about China coincide with a realisation that when troops rely on high-tech kit, cyber-attacks can kill. Mr Eikenberry, the former general, observes that in the 1970s or 1980s perhaps 70% of the technology that mattered to military commanders was proprietary to the government, and the rest off-the-shelf and commercial. “Now it is 70% off-the-shelf, much of it coming from Silicon Valley,” he says. Thus when American trade negotiators debate China policy, “the security people are in the room.”

A study commissioned by the Pentagon, “Deliver Uncompromised”, warns that insecure supply chains place America's armed forces at “grave risk” from hacking and high-tech sabotage, for instance by the insertion of malware or components designed to fail in combat. The study, by Mitre, a research outfit, notes that modern fighter jets may rely on 10m lines of software code, so it matters if tech firms use code of unknown provenance, as some do.

Pentagon chiefs have created a new Office of Commercial and Economic Analysis whose mission includes scouring defence contracts for Chinese companies, down to third-tier suppliers. James Mulvenon, an expert on Chinese cyber-security, explains that “the Pentagon has decided that semiconductors is the hill that they are willing to die on. Semiconductors is the last industry in which the US is ahead, and it is the one on which everything else is built.” He already sees more high-value defence contracts going to semiconductor foundries in America.

Randall Schriver is assistant secretary of defence for Indo-Pacific Security Affairs and a China specialist. Asked if the Pentagon will press businesses to leave China, he replies carefully. “Compa-

“It's the first time that we will have a great-power competitor that is not Caucasian”

nies can do what companies do. We are much more aware of and keen to address vulnerabilities in our defence supply chain.”

Official Washington has moved beyond asking whether China is a partner or a rival. The only debate concerns the magnitude of China's ambitions. According to Mr Rubio, Mr Xi thinks that “China's rightful place is as the world's most powerful country.”

Some political appointees in Mr Pompeo's State Department sound eager to declare that an East-West clash of civilisations is under way. On April 29th the State Department's director of policy planning, Kiron Skinner, told a forum hosted by New America, a Washington think-tank, that there was a need for a China strategy equivalent to George Kennan's containment strategy for the Soviet Union. Not content with that bombshell, Ms Skinner ventured that China is a harder problem. “The Soviet Union and that competition, in a way it was a fight within the Western family,” she said, citing the Western roots of Karl Marx's ideas. “It's the first time that we will have a great-power competitor that is not Caucasian.”

Leaving aside the ahistoricism of Ms Skinner's comments—for China's Communists drew deeply on Marx and Lenin—they are self-defeating. A clash of civilisations leaves no room for Chinese liberals, let alone for Taiwan, a democracy with deep roots in Chinese culture. As for the idea of containing one of the world's two largest economies, that would be a nonsense even if American allies and other countries were willing to help, which they are not.

There are more cautious voices. A recent essay for the Paulson Institute by Evan Feigenbaum, an Asia hand in the administration of President George W. Bush, argues that those accusing China of remaking the global order are both misstating and understating the challenge. China is selectively revisionist, wrote Mr Feigenbaum. Rather than seeking to replace today's international system, it upholds many of the “forms” of multilateralism while undermining “norms” from within the UN and other bodies.

In a break between votes, in a windowless office deep in the Capitol, Mr Coons urges Congress to try the hard work of dealing with China as it is and not as America wishes it to be. He does not think China is hostile to the idea of a rules-based order, but concedes that it has “behaved exceptionally badly on the world economic stage”. In today's Washington, that is dovish talk. ■

The view from Beijing

Same bed, different dreams

Chinese views of America are often deeply cynical

SPEND ENOUGH time with Chinese scholars and officials who study America, and comparisons will at some point be drawn between China's relations with America and a bad marriage. It is a revealing analogy. China has interests in other continents, but America is an obsession. Marriage metaphors capture the lingering admiration mixed with envy and resentment that China's elite harbours for its global rival. In the Trump era, however, a dangerous new emotion is increasingly surfacing: contempt.

Powerful Chinese officials have few incentives to talk to outsiders. But some cadres and scholars known to brief government and party bosses do speak off the record. Leaders are selectively candid with foreign counterparts, and maintain ties to retired Western grandees. It can be said with confidence that China's ruling classes claim to be deeply frustrated by the America that elected President Donald Trump. It is called a sore loser and a dangerous spoiler, not ▶▶

▶ only unwilling to play a leading role in the world but livid if China becomes more active.

According to this line of thought it is, for instance, maddening to hear America complain about China's ambitions for the Belt and Road Initiative, President Xi Jinping's globe-spanning infrastructure plan, when America is no longer prepared to play a leading part in setting global standards, and is too self-centred to invest in connecting the world.

If this were a marital row, one line that sums up the mood in Beijing would be an angry challenge directed at America: "Why do you always think this is about you?" China did not set out to overtake America, it is argued. If it becomes the world's largest econ-

omy, that is because it has a lot of people and wants to give them better lives. Yes, it has enjoyed a successful 40 years, but only thanks to its people's ceaseless hard work. Still, many regions have been left behind and are crying out for development.

That need to maintain economic growth is a reason for China to fear a trade war with Mr Trump. But it is also a reason for indignation at what is called an American policy of containment. Chinese sources describe a suffocating sense that—just as moderate prosperity comes within reach—a declining America now questions China's right to achieve that wealth, whether by building strong armed forces or developing advanced technology. ▶▶

For it is not enough to be rich, they argue. Countries must also

Down on the farm

Why Iowa is Xi Jinping's favourite corner of America

WHEN RICK KIMBERLEY showed Xi Jinping around his farm in Iowa in 2012, he explained how modern seeds, big machines and computers had doubled crop yields since he began farming in 1972. His Chinese guest, who was then vice-president and months away from assuming the leadership of the Communist Party, pronounced the farm a model to study. When he speaks, China acts.

A replica of Mr Kimberley's property is being built in Hebei province, north-east of Beijing, as a demonstration farm. He is now honorary dean of the Kimberley Agricultural Business School in Shaanxi province. Thousands of Chinese visitors have trekked to his farm in Iowa, many eager to be photographed on the John Deere tractor on which their leader sat. Mr Kimberley would have traded it in by now, but Chinese firms have asked about shipping it to the motherland.

Mr Xi's first visit to Iowa was in 1985, as leader of a five-man agricultural delegation. His business cards said he was the director of an animal-feed association. His hosts took him to farms and feed mills. He ate roast hog and went on a cruise on the Mississippi River. Iowa's then governor, Terry Branstad, received the Chinese guests. This Iowan kindness was a lucky investment. Unbeknown to his hosts, young Mr Xi (pictured) was party secretary of a county in Hebei and son of a member of China's politburo, Xi Zhongxun, who had visited Iowa in 1980.

Today, Mr Branstad is America's ambassador to China, and delights in talking up his long friendship with Mr Xi. China's president seems attached to those memories, too. During his second visit in 2012 he spent an hour with Iowans who had hosted him in 1985. "For me, you are America," Mr Xi enthused.

China has duly showered Iowa with demonstrations of amity. For the past four years orchestras on American concert tours have given free concerts in Muscatine, the town of 24,000 where, in 1985, Mr Xi stayed with a local family, the Dvorchaks. Grateful Muscatine high-school students have enjoyed free study tours of China, funded by Wanxiang, a Chinese maker of car parts.

Gary Dvorchak was at college when China's future ruler borrowed his teenage bedroom, complete with Star Wars figures on the shelves. His reward came in 2015 when his family was invited to Beijing to dine with President Xi, his wife and his daughter. Today Mr Dvorchak is a business consultant in Beijing. In the face of continued unequal treatment for foreign firms, the impatience of American businesses is at "boiling point", he laments. Often asked

to meet delegations of Iowan farmers and entrepreneurs, he tries to warn them about cultural differences. Chinese business partners learn to trust slowly. Americans are in a hurry, and trust strangers until given cause not to—but once disappointed will walk away.

From the new world

Mr Dvorchak's former home in Muscatine is now the Sino-US Friendship House, a museum displaying photographs of Mr Xi in Iowa. Its developer, Cheng Lijun, owns several properties in Iowa and is bringing up his children there. He thinks that ordinary Americans still welcome Chinese investment. But Chinese businesses feel "a lot of invisible pressure" from America's government, which sees a spy scandal in every bid for a business that uses technology, he sighs.

In 2017 America sold China soyabeans worth \$12.4bn, many from Iowa. Then Mr Trump launched his trade war and China slapped tariffs on American soyabeans. Tim Maxwell grows them near Muscatine. He backs the president even if his sales are hit: "We're going to feel a bit of a sting for a couple of years, because he is not going to let anyone push him around, and I'm all for that."

Sarah Lande (pictured) helped to organise Mr Xi's visit in 1985, giving him a lift in her red convertible (she regrets declining his request to drive it). She hosted him again in 2012. But this pioneer of engagement senses a new wariness among her neighbours. "People are influenced by what they read in the papers, that China is spying on us," she says. If a young Chinese official were to visit today, she is not sure his delegation would get the same sort of welcome: "What we show them might be a bit broad-brush now."



Xi's the one



It's a patriotic thing

► be strong, militarily and technologically. The humbling of imperial China by smaller European powers proves that. Often that is the cue for such Chinese sources to bring up the arrest in Canada of Meng Wanzhou, a senior executive with Huawei and daughter of the telecommunications giant's founder. Depressingly, the argument that follows is a cynical one about the relative strengths of China, America and Canada. It is rarely about the details of the legal case against Ms Meng, arrested at the request of American prosecutors, who accuse her of sidestepping sanctions against Iran. Ms Meng's arrest is seen as a signal that America might tolerate a richer China but does not want it to be strong. Pro-China protests have ensued in Canada and Hong Kong (pictured).

Discussions of territorial disputes follow similar lines. The Chinese government's public version of history asserts its sovereignty over reefs and islands in the South China Sea. But in private, when officials protest about America's insistence on sending warships and planes through those disputed waters, the complaint is that America is showing disrespect, and would never tolerate such impertinence in its own backyard. After 40 years of growing richer, it is time for China to tackle such long-ignored issues, they say.

Other official voices argue that China has not changed its behaviour; it has merely grown larger and more successful. If China is such an abuser of the international order, they ask, why have America and Europe never complained before? In part, Chinese puzzlement is disingenuous. China has repeatedly promised to open markets and grant more equal treatment to foreign companies. After the 20th year of broken promises, patience vanishes. In part, though, those Chinese sources have a point.

Foreign businesses have spent years sending Chinese leaders mixed messages, notes a Beijing-based American. In meetings with central-government leaders, Western bosses would talk up their positive experiences, both out of caution and because they saw little point in raising problems caused by powerful provincial and local barons, knowing that the central govern-

Mr Xi has plenty of critics in elite Beijing

ment might simply ask those barons to investigate themselves. Having stayed mum in China, American businesses would grumble to their own government, which would take their complaints to the Chinese. But the Chinese would not believe them, thinking they had heard the truth from businesses on the ground.

Mr Trump divides Chinese officials and scholars. An older generation, notably those who were among the first to study in America, is broken-hearted to find him popular with so many voters. Another generation of high-flying, middle-aged officials is more inclined to gloat. Their formative memories of America involve the disasters of the Iraq invasion of 2003 and the financial crisis of 2008. Mr Trump's diagnosis of America's ills is quite correct, they sniff. By that they mean he is right to say America should pull troops back from the Middle East and Asia and instead focus on nation-building at home. At the same time, they add, the low quality of his appointed officials points up the superiority of China's meritocratic one-party system.

The most candid voices admit that China got Mr Trump wrong, at first thinking him a pragmatic New York businessman in

the mould of others they have known. China also underestimated the durability of his support. Mr Trump's escalation of the trade fight shocked Chinese leaders, who assured visiting Western leaders in spring 2018 that his bluster was theatre, and that both sides had too much to lose for a real trade war to start.

Following Mr Trump's threats to rain "fire and fury" on North Korea in 2017, which genuinely alarmed China, the government in Beijing prefers his current policy. For now that combines indifference to North Korea's human-rights abuses with a willingness to suspend American military exercises in South Korea as long as the north halts tests of bombs or missiles that threaten America. That is essentially the "freeze-for-freeze" policy that Chinese leaders urged on previous American administrations. Those administrations rejected it as a betrayal of Asian security alliances.

Liberals who love Trump

Throughout 2018 foreign politicians and business leaders visiting Beijing were struck by an unexpected phenomenon which might be termed "Liberals for Trump". This involved reformist Chinese scholars discreetly welcoming Mr Trump's pugnacious ways. They saw outside pressure as the best way to force through needed changes, from the dismantling of state-run monopolies to the opening of markets. Those liberals are warier now—China feels under attack and Mr Trump seems less keen on structural reform.

Chinese reformers never exactly admired Mr Trump. It is more that they hoped America's president was a bigger bully than Mr Xi. Despite Mr Xi's swing back to more authoritarian rule, he has plenty of critics in elite Beijing. Some call him a statist who does not understand economics. Others blame his assertive rhetoric about China's rise for a backlash abroad, and say he has bungled the American trade war. The puzzle is to know whether such Beijing grumblers matter more or less than the American establishment grandees who deplore Mr Trump at dinner parties in Washington, DC. Others who are angry with Mr Xi are no friends of the West. Bonnie Glaser, a well-connected China specialist at the Centre for Strategic and International Studies, a Washington think-tank, re-►

cently reported that the upper ranks of the People's Liberation Army are gripped by fear, amid a sense that an anti-corruption drive ordered by Mr Xi has gone too far.

Mr Xi has told foreign visitors that he is exasperated by American inconstancy. According to a leaked diplomatic memo, Mr Xi complained to EU leaders at a summit last July that America had walked away from the World Trade Organisation just when China had at last managed to join it. He also pointed out that Mr Obama had persuaded him to join the Paris accord on climate change, only for Mr Trump to pull America out.

Impatience between the two giants is nothing new. Still, it matters that China's faith in America's future is waning. Chinese offi-

cialists used to want America's respect, asking why the superpower could not accept that their political system is a good fit for China. Chinese officials still go out of their way to note that America is a much stronger and richer country whose enmity they do not seek. But America's good opinion of China matters less to them.

It would be especially bad if China's ruling classes began to believe the charge that they have levelled for years: that America is bent on containing China. If a vengeful America wants to hurt China, there are few incentives for Chinese officials to propose imaginative concessions or urge reforms that might repair ties with America. In geopolitics as in marriage, contempt is an emotion that leads to bad outcomes. ■

Slow boat

Ordinary Americans and Chinese appear to be drifting apart

DURING A STATE visit to Beijing in November 2017 President Donald Trump invited his Chinese counterpart, Xi Jinping, to watch a video of his young granddaughter, Arabella, singing and reciting poetry in Mandarin. The daughter of Ivanka Trump and Jared Kushner learned her language skills from a nanny and at a private school. Many parents think that having studied Chinese looks good on a college application alongside ballet or violin lessons, says Scott McGinnis, a professor of Chinese at the Defence Language Institute, speaking in a personal capacity.

A survey in 2017 by American Councils for International Education estimated that 227,000 school-age Americans regularly wrestle with Chinese tones and radicals. At roughly the same time 363,000 students from China were hosted by American colleges and schools. Those numbers make talk of a cold war seems outlandish. Beyond trade, people-to-people exchanges look like sturdy guardrails to keep relations on track. From Deng Xiaoping on, the past four Chinese leaders all sent a child to study in America (Mr Xi's daughter was at Harvard). Soviet leaders did not enroll their young in Ivy League institutions.

Alas, those guardrails are weaker than they may appear. In many places, Chinese student numbers are dropping. The University of Iowa, for example, had seen Chinese enrolments rise five-fold between 2007 and 2015, with the effects still visible in the streets of Iowa City, where bubble-tea outlets and noodle bars cater to thousands of Chinese students.

But numbers peaked in 2015 and have since fallen by about 39%. Sydney Ji, a graduate student from Shanghai, says that it has become harder for Chinese

students to secure or renew visas (rules are especially tight for students in some high-tech fields). One of her own friends is returning home after failing to secure the right to stay and work. The American embassy in Beijing has begun issuing leaflets to Chinese students who are granted American visas urging them to "learn with an open mind", and enjoy the free thinking and debate of college life.

Visa rules are likely to get stricter still. In April Christopher Wray, the director of the FBI, urged academic institutions to be more mindful of how others may exploit America's "open, collaborative research environment", accusing China of sending graduate students and researchers, among others, to steal innovations. The FBI chief also expressed concern about Confucius Institutes (CIs), Chinese-funded outposts based in American universities, trying to win hearts and minds with Mandarin



Start them young

lessons and cultural events.

In 2018 Senator Marco Rubio, a Republican, urged universities in Florida to consider closing CIs on their campuses. Across America, at least ten have shut in the past year, leaving about 100. China's influence on American campuses, via student associations with close links to diplomatic missions, is a frequent topic in congressional hearings. The State Department recently ceased funding a network of American Cultural Centres at Chinese universities in the face of official harassment—including an episode in which Terry Branstad, America's ambassador, was denied access to one funded by his own embassy.

Though demand for language teaching for school-age children remains strong, the number of college-age students choosing Chinese fell to 53,000 in 2016, a 13% drop since 2013. That is telling because older students need to think that they may want to live or work in a country, says Mr McGinnis. China is becoming less attractive, he concludes with some sadness. The number of Americans studying in China peaked in the 2011-12 school year at nearly 15,000 and was down to just under 12,000 in 2016-17.

Behind all such statistics lie real people. When asked about Chinese students who may feel under suspicion, Mr Rubio pauses. "That is one I struggle with," says the senator, himself the son of Cuban immigrants. America cannot ignore China's use of students to acquire technology, he argues. But students exposed to American freedoms may call for change at home. "I don't want to trigger xenophobia in which every Chinese student in America is presumed to be a spy until proven otherwise," he says. In these populist times, others may feel less squeamish.

Competing in technology

One-party tech

America is still ahead, but China is catching up fast

A RARE THING happened in an industrial park near Washington, DC, last November. Construction began on a \$3bn extension to a semiconductor foundry owned by Micron Technologies, a maker of advanced memory chips, based in Idaho. “A few years ago, opening that sort of extension would have people saying, well, that is going to be moving to China soon, isn’t it?”, observes James Mulvenon, an expert on Chinese cyber-policy and espionage.

Not now. Instead, that Micron foundry is a glimpse of the future. Trust in China has collapsed among American government and business bosses, and a consensus has grown that Chinese firms have closed the technological gap with Western rivals with indecent speed and by illicit means.

Today’s tensions make the original cold war look simple. In 2018 China accounted for 57% of Micron’s net sales. In the 1960s and 1970s American tech companies did not rely on Soviet customers. But Micron is a symbol, several times over, of how commercial competition is turning into a zero-sum contest, in which one side wins at the other’s expense. In 2015 Micron rebuffed a \$23bn takeover bid from a Chinese state-backed investment fund, saying that it thought such a deal would be blocked on national-security grounds by the Committee on Foreign Investment in the United States (CFIUS). In 2018 the Department of Justice indicted a state-owned Chinese firm, its Taiwanese partner and three individuals on charges of stealing trade secrets relating to Micron’s memory chips—technology worth tens of billions of dollars. That followed lawsuits and countersuits in which the accused Chinese firm asserted that it owned the relevant patents in China and was therefore Micron’s victim. A Chinese court sided with it, then Micron was hit with an antitrust probe.

China hawks in Washington say the zero-sum game is about broken laws. “Put plainly, China seems determined to steal its way up the economic ladder at our expense,” declared Christopher Wray, the director of the FBI, on April 26th, adding that nearly all the agency’s 56 field offices are working on economic spy cases

“that almost invariably lead back to China”. Between March and November 2018, the Department of Justice indicted a dozen individuals and entities it says were directed by the Chinese government to obtain commercial secrets from 15 companies, predominantly in aerospace and high technology.

Others say the zero-sum game involves broken promises to American workers. They recall American political leaders assuring workers that high-value manufacturing would stay in America, even as globalisation carried cheap jobs to China.

Using his chairmanship of the Senate committee on small business and entrepreneurship as a bully pulpit, Senator Marco Rubio of Florida in February issued a report condemning China’s plans to become a global powerhouse in ten high-tech fields, from artificial intelligence (AI) to aviation, as laid out in the “Made in China 2025” (MIC2025) plan issued by the State Council in 2015. Should America let China become the global leader in innovation and manufacturing, “this would be an unacceptable outcome for American workers,” Mr Rubio writes in his report.

In a mark of these populist times, Mr Rubio is not afraid to argue that government has a direct role to play in defending blue-collar factory jobs. Manufacturing provides more stable employment than services, the Rubio report avers. It urges America to use industrial policies, including tax changes and export controls, to defend industries from robotics to tractor-making.

It’s a steal

Not all senators are as vocal as Mr Rubio, nor as keen on export controls. But deepening distrust of China is a bipartisan norm in Congress. The views of American businesses in China are a bit more nuanced, as shown by the 2019 business-climate survey of the American Chamber of Commerce there, issued in February. Nearly 70% of firms say they are profitable. Still, there are warning signs. In the AmCham survey, half of all American technology firms say they limit investments in China because of inadequate protection of intellectual property (IP), even after years of Chinese promises to get serious about it.

China has become tougher on acts of piracy, from fake consumer goods to breaches of patents. But foreign executives still tell horror stories about pressure to share secrets with local partners and cyber-attacks on company servers back home. Depressingly, 13% of member firms in the AmCham survey said that their greatest IP risk was theft by their own employees.

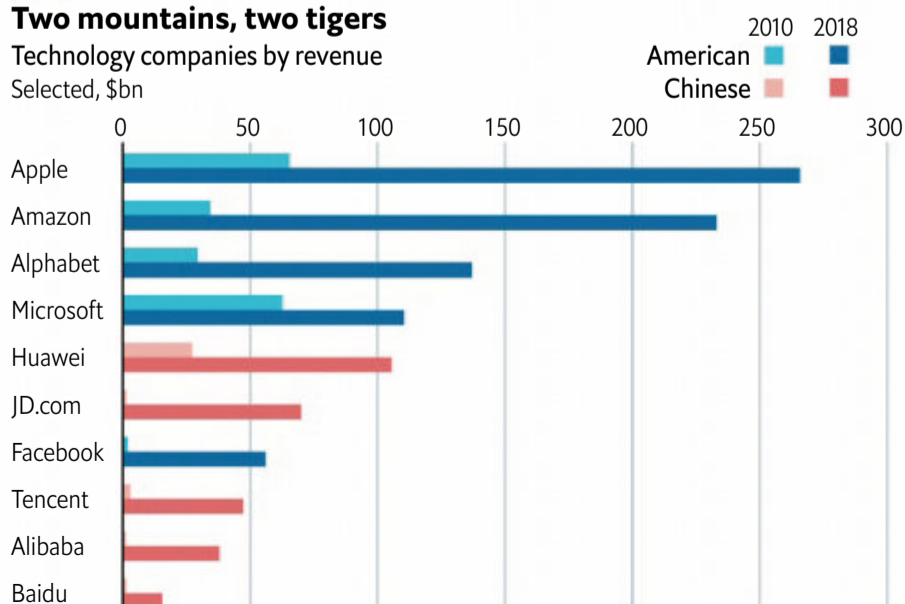
There are several ways in which economic competition can become zero-sum, and all can be seen in China today. Theft is just one. Another is the pursuit of import substitution, aiming to replace imports with domestic alternatives, by fair means or foul. America is in a funk about losing its edge, but it is still home to global champions from aerospace and semiconductors to software and self-driving vehicles. Its officials worry that MIC2025 commits China to being world-class in all those sectors.

Since 2015 supporting plans and road maps published by government research agencies set out hundreds of market-share targets for Chinese firms, declaring, for instance, that 80% of electric or hybrid “new energy” vehicles sold in China must be domestically produced by 2025. Chinese officials, facing a worldwide backlash, now downplay those targets. Strictly-censored state media have stopped using the term MIC2025. But the policy itself has not been repealed. Speeches by party chiefs ring with calls for “self-reliance” and “indigenous innovation”. Other Chinese technology sectors are being encouraged to comply with a policy called “civil-military fusion”, a national strategy backed by top leaders and funding from opaque national-security budgets.

That militarisation of some Chinese technology imposes costs as well as benefits, notes Mr Mulvenon. Those costs include the risks for Western firms of doing work that supports the brutal ▶▶

Two mountains, two tigers

Technology companies by revenue
Selected, \$bn



Source: Bloomberg

▶ techno-dystopia that China has built in Xinjiang. “The good news is that the Chinese are going to discover that autarky is hard,” says Mr Mulvenon. Americans have watched China stealing and reverse-engineering one generation of technology, he says, then having to steal the next after failing to master the underlying science. “That model is incredibly inefficient.”

China is willing to spend what it takes, showering would-be champions with billions of dollars in subsidies and prodding local firms to place orders. Among the beneficiaries is the Commercial Aircraft Corporation of China, whose C-919 commercial airliner is intended as a direct competitor to Boeing’s 737. State planners have set a goal of a 10% domestic market share for Chinese airliners by 2025. The C-919 has had teething troubles, making that timetable ambitious. But success for China could quickly feel zero-sum in America, whose top export category to China in 2017 was civilian aircraft, worth \$16.3bn. The Rubio report laments that at least ten American firms supply vital parts to the C-919.

China has created big brands in such fields as electric vehicles and batteries, in part by shutting foreign rivals out. Protectionist barriers have also allowed Chinese internet firms to grow. In 2009 the ten largest internet companies by revenue were American. Now several are Chinese (see chart on previous page).

Still, it is a mistake to exaggerate China’s strengths in big-data analysis and AI, according to Dieter Ernst of the East-West Center, a think-tank in Hawaii. A near-total lack of privacy protection may help sweep up lots of data, but American firms are better at advanced algorithms that make AI less dependent on big data sets, Mr Ernst wrote. Big Chinese applications are still mostly powered by American-designed chips, which remain world-beating.

America has other advantages. Joy Dantong Ma of MacroPolo, the in-house think-tank of the Paulson Institute, examined the origins of leading speakers at the most prestigious AI gathering. Most came from American universities and tech firms, she found. Crucially, though, more than half those American stars were foreign-born. Team Trump’s visa clampdown imperils that.

Some forms of competition can be fair but still end with the gains going mostly to one side. Notably, some technological fields give a “first-mover advantage” that offers huge rewards to countries or businesses that take an early lead, allowing them to set standards that later entrants have little choice but to follow. In April the Defence Innovation Board, a Pentagon advisory committee of Silicon Valley luminaries, issued a report warning that China is on track to pull off this feat in the race to dominate 5G mobile telecommunications. This next generation of wireless technology promises to revolutionise existing industries and invent whole new ones with data speeds about 20 times those of 4G.

A decade ago American firms took an early lead in 4G, setting standards for new handsets and applications that spread worldwide. That dominance helped Apple, Google and other American businesses generate billions of dollars in revenues. China learned its lesson, investing \$180bn to deploy 5G networks over the next five years and assigning swathes of wireless spectrum to three state providers. In America the same part of the spectrum is largely off-limits commercially because it is used by the federal government. American firms are experimenting with a different part of the spectrum that has some advantages under laboratory condi-



Made in China

tions but is easily blocked by buildings and trees. For this reason, in spite of American pressure on allies, much of the world is likely to adopt China’s handsets, chips and standards, the Pentagon board concludes. Since America’s armed forces are expected to operate worldwide, they must prepare to send data through a “post-Western” world of wireless technology and through “zero-trust” networks, studded with components from such Chinese firms as Huawei. That will mean more focus on encryption and security.

Home of the splinternet

Some technology contests look more benign. As China and America wall off their respective digital markets from one another, each will look for growth in the rest of the world. A divided world wide web, or “splinternet”, is already a reality, as China’s internet grows behind a great firewall of censorship. American champions like Amazon are promoting payment services in India. China’s Alipay service is active in Brazil. China is exporting surveillance systems and censorship algorithms to police states from Ethiopia to Venezuela. With a change in direction, America could make a virtue of an internet that respects privacy. Western biomedical firms and gene-editing laboratories could make a virtue of stricter ethics.

It is unhelpful that Mr Trump is a techno-curmudgeon. He has proposed budgets that slash scientific-research funds, though Congress reversed them. After two recent crashes of Boeing 737 Max airliners, he tweeted that “airplanes are becoming far too complex to fly”. Still, last year Mr Trump signed a bipartisan bill authorising \$1.3bn for quantum-computer research. The aim is to keep ahead of Chinese work on computers that harness the laws of quantum physics to achieve processing speeds out of a science-fiction film. America leads this field, but Xi Jinping deems it a national priority, quizzing scientists who have returned from quantum laboratories in America and Europe. Should China succeed, it could develop almost unhackable satellite communications and quantum radar to detect the stealthiest planes and submarines.

China is on track to dominate 5G mobile telecommunications

Such a success would turn a technology contest into an arms race. America would then have to decide whether this China can be deterred or whether one day it might use its new capabilities. ■

Military development

Sputnik moments

The military relationship needs new rules

BEEP, BEEP, BEEP went the first satellite to orbit Earth, the primitive Sputnik 1, launched in 1957. No matter that it could do little else. That Soviet communists had won the first space race sparked an American crisis of confidence. This had useful effects. Abroad, America strengthened such alliances as NATO. At home, vast sums were poured into science. The Sputnik crisis felt like a loss of innocence—the enemy was overhead. But the actual Soviet threat had not changed much. The Soviet Union was, as before, a nuclear-armed foe, bent on spreading a rival ideology.

Now America is having a crisis of confidence about China, and the cause is not one Sputnik moment but many smaller ones in a row. Talk to strategists in America and China—military officers, politicians, business bosses and scholars—and it is shocking how many say the chances of a limited conflict are underestimated.

In part that is because China's armed forces are catching up fast. America spent 17 years becoming expert at sending drones to find and kill individual terror suspects half a world away. Meanwhile China retired old Soviet weapons and acquired advanced fighter planes and warships. It invested in anti-ship missiles to increase the cost to America of intervention in its near seas, and in fleets of submarines (though its subs are still noisy compared with America's). It fortified small islands and reefs in contested waters of the South China Sea with missiles, radar domes and runways (pictured). President Xi Jinping urged the navy to develop an ocean-going mindset, now that ties of commerce and security bind China—for millennia an inward-looking, agrarian power—to the sea. China has a lead in hypersonic glide weapons, travelling at a mile a second, against which aircraft carriers currently have no reliable defences. Ask about China's weaknesses, and American officers will mention rigid chains of command which give little autonomy to junior officers. They wonder, too, whether different services could work together in complex missions such as invading Taiwan, the democratic island that China claims as its own.

All-out war for Taiwan is not the most urgent flashpoint. The latest China Military Power Report, sent annually to Congress by the Pentagon, sees "no indication China is significantly expanding its landing-ship force necessary for an amphibious assault on Taiwan". Instead, planners fret about efforts to push America out of China's near seas and beyond the "first-island chain" that includes Japan and Taiwan. American ships and planes regularly exert legal rights to cross the South China Sea, triggering Chinese responses that could escalate unpredictably.

Far out

This era of doubt even has its own emblematic Chinese satellite, the *Shijian 17*. Officially an experimental craft, testing new propulsion systems and imaging devices for spotting space debris, American scientists and military leaders have watched the SJ-17 perform remarkable manoeuvres since its launch in 2016, scooting between three different Chinese satellites high above the Earth and parking itself within a few hundred metres of one of them. China, like America, is becoming skilled in the dark arts of anti-satellite warfare. It first tested a satellite-destroying missile in 2007, strewing debris in space, and is thought to have tested anti-satellite lasers and jammers. Last year Mike Pence, the vice-president, in-

cluded "highly sophisticated" Chinese satellite manoeuvres as one of the reasons to set up a "Space Force", a new service branch drawing on a broad range of specialists.

Strategists talk about the difference between capabilities and intentions. Alarm at China is eroding that distinction. When the US-China Economic and Security Review Commission, a congressional oversight panel, held a hearing on China's space programmes last month, a Pentagon representative, William Roper (the assistant air force secretary for acquisition, technology and logistics), noted that the commission was really asking whether America is in a strategic competition with China in space. "I hope you conclude 'yes,'" he told them. Noting America's vast lead in space—it deploys more than half the world's declared spy satellites—Mr Roper asserted that "countries like China have already demonstrated their intention to escalate hostilities into space."

President Donald Trump takes the idea of a Chinese space challenge seriously, says Michael Pillsbury, an outside adviser to the White House. "The Space Force is all about China." He expresses dismay at China's 38 orbital launches in 2018, surpassing America's 34 (see chart on next page). "That shouldn't be happening."

The mood of alarm is bipartisan. A space-threat assessment published in April by the Centre for Strategic and International Studies, a think-tank in Washington, DC, opens with a warning from Jim Cooper of Tennessee, a Democrat who chairs the House subcommittee that oversees the space programme: "The risk of a space Pearl Harbour is growing every day...Without our satellites we would have a hard time regrouping and fighting back. We may not even know who had attacked us, only that we were deaf, dumb, blind and impotent."

Chinese experts suspect unseemly panic. After all, America tested its first anti-satellite weapon in 1959, and most of China's ▶▶



Nothing to see here

▶ space feats, from manned flight to the creation of a network of navigation satellites, were pulled off by America decades ago.

A leading maritime strategist, Hu Bo of Peking University, complains that Americans have the bad habit of treating China's intentions and capabilities as one and the same, perhaps because they consider Chinese power "inherently evil". As soon as China has a missile with the range to hit the island of Guam, America charges that China is "threatening Guam", he adds. By the same logic Beijing is in peril, as it lies within range of American bombers and missiles. "But China doesn't go around claiming that the United States is threatening Beijing." Mr Hu sees an America that had grown used to feeling invulnerable.

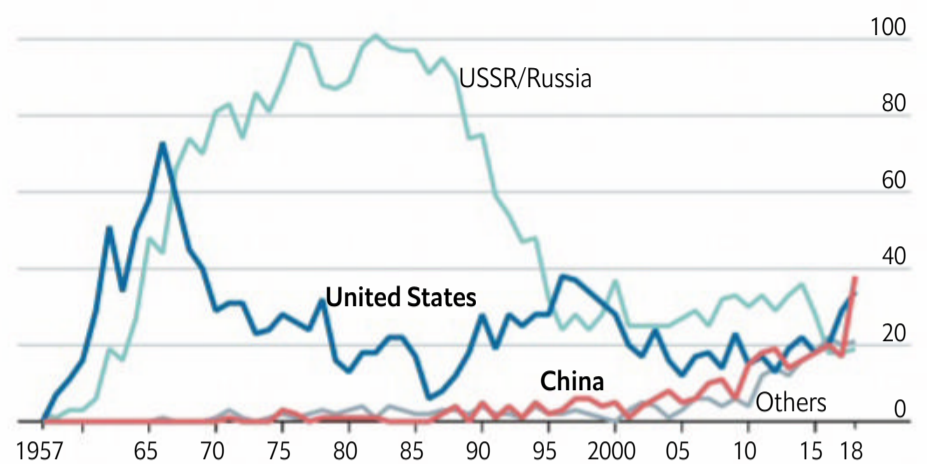
A common complaint in Chinese national-security circles is that America's mood has turned very suddenly, even though China's core interests, from its territorial claims over Taiwan to preserving its one-party system, have not changed in decades.

America has changed, a lot. The National Security Strategy (NSS) of 2006 declared that America "seeks to encourage China to make the right strategic choices for its people, while we hedge against other possibilities." The NSS of 2017 calls engagement mostly a failure, and charges: "China seeks to displace the United States in the Indo-Pacific region, expand the reaches of its state-driven economic model and reorder the region in its favour."

Chinese security experts assume that the explanation is simple, and lies in China's growing military and economic "hard power", says Zhao Tong of the Carnegie-Tsinghua Centre for Global Policy, a Beijing-based think-tank. He sees a flaw in that argument, however. America's mood change was swift, China's rise gradual. Mr Zhao has a somewhat different explanation. It is not just that China is stronger, but that it has become more willing to show off that strength—an assertiveness connected to a renewed emphasis

Commencing countdown, engines on

Number of successful orbital space launches



Source: Centre for Strategic and International Studies

on ideology in Chinese domestic politics. That made the world realise that China is not about to embrace anything resembling Western values, Mr Zhao suggests.

Other misunderstandings lurk. When smaller neighbours complain that China is threatening them, Chinese security folk are convinced that America must have put the tiddlers up to it. The way they tell it, when China acts tough it is in self-defence, showing that it cannot be pushed around. "I am very anxious, because China has not acquired the capacity to look at issues from the perspective of others," says Mr Zhao.

International-relations scholars call the most lethal forms of misunderstanding a "security dilemma". It can arise when one state takes defensive actions which are mistaken for acts of aggression by another, making all sides less safe. America and China risk such dilemmas today, especially in novel fields of competition.

If strategists spend time counting anti-ship missiles and studying China's new marine-combat units, they also spend much time thinking about assets and weapons that cannot be seen and for which no rules of war exist, from cyber-weapons to compromised supply chains. Nowhere is this truer than in cyber-warfare, a field so shadowy that China and America do not even agree on basic definitions, such as what constitutes an unacceptable act. Some sound almost nostalgic for the grim but familiar doctrines of the East-West nuclear stand-off during the original cold war.

Thinking about the unthinkable

Away from the din of daily headlines about trade wars and tariff fights, discreet efforts are under way to see if America and China can agree on some basic norms and principles to avoid disastrous clashes or miscalculations in the cyber-domain. These efforts explicitly take historic nuclear arms talks as a model, reviving such half-forgotten cold-war phrases as "confidence-building measures" and "no first use" pledges.

American and Chinese think-tanks have held quiet meetings to talk about actions so disastrous that both countries might be willing to forswear them. The Carnegie Endowment, based in Washington, DC, has suggested a ban on attacks against command-and-control systems governing nuclear forces, and "extreme restraint" over undermining trust in flows of financial data vital to global stability. A group of government experts convened by the UN has proposed a norm against attacking critical infrastructure, like dams or power grids. Big technology companies and business leaders have begun debating lists of actions that could become as taboo as mustard gas or anthrax in the physical world, such as testing cyber-weapons "in the wild", in computer networks connected to the outside world. ▶



▶ Trust is proving a stumbling block to cold-war-style treaties to outlaw such tools. Unlike nuclear warheads, cyber-weapons cannot be counted, and their destruction can never be verified. To date, Chinese experts and officials have proved reluctant to talk about how China's cyber-warriors operate. America disagrees with China about which forms of cyber-espionage, though annoying for rivals, are to be expected. America draws the line at government spying that steals trade secrets and hands them to favoured companies. China promised to stop such spying in a 2015 agreement between President Xi Jinping and Barack Obama, but American officials insist that the pledge has been broken, with China merely trying harder not to get caught by putting operations under its main spy service, the ministry of state security.

Navigating this new world of known and unknown attacks may require both sides to make painful concessions. In October 2018 a retired colonel from the People's Liberation Army, Lyu Jinghua, and a former Israeli atomic-energy official, Ariel Levite, published a proposal for a grand cyber-bargain in *China Military Science*, a PLA-sponsored academic journal. The paper suggests that America recognise China's right to police and censor its own internet aggressively, dropping any insistence that the internet should be a place of free speech and inquiry worldwide. In return, it proposes that China's cyber-police use their formidable powers to prevent and punish cyber-attacks launched from Chinese territory.

Such proposals lack the drama of America's response to the Sputnik shock, a space race that put man on the moon and spurred inventions vital to modern life. But the Sino-American confrontation must be managed. Arguably, it already amounts to an undeclared cyber-war. Both sides have overriding interests that can be listed and compared. Maybe one day those lists will become a treaty, making the world safer. Alas, that day has not come yet. ■

Trade

On your bike

The trouble with tariffs

DONALD TRUMP is not the first American president to promise a tougher line on China, but he is the first to make a trade war sound like a rent renegotiation. "I am a Tariff Man," he tweeted last December, boasting that America is "taking in \$billions" thanks to tariffs he has imposed (never mind that tariffs are a tax, mostly paid by American consumers). Mr Trump makes America's markets sound like a valuable piece of real estate which foreigners should pay more to access. Or as he puts it: "When people or countries come in to raid the great wealth of our Nation, I want them to pay for the privilege of doing so."

As China grew, politicians typically accused it of not "playing by the same rules". Mr Trump is different. He is not very fussed about rules. He says that he does not blame China for putting its interests first and for stealing American jobs. He blames his predecessors who allowed that theft to take place.

When China's business and policy elite ponders the trade war, it is not uncommon to hear Mr Trump described as a pragmatic businessman under the control of a cabal of crazed economic nationalists. In fact, trade is one of the few policy issues on which Mr Trump came into office with fixed beliefs, forged in the 1980s at a time of trade tensions with Japan and Germany. In contrast, his inner circle has spent a lot of time squabbling over trade policy, occa-



Made in America?

sionally in full hearing of stunned Chinese negotiators. Officials in China are slightly obsessed with the president's chief trade adviser, Peter Navarro, an abrasive academic who would like to decouple the Chinese and American economies. In truth, Mr Navarro's influence is limited. His main strength is that he represents the world view of trade-union Democrats whose votes Mr Trump needs to be re-elected.

The United States Trade Representative, Robert Lighthizer, was raised in a rustbelt railway town and sees fighting to protect manufacturing workers as the proper work of government. He cut his teeth negotiating with Japan for the Reagan administration. What unites this odd bunch is a shared narrative: that China schemed and cheated its way to stealing American jobs and that those jobs could be dragged home by using enough force, just as it happened with Japan two generations ago.

Back then Japan and Germany placated America by agreeing to strengthen the yen and the D-mark against the dollar, making American goods a bit more competitive. Japan was bullied into voluntarily restricting exports of everything from textiles to cars. More constructively, Japanese firms opened car factories in America, bringing Japanese quality management with them.

Alas for the odd bunch, the solutions imposed on Japan are inapplicable to China, and history will not repeat itself. For one thing China is not about to let its currency strengthen by 50% or more against the dollar. For another, Chinese carmakers or telecommunications giants like Huawei are not very welcome to invest in America, where they stand accused of stealing technology and threatening national security.

Team Trump's narrative also refuses to acknowledge the logic of global supply chains. The popular history of how American jobs migrated to China overplays the cunning of Chinese officials and underplays the role of multinational companies from Asia and be- ▶▶



He remembers how, in the late 1980s, Chinese-made bikes sold in America at prices that made no sense and then kept falling by a further 5-10% each year. Kent closed its New Jersey plant in 1991. A few years later the remaining American bikemakers applied to have anti-dumping tariffs slapped on Chinese imports. Government trade regulators declined to help. “The United States was trying to endear itself to China back then,” Mr Kamler charges. It sounds like one of Mr Trump’s sagas of Chinese cheating and American passivity. Yet real life is less tidy, as a trip to the Yangzi delta shows.

Most Kent bicycles are made in Kunshan, near Shanghai, by a contractor called Shanghai General Sports. It is run by Ge Lei, an amiable 43-year-old. The company patriarch is his father, Ge Yali, who ran a state-owned bicycle plant in the 1980s. In the elder Mr Ge’s telling, Kunshan owes its rise to Taiwanese and Japanese manufacturers who transformed production standards. If followers of Mr Trump were to find themselves in the Ge family boardroom in Kunshan, decorated with Kent children’s bikes already bearing Walmart labels, they might yearn for BCA machines from South Carolina to wipe them out.

Except that BCA is a subsidiary of Kent. The firm was opened by Mr Kamler in 2014 after Walmart launched a buy-American drive. And rather than making bicycles from scratch, BCA assembles and paints imported frames and parts, many from Kunshan. A few years ago the Ge family bought 49% of Kent. In other words, those patriotic BCA bikes are half-Chinese.

There is worse news for America Firsters. Because Mr Trump’s tariffs apply to finished bikes and components, they have raised Kent’s and BCA’s costs by \$20m a year. Meanwhile, a separate series of Trump tariffs on steel and aluminium have so disrupted markets that plans to expand BCA are on hold, costing American jobs.

In 2015 South Carolina’s then governor, Nikki Haley, hosted Chinese and Taiwanese parts-makers at the BCA plant, urging them to open branches in her state to create a bike-making cluster. Mr Kamler urged Chinese suppliers to see that low-technology manufacturing is profitable in America. “Candidly, it was not successful,” he sighs. BCA assembled 310,000 bikes last year, and Mr Kamler believes that low production volumes put Chinese investors off. Ge Lei sees a deeper problem. Even ignoring labour costs, he thinks that America has forgotten how to run labour-intensive factories. He is too tactful to call American workers lazy, saying only that they move “slower.”

Instead Mr Ge is building a plant in Cambodia, seeking lower wage bills. Bicycles made there will escape Mr Trump’s anti-China levies as they ship to Moline and other Walmarts. Every one of his new Cambodian workers will learn something that Mr Trump refuses to accept: tariffs rarely work as intended. ■

► yond. In many low-end manufacturing industries, the forces of globalisation sent jobs to China when it offered low wages, cheap land and tax breaks. Foreign firms trained Chinese managers to run export-quality plants.

Now, as Chinese wages are rising and Mr Trump’s tariffs are creating unmanageable political risks, manufacturing jobs are leaving after a 30-year sojourn, heading for South-East Asia and beyond. Getting history right matters because Mr Trump’s trade rhetoric is so steeped in nostalgia. Douglas Paal, who held top Asia posts in the Reagan and first Bush White Houses, sees a defect in every fight based on trade law: “The structure doesn’t allow for the voices of the industries of the future.”

Sometimes a single industry’s fate sums up an era. In the 1970s American factories produced over 15m bicycles a year. Today over 95% of bikes sold in America are imported, overwhelmingly from China. They use decades-old technology, but the Trump administration wielded special “section 301” powers, meant to safeguard the most precious intellectual property, to slap a 10% tariff on Chinese bicycles last September, raised to 25% on May 10th.

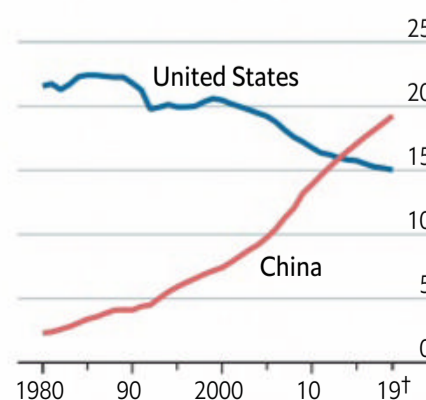
I want to ride it where I like

For anyone seeking evidence that trade wars are good for American workers, the bicycle aisle of the Walmart Supercentre in Moline, Illinois, looks promising. Alongside Chinese-made cycles from brands like Huffy or Kent, the racks hold stirringly patriotic machines: mountain bikes carrying the shield-shaped logo of the Bicycle Corporation of America (BCA) and tags in the colours of the American flag, bearing the slogan “Bringing Jobs Back to America!” and giving a factory address in South Carolina.

That Walmart aisle is misleading. Arnold Kamler is chief executive of Kent International, a family firm based in New Jersey that sells about 3m bicycles a year to Walmart, Target and other shops.

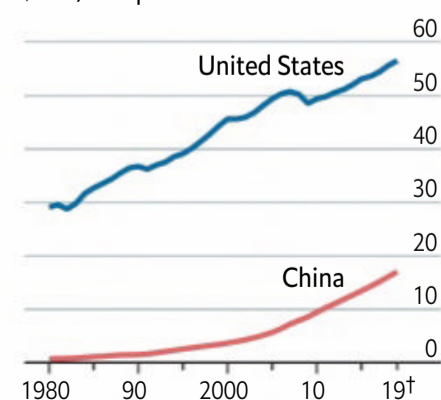
Peddalling fast

Global GDP*
% of total



Source: IMF

GDP per person*
\$'000, 2011 prices



*At purchasing-power parity †Forecast

The future

A contest for the ages

America and China must manage their rivalry, or risk disaster

ASK AMERICAN experts how a great-power competition with China might end well, and their best-case scenarios are strikingly similar. They describe a near future in which China overreaches and stumbles. They imagine a China chastened by slowing growth at home and a backlash to its assertive ways overseas. That China, they hope, might look again at the global order and seek a leading role in it, rather than its remaking.

Chinese experts also sound alike when explaining their own best-case scenario. Put crudely, it is for America to get over itself. More politely, Chinese voices express hopes that in a decade or so America will learn the humility to accept China as an equal, and the wisdom to avoid provoking China in its Asian backyard.

It is sobering that none of these experts predicts a future in which America and China both feel like winners. That should give all sides pause. The original cold war with the Soviet Union ended with an American victory. In a new Sino-American cold war, both countries could lose.

Evan Medeiros, formerly Barack Obama's top Asia adviser, worries that China is focused on Mr Trump's disruptive diplomacy and narrow interest in trade. Mr Medeiros, now at Georgetown University, hears a lack of understanding about how America's mood has changed. The Chinese "are focused on the cyclical, I don't think they have internalised the structural," he says.

Along engagement

As for America, it needs to remember that engagement with China was not an act of charity. It has become fashionable to mock as naive the Americans who advocated engagement with China as it opened to the world. In fact, many were hard-headed realists. The US-China Dialogue Podcast, an oral-history project at Georgetown University, is interviewing veterans from 40 years of diplomatic relations. It offers an instructive reminder of how fragile and dangerous China was not long ago. In one recording Jeffrey Bader, a former principal adviser to Mr Obama on Asia policy, now at the Brookings Institution, recalls how in 1980s no issue occupied America more than China's willingness to provide nuclear-weapons secrets to Pakistan and ballistic-missile designs to "every rogue regime in the Middle East". After years of high-level pressure, China is now a foe of nuclear proliferation. After the brutal suppression of student-led demonstrations in Tiananmen Square in June 1989, America kept trade ties open, not in hopes of a kinder China, Mr Bader notes, but for fear that it might slip back into the xenophobic autarky of the Mao years.

America needs to think hard about what it wants from China. Some in Washington call continued Communist Party rule an insuperable barrier to trust. Unless they see the party being overthrown soon, it is wiser to focus on Chinese behaviour. As Oriana Skylar Mastro of Georgetown University says: "If we make it about the nature of China itself, we give them no exit."

America must avoid traps. If Chinese strategists believe what they say—that America is tired and ready to retreat—the next step is predictable. China will offer America a superficially easy life in which China is granted a sphere of influence in the western Pacific Ocean, and America settles into inward-looking decline.

There is a cold logic to isolationism, concedes Ms Mastro,

though she opposes it. If America is willing to accept a world in which it no longer stands by Asian allies, then "there are no other points of military contention between China and the United States." The price would be high: a demonstration that America feels bound neither by treaty commitments to allies nor its values.

Not long ago America and China defused crises by promising to expand commerce. It is too late for that. David Dollar of the Brookings Institution, a think-tank, represented the Treasury in Beijing. He recalls President Xi Jinping telling visiting Americans that "the economic relationship is the foundation of our relationship." Mr Dollar demurs. Several Western allies, such as Germany, are more deeply bound to China by direct exchanges than America is. Among destinations for American foreign direct investment, China ranks seventh. A stronger case for engagement involves the unique capability of America and China to provide global public goods, such as policies to tackle climate change, he says.

The chances of an accidental clash with American planes or ships are too high for comfort

Henry Paulson, the former treasury secretary, urges China and America to agree on tangible projects that their publics can see, from environmental schemes to greenfield investments that create new jobs: "To build trust it is important to get some wins." This report has explored many obstacles to trust. China is a curious sort of superpower: admired for its achievements but lacking real friends. At best it turns other countries into clients, drawn by its money, technology and markets. China is not to be blamed for becoming very large. But it is too big to maintain the self-interested, opportunistic, cynical worldview that helped it to rise. If it does not change, it could break globalisation, splintering world markets into Chinese- and American-led camps. In the South China Sea and other near waters, China's assertive nationalism is raising the chances of an accidental clash with American planes or ships to a level too high for comfort. And China has built a racist police state in its north-western region of Xinjiang, locking perhaps a million Muslim Uighurs in "re-education camps" and subjecting millions more to oppressive high-tech surveillance. That will become an ever larger drag on its reputation, especially if China exports that techno-authoritarian model to other places.

America, too, has a lot to lose. Its leaders are succumbing to a crisis of confidence that risks proving scornful Chinese critics right. To compete with China, America must invest in its future, with funds for public education and high-level science, and sensible immigration policies to attract talent. Abroad, it means rebuilding frayed alliances, and remembering that other Western nations do not want to choose between China and America. No rules exist for this great-power competition. Modern history has not seen such ideological rivalry between two giant trade partners. Agreeing how to make that contest safe and constructive will be hard. But this century's peace and prosperity depend on it. ■

ACKNOWLEDGMENTS A list of acknowledgments and sources is included in the online version of this special report

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Immigration in Germany

Opening up, a crack

OBERSTADION AND STUTT GART

Cautiously, Germany is extending an invitation to foreign workers

THINK GERMANY and migration, and you probably think refugees. But German employers desperate for workers have their eye on a different sort of immigrant. After a decade of economic growth, unemployment is at its lowest and job vacancies their highest since reunification in 1990. Almost two-thirds of firms complain about a lack of skilled labour (see chart). So Germany is starting to look outward.

Germany's modest wage growth suggests there is no widespread labour shortage. But a tour through the manufacturing heartland of Baden-Württemberg (unemployment rate: 3.1%) finds few doubts among employers. "If you advertise in the newspaper, you get zero!" cries Peter Kaufmann, who runs a house-building firm in Oberstadion, a village near Ulm. He reckons he could raise his headcount from 100 to 150 if he could find more bricklayers and carpenters. Services like elderly care and tourism are crying out for workers. Nicole Hoffmeister-Kraut, Baden-Württemberg's economy minister, says labour shortages hurt growth. And Germany's greying workforce makes this a problem for the ages.

As a result, German parliamentarians are discussing the country's first attempt to

regulate the immigration of semi-skilled workers from outside the European Union. If passed, the *Fachkräfteeinwanderungsgesetz* ("Skilled workers immigration law") will from 2020 extend the rules covering foreign graduates to vocationally trained workers. Firms will no longer have to favour EU citizens for such jobs, meaning they can hire non-EU immigrants so long as they speak decent German and have been trained to German standards. The re-

→ Also in this section

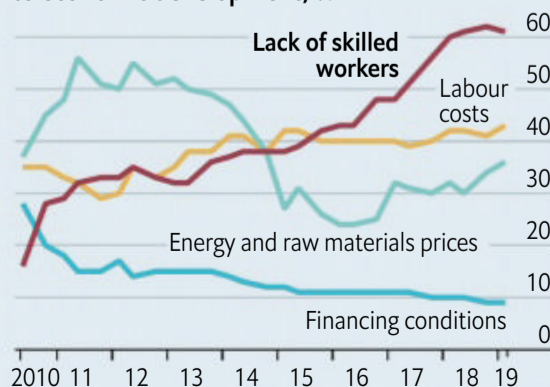
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striction of immigration to "bottleneck" occupations is to be scrapped. Some foreigners will be able to come to Germany and spend six months seeking work or a training contract, albeit with conditions.

The law is a hard-fought compromise between Germany's "grand coalition" of centre-right and centre-left. Hubertus Heil, the labour minister, calls it a "milestone" in German history. Yet as written, it will do little to alleviate employers' woes. It is extremely hard for foreigners to prove they have picked up skills equivalent to those taught in Germany. Under Germany's "dual education" system about half of school-leavers are trained on the job in one of around 330 regulated professions, from bookbinding to thermometer-making. This system, deeply rooted in German history, is not comparable to anything outside Europe, as Syrian refugees who arrived in ▶▶

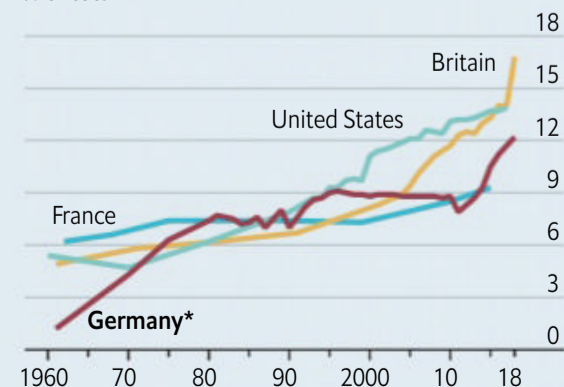
Tight corner

German companies, perceived risks to economic development, %



Sources: DIHK; Destatis; Insee; ONS; US Census Bureau

Foreign-born population % of total



*Estimates revised after 2011 census results

► Germany with experience as bakers or lorry drivers have learned to their cost.

The government therefore estimates that the law will bring only around 25,000 people a year to Germany, at least to begin with. Rainer Dulger of Gesamtmetall, an engineering employers' group, reckons it will help fill one-tenth of his members' vacancies at best. "As long as we don't address the question of recognising foreign qualifications, we won't have substantial change," says Rüdiger Wapler of the Institute for Employment Research in Stuttgart.

Filiz Polat, of the opposition Greens, detects a whiff of hostility to foreigners in the resistance to establishing a more generous regime. Some in the ruling Christian Democratic Union (CDU) indeed cling to the old canard that Germany is not a "migration country", even though one-quarter of the population has a migrant background and over 100,000 people are naturalised each year. It was less than 20 years ago that a CDU politician could campaign against a scheme to recruit foreign IT workers under the slogan *Kinder statt Inder!* ("Children instead of Indians!"). Lingering fears among conservatives of immigrants swelling welfare rolls are reflected in the bill's many restrictive provisions.

The law has also been caught up in the political slipstream of 2015-16, when over a million asylum-seekers entered Germany. Between 10,000 and 15,000 still arrive every month, and few of those ordered to leave do so. The compromise hashed out by the coalition partners rules out migrants "changing lanes" from asylum to work—although some who have found jobs or training will be able to stay—and the skilled-worker law is accompanied by a controversial bill to toughen deportation rules.

"The mingling [of asylum and immigration] produces problems," says Lars Castellucci, a Social Democrat MP who backs the law. He says the skilled-worker law could be amended one day if it proves ineffectual. Thomas Bauer, chair of the Expert Council of German Foundations on Integration and Migration, proposes expanding the pathways for potential immigrants to include language fluency or previous work experience in Germany. But until the asylum numbers are cut it may be hard to further relax the rules for immigrant workers.

In the meantime, firms will have to manage the new law, employers' groups must get to grips with a potpourri of foreign training systems and embassies will need more resources. Workers from the Western Balkans, who already enjoy special access to Germany, can wait up to a year to have applications processed. Oliver Maassen, head of HR at Trumpf, a machine-tools and laser-manufacturing outfit based near Stuttgart, says the firm once spent 11 months and tens of thousands of euros trying to secure a visa for a qualified Indian

colleague who wanted to move to Germany.

Despite employers' pleas, the new law may ultimately be off-target. Mr Wapler notes that job growth in the semi-skilled professions it covers has been slower than in the low- and high-skilled sectors, and that such roles are anyway at risk of automation. Yet the law also carries a symbolic value that may have been overlooked. Mr Bauer says it creates a presumption that immigrants have a right to seek work in Germany, whatever the caveats. What has long been clear in fact will at last be enshrined in law: that Germany is a country of immigration. "Employers may not think this is a huge thing," he says, "but I do." ■



Bulgaria

Secrets and lies

SOPIA

Politicians try to explain how they afford their splendid apartments

FEW BULGARIANS who walk by the Letera, a new luxury apartment building in Sofia, can read the texts inscribed on its façade. They are written in the Glagolitic alphabet, a medieval ecclesiastic script. This is part of the building's aesthetic, a sort of religious-nationalist elitism. The advertising video on its website is a tribute to early Slavic Christianity, featuring cowed monks in the mist. Over the entrance, the 91st Psalm offers protection for the righteous from their enemies: "He who dwells in the secret place of the Most High, abideth in the shadow of the Almighty."

Tsvetan Tsvetanov (pictured), the owner of the Letera's penthouse, may wish he dwelt in a somewhat more secret place. In late March Mr Tsvetanov, the second most powerful figure in the ruling GERB party, was revealed to have obtained his apartment in a complicated exchange that valued it at about €250,000 (\$280,000), per-

haps a quarter of the going rate. He denies any wrongdoing, but has resigned as GERB's parliamentary leader.

Since then nearly a dozen other highly placed officials have been found to have received cut-price apartments in various buildings around Sofia. Many have stepped down, including the then justice minister. Even the chairman of the anti-corruption commission is under investigation, for failing to declare that his top-floor loft included his building's entire 186-square-metre roof terrace. (He claimed it was shared by all the residents, though it can be reached only from his apartment.)

The "apartments scandal" has infuriated Bulgarian citizens, even though the sums involved are far smaller than in other corruption affairs, such as the billion-dollar collapse of the politically connected Corporate Commercial Bank in 2014. "The thing about this story is that you can touch it," explains Polina Paunova of Svobodna Evropa, the Bulgarian branch of Radio Free Europe, which first reported the scandal.

The media have become obsessed by details of unlisted balconies and private elevators, but the real implications go much deeper. The most difficult problem for corrupt politicians is justifying cash holdings that vastly exceed their salaries, explains Nikolay Staykov of the Anti-Corruption Fund, a watchdog that worked with Svobodna Evropa. Property transactions provide ways to launder such money, such as declaring a purchase at the lowest plausible value, and then reselling it to a friendly party at the highest plausible price.

The scandal involves powerful commercial interests as well. The Letera was built by Arteks, a developer that is also building a 34-storey apartment tower that would be the tallest in Sofia. That project, the "Golden Century" building, is opposed by neighbourhood groups. More important, it may not be legal: its construction permit, granted in 2007, expired in November 2017. The company contends that amendments to the construction code passed by parliament in January 2017, when Mr Tsvetanov was leader of the GERB faction, retroactively granted it an extra three years. Mr Tsvetanov says that when he was negotiating to buy his apartment from Arteks, he was not aware of the problem with the Golden Century's permit, and that in any case the amendments do not apply. Arteks's lawyers say they do.

Since they joined the European Union in 2007, Bulgaria and Romania have been subjected to special monitoring by the European Commission to check that they are making progress against corruption. Romania established an independent prosecutor's office that convicted thousands of officials, but has since backtracked and last year fired the prosecutor. Bulgaria, meanwhile, has been evasive ►►

▶ from the start. The current anti-corruption commission, formed in early 2018, is the third iteration: earlier versions accomplished little and were dissolved under EU pressure for reform. With its commissioner now under investigation, the new version is just as compromised.

Boyko Borisov, Bulgaria's prime minister for most of the past ten years, is a canny operator who has his party entirely in his grip. His position is not under threat. But the apartments scandal has pushed GERB's popularity below that of the rival Socialist Party in some polls, and it may have wrecked Mr Borisov's ability to fulfil one of his campaign promises: ending the EU special monitoring programme.

Meanwhile, Mr Tsvetanov is defending himself by trumpeting his role as an advocate for Bulgaria's planned purchase of F-16 fighter jets from America. Like the others accused in the apartment scandal, he hopes the words of the psalm hold true: "No evil shall befall you, nor shall any plague come near your dwelling." ■

France

Mighty new metro

LA DÉFENSE

Vast tunnelling is under way

DEEP IN THE ground beneath the western Paris business district, the din is bone-jangling. With compact mechanical diggers, workers are excavating rubble from 22-metre (72-foot) shafts. These will take 60 supporting pillars for a vast new train station, to be buried 35 metres underground. Welcome to one of Europe's biggest infrastructure projects: an ambitious scheme to encircle Paris with a new metro loop, and shift the way people think and move about the capital.

The new station at La Défense, built as part of the westward extension of the E line, will link up to a huge looping network



known as the "Grand Paris Express". Most of the French capital's existing rail and metro lines are there to carry people in and out of the city centre. The new underground loops, by contrast, focus on moving them around the suburbs.

One loop will run from Charles de Gaulle airport in the north, via the *banlieue* of Seine-Saint-Denis, westward to the skyscrapers of La Défense, and on in a ring around southern and eastern Paris, outside the capital's *périphérique* ring road. A second loop will link the first to Orly airport in the southern suburbs, and then west via the Saclay university cluster at Palaiseau to Versailles. When complete, the new driverless underground network will feature 68 new stations and cover 200km, nearly twice the length of London's new Crossrail.

Like Crossrail, the new Paris express has been beset by delays and cost increases. A damning report by the French national auditor, in December 2017, pointed then to an estimated total cost of €38.5bn (\$43bn), up from €19bn in 2010, when the publicly financed project began. Last year, the government finally conceded that only part of the network would be finished by 2024, when Paris hosts the Olympic games. A new fast link to Charles de Gaulle airport may also not be ready by then. Part of the southern loop will not open until 2030, or later still.

Naturally, everyone blames everyone else, easy to do in a city with baffling and overlapping layers of local and regional government. Yet, in time, the effect could be radical. The new network should help to defy the mighty centralising force of Paris, which obliges commuters who live in one suburb and work in another to pass through the centre. This will relieve pressure on city-centre lines, and could give a boost to suburban business hubs. Parisians tend to hold a mental map of their city that stops at the *périphérique*. The new network, says Jean-Louis Missika, deputy mayor for planning at the capital's town hall, marks the end of a model that "assumes Paris is the centre of the world". ■

Wine and punishment

Battling the bottlenecks

SEVASTOPOL

The trials and tribulations of winemakers in post-annexation Crimea

VINES LINE the hills south of Sevastopol. Oleg Repin, a local vintner, surveys the land and recalls his days harvesting grapes as a schoolboy. "Living here, sooner or later you come in touch with wine," he says. One of a handful of boutique Crimean winemakers hoping to revive fine wine on the peninsula, his brand, launched in 2010, now produces a punchy riesling and a subtle pinot noir.

When Russia seized Crimea from Ukraine in 2014, it coveted many things, from strategically located ports to sandy beaches. So too its bounty of grapes. During the Soviet era, central planners used the region to mass-produce wine,

often of dubious quality, for the whole Union. After the annexation, among the first assets that the new Russian authorities seized and nationalised were two tsarist-era wineries, Noviy Svet and Massandra. The Russian government has showered its new alcoholic acquisitions with subsidies.

Yet for many producers, the challenges of post-annexation life have been harder to swallow than a bottle of Soviet sauvignon. Though the Russian market is much larger than the Ukrainian one, drinking there still revolves around spirits and beer. Credit can be hard to come by, with just two banks serving the region. The transition to de facto Russian rule has made acquiring and holding property tricky; small producers have struggled to adjust to Russian regulations. Western sanctions mean that supplies often have to be acquired through roundabout means. Mr Repin reckons the sanctions add 15-20% to costs; they make exporting "impossible".

The latest hiccup has been a shortage of bottles. After the annexation, two Russian factories became the main sources of glassware for Crimean wineries. Recently, one cut off its contracts with Crimea; local winemakers suspect that a new director, loyal to Western shareholders, discovered that the company had been supplying Crimea.



Charlemagne | How to win the Eurovision Song Contest

What a music show says about a divided continent



I COULD BE the sun that lights your dark/And maybe I would lit [sic] your world with just one spark." The traits are all there: the key change, the dodgy English, the endorsement of peace and being nice. Such is the Eurovision Song Contest. "Too late for love" is the Swedish entry and one of the favourites to win this year's competition on May 18th.

Eurovision was founded in 1956 to promote peace in post-war Europe. But some of its traits can turn the keenest Europhile into a Brexiteer, a Frexiteer or a Swexiteer. Since 1997 viewers across Europe have been able to vote by phone. Hence the shamelessly political results. Cyprus votes for Greece, for example, and Finland votes for Estonia. Songs that make sense in a national context sometimes prove baffling to foreigners, and flop. Successful contestants often offer a vague, generic Euro-music, a living metaphor for the EU's homogeneous mush.

To some extent, the metaphor works. Just as European states struggle to reconcile different economic and geopolitical instincts—most Eurovision participants are members of the EU—so different musical tastes under Europe. Irving Wolther, an expert on European music known as "Dr Eurovision", explains the national differences. Finnish emphasises the first syllables of words and so has its own rhythm. Italian depends on vowels. Dutch depends on consonants. Such nuances make it hard to write a song that will naturally appeal to all tastes. Even assessments of the contest differ between different national broadcasters. Dean Vuletic, a historian specialising in Eurovision, identifies three different styles of commentary: campy (Italian), sarcastic (Austrian or British) and matter of fact (German and eastern European).

Yet under the surface there is a different, more positive story. For one thing, there are common, distinct trends that unite European music styles. Eurovision's early years were dominated by ballads and other gentle songs. Then in the late 1960s and early 1970s came Europop. Defined by Simon Frith, a musicologist, as "a bouncy beat, just one chorus hook and elementary lyrics", this was epitomised by ABBA, a Swedish group. Such Eurovision songs were often the soundtrack to summer holidays in Mediterranean resorts with pan-European audiences. In the 1990s, partly thanks to its expansion to post-communist countries but also as Europop

faded from fashion, Eurovision embraced world music. Around the same time media markets were liberalised and Eurovision became more commercial. Even today—in a musical age defined by Spotify and YouTube—its songs have distinctive traits. American chart hits are often influenced by rap and country songs. Europe's hits, by contrast, tend to be rooted in pop and dance-music traditions.

Europe's musical giant is Sweden. Universal music education, a culture of egalitarian consumerism (think H&M and IKEA) and the ability to enunciate English lyrics more clearly than any native speaker help to explain why this small nation is the world's third largest music exporter, after Britain and America. Sweden's pre-selection for Eurovision is one of the country's biggest annual television events. Even unsuccessful contestants often end up as stars. A cottage industry has emerged: Swedish composers write songs for their own country and also for others.

One such mercenary is Thomas G:son, a Swede who has written 14 Eurovision songs, including the winning song, "Euphoria", for his native Sweden in 2012. (Sample lyrics: "Euphoria!/ An everlasting piece of art/ A beating love within my heart ...")

"A good Eurovision song has to connect with all the different people of Europe," says Mr G:son; the key is not a particular style but something distinctive and attention-grabbing. Eurovision artists only have three minutes, shorter than the average chart song, and most viewers are hearing the song for the first time and alongside almost 30 other ditties. It has to "gel" with the artist, says Mr G:son. It cannot be bland.

One trick, says Mr Wolther, is to combine the different with the familiar. Some hooks are purely musical. Composers who apply the lessons of Spotify, whose big data Eurovision artists use to work out what sort of songs appeal across cultural divides, tend to include plenty of drama in the first 30 seconds of a song to prevent attention wandering. A key change can raise the excitement. Hints at current chart hits also help.

But other hooks are cultural. Politics is one way of one doing that. Recent winning entries in Eurovision by Austria, Portugal, Ukraine and Israel all had an ideological dimension. And then there is the performance. Flaming pianos, ridiculous costumes, holograms and digital graphics in the background at least make a song memorable. To win Eurovision is to find the sweet spot between camp and sincerity: just enough politics, just enough eccentricity, just enough pan-European appeal.

Tell it Brussels

All of which contains lessons for the EU, which suffers from many of the flaws often ascribed to Eurovision. It is too bent on homogeneity, too artificial and too deracinated. However, Eurovision shows that it is possible to unite the continent by pushing against those things. In recent years Eurovision has rewarded eccentric entries that refuse to follow the rules. Austria won with a bearded drag queen, Portugal with a ballad sung in Portuguese, Ukraine with a lament for the historical expulsion of the Tartars. Last year Israel won with chicken moves, a wacky outfit, a feminist message and typical Israeli humour.

Eurovision has many sins but also displays virtues: an absence of pomposity, a nod to national cultures, a tolerance of the artificial, an openness both to the new and the familiar and a sense of what people want. All these are traits that Europe's stuffy political institutions sadly lack. Eurocrats who sneer at Eurovision should learn from it instead. ■



The European election

When the centre cannot hold

PONTEFRACT

In a bizarre and unwanted election, both main parties look like taking a drubbing

FEATHERSTONE Working Men's Club, near Pontefract, has never seen anything like it. On a sunny May morning, a mass of Brexit Party supporters, armed with placards and warmed up by a tub-thumping speech from Ann Widdecombe, a former Tory minister, chant "Nig-el, Nig-el" as their hero clammers on to the platform. This month's European election, Nigel Farage shouts, is about democracy and the betrayal of voters. Mentions of Theresa May, the Conservative prime minister, or Yvette Cooper, the local Labour MP, are greeted with howls of "Traitor!" Outside, a kindly soul from the Communist Party of Great Britain (Marxist-Leninist) distributes leaflets pointing out that his party also backs Brexit.

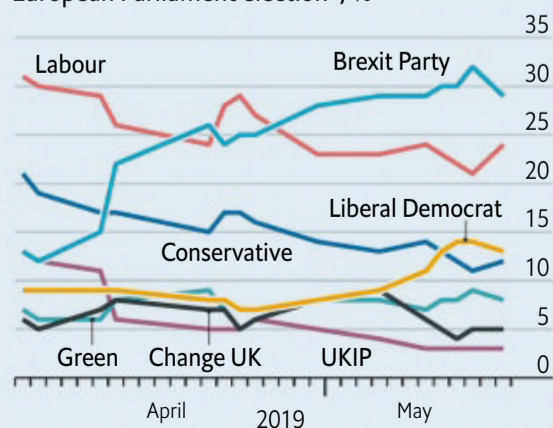
Mr Farage's new party thrives on protest. Its supporters enjoy nothing more than being told their vote to leave the European Union in June 2016 has been betrayed by the establishment, the London elite, a useless prime minister, the civil service, treacherous MPs and the BBC. Mr Farage, who went from private school to a career in the City, is himself a prime elite specimen. Yet he manages to pose as an anti-estab-

lishment rebel (see Bagehot). In a Labour stronghold he raises cheers from the Yorkshire audience by denouncing Jeremy Corbyn as an Islington leftie. He offers no policies—they are promised only after the election—and does not even explain why Brexit is a good idea. His message is simple: we must walk out in October with no deal.

By any standards, the European election

D'Hondt stop me now

Britain, voting intention for European Parliament election*, %



Sources: BMG Research; ComRes; Hanbury Strategy; Opinium; PanelBase; YouGov *Three-poll moving average

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taking place in Britain on May 23rd is bizarre. Nobody wanted it, as Brexit was meant to have happened on March 29th. But Parliament's repeated refusal to pass the government's Brexit deal was followed by a European Council decision to extend the deadline until October 31st. So Britain is having to join the rest of the EU in voting for a fresh set of MEPs next week.

On the face of it the result should not matter much. If a Brexit deal is passed before the summer recess, as the government still hopes, British MEPs will barely have time to take their seats. Both main parties play down the ballot's importance. The Tories are invisible on the campaign trail, failing even to produce a manifesto. Labour is little better, as its leadership is divided over whether to support another referendum. Yet the smaller parties are enjoying themselves—and doing well.

The outcome will depend heavily on turnout. In European elections it is usually small (last time, in 2014, it was 35%). Yet this one may see turnout rise, as both pro- and anti-Brexit forces have been energised. Pollsters find that voters now identify more strongly with Remain or Leave than with their usual parties. The result is that support is bleeding from the Tories to the Brexit Party and, to a lesser extent, from Labour to the Liberal Democrats, Greens and Change UK (see chart).

The focus is on Mr Farage's Brexit Party, as it has a good chance of coming first. Yet, given the Tories' calamitous meltdown over Brexit, this would not be so extraordinary. In 2014, after all, Mr Farage led the UK

► Independence Party into pole position. The bigger surprise is the fall-off in Labour support. Mr Corbyn's ambivalence on Brexit seems to be driving many Remain voters to the smaller parties.

These three, especially the new Change UK, have come under justified attack for splitting the Remain vote. Change UK's leaders claim this is less damaging than it seems, as they appeal to voters disillusioned by the Lib Dems or hostile to the Greens. If the three together score in the high 20s, they will do almost as well as the Brexit Party in vote share, though probably not in terms of seats. Yet Change UK is having a tough time, not least over its poor organisation and branding. This week its lead candidate in Scotland pulled out, asking voters to back the Lib Dems. The party has no candidate in the Peterborough by-election on June 6th.

The biggest question is what impact next week's election might have on Brexit and British politics. The Brexit deal still seems stuck. Brussels has switched off; no further negotiations are taking place. But Mrs May has announced that in early June she will bring the withdrawal agreement bill before the House of Commons. Her hope is that the Brexit Party's success may shock Tory and Labour MPs into voting for the deal after all. She will also argue that, if the bill fails, the only alternative is a no-deal Brexit. Yet she is on weak ground. Labour still looks unlikely to back the bill. So do the Northern Irish Democratic Unionists and the hardline Tory Brexiters. And no-deal is not the only alternative, as Brussels seems prepared to grant yet another extension of the deadline to avert it.

The effect of the election on Mrs May's own position may be more dramatic. As *The Economist* went to press she was trying to fend off another attempt by the 1922 committee of Tory backbench MPs to change its rules to allow a leadership challenge. Even if she avoids such a contest, most ministers and MPs expect her to go soon. If her attempt to pass the Brexit bill fails, she will be under intense pressure to accelerate the timetable for her departure.

What might her successor do? This is where the Brexit Party's influence will count. It is not going away after the European election. Indeed, Mr Farage claims to be ready to run candidates, including himself, in any general election, too. And for many Tories, the prospect of the Brexit Party eating away at their vote means their party must back a no-deal Brexit to survive.

Yet if it does, it risks losing its more moderate supporters. Thus, however the Tories respond to the Brexit Party's success, a Labour victory in a future election seems more likely. Here is the ultimate irony for those vociferous Farage supporters. Their actions could yet mean that a Labour-led government overturns Brexit altogether. ■



Football and finance

Scouts' honour

How three middling clubs used clever hiring to beat the top dogs

IF YOU HAD told football fans in a pub 15 years ago that Manchester City, Liverpool and Tottenham Hotspur would one day dominate the Premier League, they might have told you to make it your last pint of the day. In 2004 City finished 16th, Spurs 14th and Liverpool a distant fourth. The ruling triumvirate of Arsenal, Chelsea and Manchester United were the only clubs to win the competition in 1996-2011.

Yet today the league tables are turned. The Premiership's new sultans are Manchester City, who on May 12th sealed their fourth title in eight seasons, to the delight of Abu Dhabi's royal family, who bought the club in 2008. One point behind were Liverpool, whose tally of 97 made them the best runners-up ever. On June 1st the Merseyside team will face Tottenham in the final of the Champions League, Europe's most prestigious tournament. What has allowed this new trio to dominate?

Money is part of the answer. In 2008-12 Manchester City splurged £520m (\$675m) on transfers. Fenway Sports Group, an American firm that bought a near-bankrupt Liverpool in 2010 for £300m, now spends that much a season on players' wages and transfer fees. But lots of English clubs are wealthy: nine of the world's 20 highest-earning clubs are English. City spend only 8% more per year on players than United, and Spurs pay 20% less than Arsenal.

In the past, Premier League clubs squandered their wealth. When 21st Club, a consultancy, plotted European teams' spending against their results, 16 of the 20 English sides sat below the trend line. Con-

tinental clubs charge higher transfer fees to affluent Premier League sides, who spend 80% more than their rivals for the same level of talent. What's more, English clubs have a habit of buying ageing stars rather than nurturing talented youngsters.

Manchester City, Liverpool and Tottenham have learned from these mistakes. Since 2016 the players they have signed have been younger and from less flashy clubs than those bought by their rivals (see charts). City paid £55m for Kevin de Bruyne, a midfielder for Wolfsburg, a mediocre German team. Liverpool bought Mohamed Salah, an attacker for Roma, for £37m. Now in their peak years, each has become his team's best player. This season Spurs became the first club in Premier League history not to sign a single player, after years of recruiting young talents from lesser clubs. Many have matured into stars, such as Son Heung-min (from Leverkusen) and Dele Alli (from Milton Keynes).

Meanwhile Manchester United, Chelsea and Arsenal have made costly errors. United made 30-year-old Alexis Sánchez the league's highest earner, on £25m a year. But the striker scored just five goals in 45 games. Chelsea got rid of Álvaro Morata, a £60m striker from Real Madrid, after just a year. Arsenal have purchased several woeeful defenders.

Challenges remain for the new trio at the top—not least an investigation by UEFA, Europe's football authority, into claims of financial irregularities at City, which could mean a season-long ban (City deny it). Either way, on June 1st an English side will win the Champions League for the first time in seven years. ■

Only the good buy young

Selected English football clubs

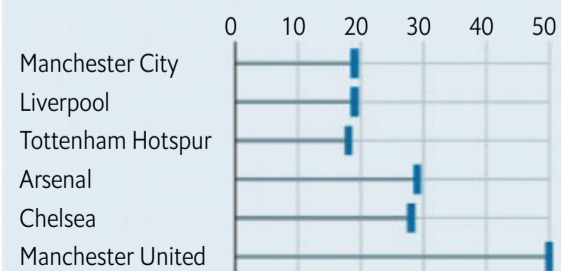
Average age of players bought

First-team players, since 2016-17



Share of players bought from elite clubs*

First-team players, since 2016-17, %



*21st Club rating greater than 800 points (approximately top 15 clubs in Europe)
Source: 21st Club

Bagehot | The return of Mr Brexit

Nigel Farage is once again at the heart of British politics



HE HAS NEVER held a seat in the House of Commons, let alone a seat around the cabinet table. Yet Nigel Farage is one of the most important British politicians of the past few decades. History will have little to say about many members of Theresa May's under-achieving government. But it will have a great deal to say, whether good or bad, about this former commodities trader turned champion of the populist revolution.

Mr Farage has changed the course of British history once and may be about to change it again. He persuaded David Cameron to call a referendum on membership of the EU, by turning the obscure UK Independence Party into a powerful electoral machine that hoovered up discontented Tory voters. Now he is trying to force Mrs May to "deliver on" that referendum by demanding that Britain leave with no deal. His brand-new Brexit Party is likely to win more votes than any other in next week's European election and send an electric shock through the political establishment.

As you might expect, the leader of the Brexit Party is a very British—or perhaps it would be more accurate to say a very English—figure. He is part city-slicker and part pub-philosopher, usually wearing pinstripe suits and a tie but also fond of propping up the bar with a pint of ale in front of him. (It is a measure of how seriously he is taking the current election that he is currently off the beer.) He litters his conversation with Basil Fawlty-style references to the second world war, and has said his greatest regret is not having taken part in D-Day.

But this English figure is drawing on powerful global forces, which are eroding the foundations of the liberal order that was founded after the war and rejuvenated by free-marketeers in the 1980s. Mr Farage is much more aware of the global dimension of what he is doing than many of the supposed "citizens of nowhere" whom he is tormenting. During his almost 20 years as an MEP he has cultivated deep connections with right-wing populists across Europe. He was the first British politician to visit Donald Trump after the 2016 presidential election and he is greeted at CPAC, a gathering of American conservatives, as a conquering hero. "The Brink", a new film about Steve Bannon, Mr Trump's former campaign manager, shows Mr Farage taking part in a meeting with Mr Bannon and various European populists, some of them distinctly

unsavoury, to discuss forming a sort of anti-Davos popular front.

The most powerful of these global forces is, somewhat paradoxically, nationalism. The past decade has seen a revolt against the world-is-flat globalism that was all the rage at the turn of the century, a revolt that has swept overtly nationalist governments to power in America, Brazil, Hungary and Poland, to name only the most obvious. The second force is resentment against the remote elites who have exploited the upside of globalisation while cunningly protecting themselves against the downside. They include borderless bankers who suddenly rediscover the importance of nation-states when it comes to bailing out their banks, and international networkers who, in the words of Thierry Baudet, a hot new populist in the Netherlands, are forever "failing upwards".

Britain is particularly exposed to these global forces. It is one of the few European countries whose national pride was burnished rather than tarnished by the second world war. As such it was always going to be a misfit in a European club designed by France and Germany. A distinctive sense of Englishness has been gathering strength for years, partly in response to Scottish nationalism. Britain's liberal economic model has also generated mounting resentment, both because it left swathes of the country behind and because the financial crisis produced a decade of stagnant wages.

Mr Farage has woven this combination of pride and resentment into a compelling anti-establishment narrative. Brussels bureaucrats are intent on turning an enterprising nation into a vassal of the European super-state, he says, and the British establishment is too craven and corrupt to see what is happening. Those very Brussels bureaucrats have unwittingly followed Mr Farage's script. "Brexit: Behind Closed Doors", a recent BBC documentary that is compulsory viewing in Brexit Party circles, shows Guy Verhofstadt, the European Parliament's Brexit co-ordinator, and his minions joking about turning Britain into a colony and comparing it to a clapped-out old car.

The pinstriped populist has also made use of a third global force: a technological revolution that is making it easier to create just-in-time political parties out of thin air and keep in constant contact with their supporters. One of the many ironies of the European election is that the supposedly backward-looking Brexit Party has exploited social media much more astutely than the self-consciously with-it Change UK. Mr Farage's public events have been perfectly choreographed and his online campaign first-rate. The Brexit Party has a cadre of battle-hardened young Brexiteers who understand the digital world and who sharpened their campaigning skills in the referendum.

Farage against the machine

The party's barnstorming performance so far has ignited a lively debate about what this means for the future of politics. Will the Brexit Party be able to break the mould of British politics? Or is it just a protest outfit driven by a single man and a single issue? Mr Farage's former vehicle, UKIP, won 12.6% of the vote in the general election of 2015, which translated into just one seat. But psephological calculations miss the bigger questions. Mr Farage's success signals the rise of a new sort of politics, which puts the will of the people before the judgment of MPs, and which emphasises questions of identity rather than technocratic problem-solving. Mr Farage may never succeed in his lifelong ambition of winning a seat in Parliament. But by keeping questions of identity at the centre of politics, he will succeed in his bigger aim of consuming the age of bland compromise with an age of fiery populism. ■



Politics and comedy

Funny business

Comedy is the populists' secret weapon. The professionals are joining in

OF ALL DONALD TRUMP'S beefs with the "mainstream media", it may be the least likely. Those po-faced purveyors of fake news, claims the president, do not take him seriously as a comedian. "He has a great sense of humour that he doesn't get credit for," explains a White House official.

So, credit where credit is due. The expansive, largely unscripted, disquisitions with which Mr Trump entertains his rallies are less traditional "speeches" than a stand-up comedy routine. Instead of tedious policy pronouncements and fine phrasemaking, his audience is treated to an impromptu circus of gags, pouts, gibes, mimicry and put-downs: "Pocahontas" for Elizabeth Warren, a Democratic senator and candidate for presidential nomination (because of allegations that she exaggerated her native-American heritage); "One Per Cent" for another Democratic contender, Joe Biden (a wildly inaccurate summary of his poll ratings), and so on.

David Litt, who used to write jokes for Barack Obama, acknowledges that Mr Trump has a great feel for his audience and the "skill-set of a comedian". In treating

politics as a joke-filled prank, Mr Trump is, as so often, right on trend. Ukraine has just gone one better. On April 21st it elected Volodymyr Zelensky, a professional comedian and television star, as president.

He made his name in "The Servant of the People", a television show, playing a teacher who accidentally becomes president after a foul-mouthed rant about the country's politics that goes viral. Mr Zelensky's real campaign eschewed traditional rallies in favour of comedy performances. One joke became a reliable hit, asking why Petro Poroshenko, the incumbent, wanted a second term in office: "So he doesn't get a [prison] term." (It's the way he tells them.) A stand-up joke likened Ukraine's attitude to money to a German porn star who "takes it from every side and in any amount".

Mr Zelensky is not alone. Last year Slovenia elected a satirist, Marjan Sarec, as prime minister. He honed his talents on a radio programme and spoofing the former prime minister, Janez Jansa, on television. In 2015 Guatemalans elected as president Jimmy Morales, a comedian. Jón Gnarr, a stand-up comic and former punk-rocker,

served as mayor of Reykjavik, capital of Iceland, from 2009 to 2014. In the general election last year in Italy, the Five Star Movement, founded in 2009 by Beppe Grillo, another comedian, became the largest party in parliament and part of the governing coalition.

In Britain the successor as prime minister to the hapless Theresa May may well be Boris Johnson. He is a career politician—a former mayor of London and foreign secretary, and a leading Brexiteer. But an important part of his persona—comic buffoonery—was fixed by his appearances on a satirical news show, "Have I Got News for You", cementing an image as a flawed but lovably self-mocking man-of-the-people. As mayor, he tickled Londoners with a joke. When Mr Trump called parts of their city "no-go areas", he retorted: "The only reason I wouldn't go to some parts of New York is the real risk of meeting Donald Trump." On the campaign trail, Mr Johnson promised that "voting Tory will cause your wife to have bigger breasts and increase your chance of owning a BMW."

Kicked around

Oddly, since he was hardly famed for his sense of humour, it may have been Richard Nixon who began the crossover between politics and comedy. In 1968, just before winning the presidential election, he popped up on a hit television sketch-show, "Rowan and Martin's Laugh-In" to repeat, in typically lugubrious deadpan, its catchphrase: "Sock it to me".



▶ Politicians have long appeared on comedy shows and employed gag-writers to pepper their speeches with jokes. But politics and comedy remained discrete professions. Winston Churchill had a reputation for funny—and withering—put-downs. Disturbed in the lavatory by a message that the Lord Privy Seal wanted to speak to him, he is supposed to have replied: “Tell His Lordship I’m sealed on the privy and can only deal with one shit at a time.” But no one mistook the war leader for a comic.

The boundaries broke down after the 2008 financial crisis. Reacting to the perceived corruption, incompetence and complacency of the political class, comedians started to lead, as well as reflect, the new populist era. As Mr Gnarr quipped, “when the going gets funny, the funny get going.” This new breed of “cometicians” are primarily insurgents. Comedy is a weapon to destabilise the established political order. In this respect they recall George Orwell’s observation in 1945: “Every joke is a tiny revolution. If you have to define humour in a single phrase, you might define it as dignity sitting on a tintack.”

Don’t make us laugh

Mr Gnarr was among the first to sow the tintacks. Satirising politicians’ promises, his “Best Party” offered free towels at swimming pools and a “drug-free parliament by 2020”. He joined the race for mayor for fun, but with every prank his poll ratings climbed. Since then, some comedians have at times come to be taken seriously. In authoritarian countries, such as Venezuela or Iraq, this means that they are among the first to be persecuted or chased out of the country. In the West, however, they are more likely to be courted by politicians.

In the French presidential election campaign in 2017 Emmanuel Macron toured the Paris *banlieues* with Yassine Belattar, a stand-up comedian and the son of a Moroccan cleaning lady and a taxi-driver. His routine takes on touchy issues such as Islamophobia and jihadism. After the massacre at the Bataclan theatre in Paris in 2015, Mr Belattar started his shows with “Don’t be afraid. I know it’s a bit scary to see an Arab bloke walking into a theatre.”

If the first cometicians were only accidentally successful, their successors have actively cultivated their comedy personas as springboards for office. Mr Trump, like Mr Johnson, appeared as host of one of his country’s leading satirical shows, “Saturday Night Live”. SNL first poked fun at Mr Trump, already host of “The Apprentice”, in 1998. In November 2015, as a contender for the Republican presidential nomination he led the opening segment. He was greeted with rapturous applause by his young, liberal audience, and joshed along with his SNL impersonators. This, and other appearances on late-night shows, such as Jimmy

Fallon’s, helped to foster an image of a good bloke who could take a joke.

Mr Trump, like Mr Johnson, in effect controlled the demolition of his own dignity, thereafter ensuring that he was almost joke-proof. Nigel Farage, leader of the Brexit Party (see Bagehot), pulled off the same trick on “Have I Got News for You” for his former vehicle, the UK Independence Party, gamely laughing along with his fellow panellists when asked to identify UKIP members as either Fruitcakes or Loonies.

Cometicians also use humour for plausible deniability. As they consciously blur the lines between comedy and politics, so they can try to wriggle out of anything that might return to haunt them. Another UKIP politician has brushed aside criticism of a tweet about raping a female Labour Party MP, saying it was “satire”. When boasts by Mr Trump about sexual assaults on women were caught on tape, he dismissed them as “locker-room banter”.

Countries such as Britain, America, France and Italy have rich comic traditions, often best known for challenging conventional bourgeois society and conservative norms. This humour tends to be wordy and sophisticated, appealing to a university-educated audience; think of Britain’s “Monty Python’s Flying Circus”, “Not the Nine O’Clock News”, and more recently “The Thick of It”, a satire showing politicians as vain, inept and vicious. Likewise in America with SNL and the “Daily Show”.

Many of today’s cometicians, however, are drawing on alternative, more bawdy comic traditions that the elites disdain. These traditions are often more popular—and, in being defiantly “politically incorrect”, more populist. The culture wars have been played out by the countries’ comics. “Monty Python” was merely a fleeting success compared with the “Benny Hill Show”.



Smutty, crass and full of scantily clad women, Benny Hill ran for 36 years, in various iterations, and was exported to 140 countries. The tubby, bespectacled, lecherous Hill remains Britain’s greatest comic export; he is a cult figure in France.

Black humour

Sophisticates such as the Pythons, or Dario Fo in Italy, have “punched up”. They provoke laughs by attacking those who at least know how to fight back. In contrast, and despite their “anti-elite” pretensions, many cometicians “punch down”, identifying with the majority by making fun of those at the bottom of the socioeconomic scale, often underprivileged minorities. The Guatemalan president, Jimmy Morales, used to perform in blackface, portraying a bumbling character called Black Pitaya, or Black Dragonfruit. Crude and offensive, Mr Morales claimed that the character was a harmless joke enjoyed by all Guatemalans. Black Pitaya would not even get an airing on American or European television. Mr Morales’s son has recently promised to resurrect the character.

As president, Mr Obama used to make (extremely gentle) fun of himself before mocking others. In 2011, to an audience of journalists, he devoted an entire skit to the hilarious idea that Mr Trump might one day be president, suggesting that he would turn the White House into a casino with a “Trump” sign on top. The gag somehow seems less funny today. Mr Trump jokes about anyone—even the disabled. When self-deprecation seemed called for in a dinner speech in 2016, he teased the media and his wife instead. (“Michelle Obama gives a speech and everyone loves it...My wife Melania gives the exact same speech and people get on her case.”)

It is too early to know how the cometicians will fare in office. Like many populists, they defy conventional categories of Left and Right. The Five Star Movement has left-wing policies such as handing out free money, but shares power with the right-wing, anti-immigration League. Some cometicians, such as Slovenia’s Mr Sarec, a rare centrist, have promised to knuckle down to solemn policy wonkery.

Mr Gnarr was an unlikely success as Reykjavik’s mayor. He took tough decisions (including doubling the price of swimming-pool towels) and cut budgets and jobs to balance the books after the financial crash. Others, such as Mr Morales—and perhaps Mr Zelensky—may turn out to have been useful idiots, helped into office by utterly conventional political forces bent on maintaining the status quo. Mr Morales himself is fending off charges of corruption against himself and members of his family. And Mr Trump? He could well improvise his way to a second term. That would be his best punchline yet. ■



Sanctions Inc

Hide and seek

NEW YORK

A surge in sanctions creates risks for companies—and opportunities

AN OIL TANKER entered the Persian Gulf in early February, supposedly heading to the Basra terminal, off the coast of Iraq. Then it turned off its transponders and went dark. Ten days later it resumed transmissions, sailed back through the Strait of Hormuz to Fujairah, in the United Arab Emirates, and emptied its tank. It then reversed towards Basra, went dark again, reappeared and delivered oil to Fujairah once more. In the past eight months, vessels followed this pattern more than 60 times.

Such manoeuvres near Iran are of interest to officials in America, which on May 2nd barred all exports of Iranian oil. In this instance, though, the information was gathered not by intelligence agencies but by a company, Windward. With headquarters in Israel and backed by investors including David Petraeus, a former director of the CIA, and John Browne, a former boss of BP, Windward is helping companies navigate a maze of sanctions.

It is not alone. Proliferating sanctions

are creating problems for some companies and potential profits for others, as an industry emerges to help firms comply with them and understand their effects. Nowhere is this more evident than in the energy trade, encompassing oil companies, banks, asset managers and traders, as well as shipbrokers, maritime insurers, bunkering firms and vessel owners. Even if America and Iran avoid military conflict in the Gulf, companies will still have to grapple with the sanctions which to date have been

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President Donald Trump's weapon of choice. For one big energy trader, says its compliance officer, the consequences of being in breach of sanctions are "terminal".

The risk to businesses is rising, for two reasons. First, the use of sanctions has grown more complex since Marc Rich, the founder of Glencore, a huge trader, was indicted in 1983 for working with Iran, which was then holding Americans hostage (he was famously pardoned in 2001 by Bill Clinton). Last year America imposed sanctions on about 1,500 people, firms, vessels and other entities, nearly triple the number in 2016. The past six months have been particularly eventful. America began imposing sanctions on Iran in November, and in January on Venezuela, another big oil exporter. On May 9th, for the first time, it seized a ship accused of transporting banned North Korean coal.

Second, blackballed countries and unscrupulous middlemen are getting better at evasion. In March advisers to the UN, relying in part on Windward data, and American Treasury officials published separate reports that described common ways of doing it. Boats turn off their transmissions systems to avoid detection. Oil is transferred from one ship to another in the middle of the ocean—ships trading on behalf of North Korea find each other in the East China Sea using WeChat, a popular Chinese messaging service. Captains disguise a ▶▶

ship's identity by manipulating transponder data to transmit false locations and identity numbers of different vessels.

Such methods have helped Iran and Russia transport oil to Syria, American officials say. In 2018 North Korea managed to import refined petroleum far in excess of the level allowed by multilateral sanctions. The situation in Venezuela is different—technically, America's sanctions still allow foreigners to do business with the country. But fear that sanctions will expand mean that traditional trading partners are scarce. Nicolás Maduro's regime this month found a shipowner to transport crude to India, according to a shipbroker familiar with the deal, but Venezuela had to pay twice the going rate.

Businesses keen to understand such shenanigans can be roughly divided into two categories. The first includes those who can profit from grasping sanctions' impact on energy markets, such as hedge funds, analysts and traders. A squadron of firms is ready to assist them, combing through ship transmission data, commercial satellite imagery and other public and semi-public information. They do not specialise in sanctions, but sanctions are boosting demand for their tracking and data-crunching expertise.

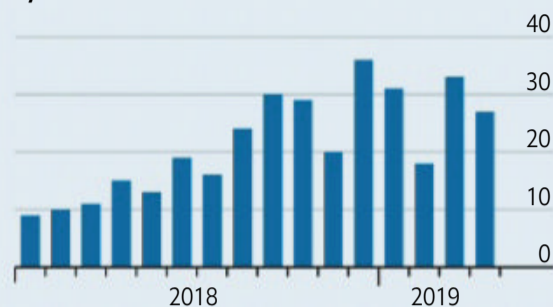
A main determinant of Venezuela's output, for instance, is access to the diluent it needs to blend with its heavy crude. A firm called Clipper Data has noted Russian ships delivering diluent to vessels near Malta, which then transport it to Venezuela. Kpler, a French rival, uses satellite images of shadows on lids of storage tanks to help estimate the volume of oil inside. Using transmissions data, images, port records and more, Kpler produces estimates of Iran's exports for customers such as the International Energy Agency and Bernstein, a research firm—including a recent uptick in Iranian exports without a specific destination (see chart).

The second category of companies are wary of violating sanctions themselves. They need assistance of a different sort. Latham & Watkins, a firm that advised the chairman of EN+, which controls a Russian aluminium giant, as he successfully removed the company from America's sanctions list this year, has seen a surge in sanctions-related business. Refinitiv, a data company, offers software which permits clients to screen partners and customers against lists of embargoed entities. Windward uses machine learning to pore over data such as ships' travel patterns, transmissions gaps (some of which may be legitimate) and name changes to help firms identify suspicious activity. Kharon, founded last year by former United States Treasury officials, offers detailed analysis of anyone or anything on sanctions lists.

Companies are reinforcing in-house

Through a strait, darkly

Persian Gulf, number of dark activities* by tankers†



Iran, seaborne exports by destination
Barrels per day, m



Sources:
Windward; Kpler

*Deliberately switching off automatic identification transponders
†Longer than 150 metres

compliance programmes, too. Trafigura, a large energy trader, now contractually bars buyers in north Asia from turning off their ships' transponders, so that vessels can be tracked. It also requires them to disclose when and where cargo is unloaded.

But progress is uneven. "There is growing awareness of why this is a problem, but people have been pretty slow to act," says Hugh Griffiths, who has led a UN panel of experts on North Korea. He was surprised that, as of last year, few maritime insurers screened the transmissions data for the vessels they cover. The International Group of P&I Clubs, a consortium of marine insurers, did not respond to *The Economist's* request for comment. In March the Treasury, echoing the UN panel's recommendations on North Korea, urged businesses to adopt more robust methods to clamp down on sanctions violations. On May 2nd it published new guidelines for compliance. That will create more business for law firms and others.

Their gain may, however, be the Treasury's loss. The burgeoning industry is keen to poach Treasury officials. As Kharon shows, bureaucrats may be ready for new ventures. A volatile boss also makes public service less appealing. In March the department announced new restrictions on two shipping companies based in China, for breaching North Korean sanctions, only to have Mr Trump tweet that he was scrapping them. In the words of a former top official, "it's more lucrative and rewarding to help companies navigate the sanctions era." ■

Chaebol family feuds

Korean heir

SEOUL

Generational change does not equal renewal

PILOTS AND flight attendants in Korean Air uniforms lined the streets as Cho Yang-ho, the company's late chairman, made his final journey to the family tomb last month. The pomp of the send-off, which followed a five-day wake in a lily-covered room at a hospital in Seoul attended by thousands of people, belied the mess which the patriarch left behind.

Weeks earlier investors had ousted Cho, who was being investigated for tax evasion, embezzlement and breach of trust at the time of his death, from the board of Korean Air amid a string of scandals involving his family. Starting with an incident in 2014, when his eldest daughter forced a Korean Air flight to turn around after she had been served macadamia nuts in a packet rather than a bowl, the Chos have personified the entitlement which many South Koreans detect in the conduct of those who control the *chaebol* (conglomerates).

Cho Won-tae, the late chairman's son and heir-apparent, said at the funeral service that his father's last wish was for the family to run the company together "in peace". Good luck with that. Hanjin KAL, the airline's parent company, missed a deadline to tell the Fair Trade Commission (FTC), which regulates the conglomerates, who would take over as the company's legal representative. This hinted at internal disunity and delayed the publication of the FTC's annual report on the biggest *chaebol*. When the report was released on May 15th, the FTC unilaterally designated Cho *filis* as representative. But he holds only 2.34% of Hanjin KAL's shares, roughly as much as each of his two sisters, who are rumoured to be unhappy with the FTC's decision. The company denies this. Either way, divvying up the father's 17.84% stake among family members will take months.

The *chaebol* continue to dominate the South Korean economy, despite repeated pledges by successive governments to rein them in. The Hanjin squabble is a reminder of how far they have to go to meet modern standards of corporate governance. In 2018 the Asian Corporate Governance Association ranked South Korea ninth out of 12 regional markets, lambasting poor disclosure practices and the failure to respect the rights of minority shareholders.

Regulators and activist investors are making a greater effort to peer through the opacity of *chaebol* shareholdings and, in a few cases, have managed to improve ►►

Corporate spin-offs

Breaking up is hard to do

PARIS

At least profitably

CORPORATE FASHIONS come and go, and this season's is industrial break-ups. In America and Europe, once-sprawling conglomerates are being carved up into focused companies that investors hope will fare better on their own. Those banking on quick returns have mostly been disappointed.

Conglomerates thrived in the 1970s, and made a comeback after the merger frenzy of the late 1990s. They are beloved of megalomaniac bosses keen to prove they can run empires peddling anything from train carriages to CT scanners (as Siemens currently does, albeit not, as it announced last week, for much longer). But the argument that diversity lets a firm's healthy arms prop up temporarily frail ones is, once again, losing ground in the rich world.

Private-equity funds have pots of money to buy unwanted divisions. Listing companies—or spinning them off to existing investors—is easier than it once

was. Plenty of activist hedge funds are pressing firms to restructure, hoping to cash in when the sum of conglomerates' parts fetches more than the whole (studies show this can be true in the long run).

Gauging the impact of a break-up announcement is hard. Investors price in its likelihood before a company owns up to "exploring strategic options". Splits often follow bad results that enfeeble the management, which may in turn mean worse news down the line.

Our chart, which takes the first detailed news reports of a spin-off as its starting-point, shows that of recent break-ups, only Honeywell, which filed listing documents for its car-parts and home-security arms last August, has subsequently outperformed the broader market. United Technologies has kept pace with it. General Electric, Thyssenkrupp, DowDuPont and ABB have not. If their share prices fall any more, they will be ripe for a takeover.

Freight apps

Moving with the times

FORT LAUDERDALE AND SAN FRANCISCO

Trucking illustrates hurdles to Uber's dreams of dominating world transport

FLORIDA 595 is unappealing, even by truck-stop standards. Odour from a landfill next door permeates the humid air. Planes from a nearby airport buzz overhead. The average American trucker spends two-thirds of working time either in places like this or loadless on the road. So the wheelmen propping up the bar at 595 are giddy about a new breed of smartphone app. For a few years startups like Cargomatic and Convoy have been helping drivers maximise their gainful time behind the wheel by digitising the matching of shipments with lorries. Convoy called itself "Uber for freight"—until 2017, when Uber launched exactly that.

If Uber had presented itself as just a ride-hailing firm, analysts reckon, it would not have fetched an \$82bn valuation when it listed in New York on May 10th. That was predicated on the platform's potential to disrupt all road transport. Investors are having second thoughts: Uber's share price fell sharply in its first two days as a public company (before regaining ground), perhaps on the realisation that the firm may struggle to make money anytime soon. Uber Freight is a case in point.

On paper, the market the app could disrupt looks huge. Global spending on road freight reached \$3.8trn in 2017, says Armstrong & Associates, a consultancy. Companies in America spent over \$700bn; freight rates grew by 30% last year owing to a surfeit of cargo and a shortage of drivers.

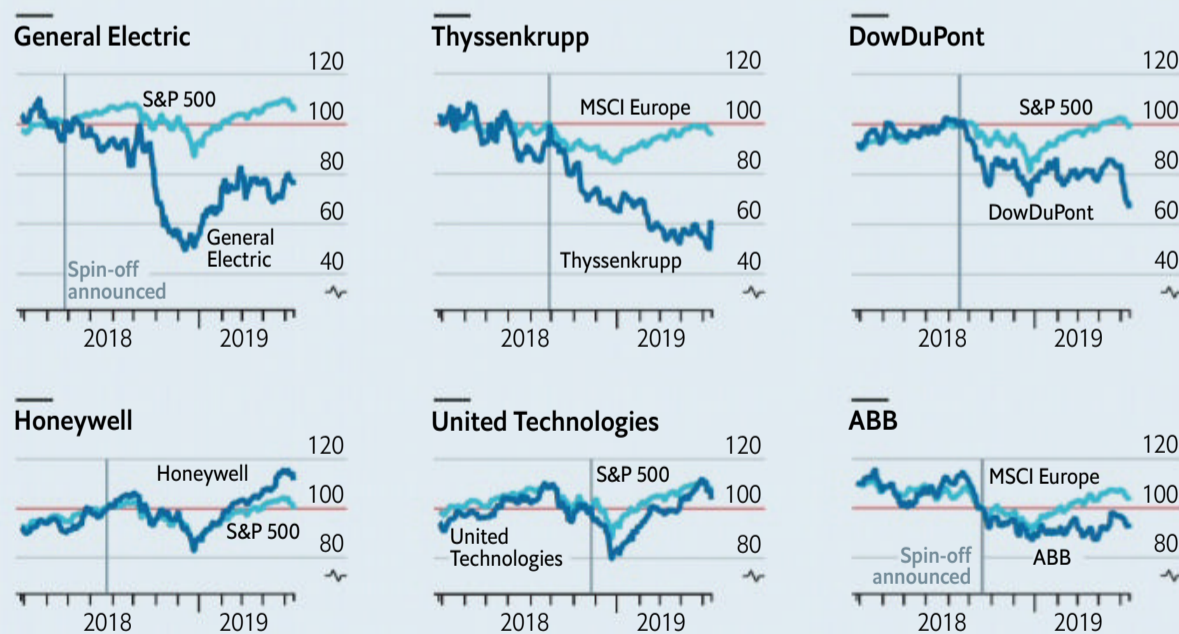
In practice, only \$72bn of American shipments is managed by brokers; most of the rest travels on company lorries. Digital brokers' slice is wafer-thin. Zion Market Research predicts that their global turnover will increase from around \$1bn to \$21bn between 2017 and 2026. Uber would need to dominate this market to rival its \$9bn in revenue from ride-hailing in 2018.

Uber touts freight as its third-most-important business after ride-hailing and food delivery. It made up nearly 3% of the firm's revenues in 2018, but bookings grew by almost 450% that year—faster than any other division. Bill Driegert, boss of Uber Freight, thinks that it can grab most of the brokers' \$72bn, not just the digital bit. No rival can match its software or traffic data—both applicable to lorry logistics, Mr Driegert boasts. Brand recognition, he believes, should help win over drivers reluctant to take jobs from apps no one has heard of.

But unlike ride-hailing, which Uber

All spin?

Total returns, spin-off announcement* date=100, \$ terms



Sources: Datastream from Refinitiv; The Economist

*First detailed news report

▶ accountability. But owner-families and the management remain hard to tell apart. In late March Elliott, an American activist hedge fund, failed to get the dividend raised or an external director elected at Hyundai, the second-biggest *chaebol*. The conglomerates "are still run for the benefit of the families who own them", says Park Ju-gun of CEOscore, a corporate watchdog.

In the longer term, though, the Hanjin succession presents an opportunity for renewal, not just generational change. Out-

siders could use the opening to push for better governance. KCGI, a local activist fund, has been increasing its stake in the company and covets board seats. Shares in both Hanjin KAL and Korean Air surged on the news of Cho père's death. As the government of Moon Jae-in, the president—pre-occupied with the North Korean detente, uncertain economic outlook and no clear majority in the National Assembly—drags its heels on corporate reform, shareholders look keener to take the lead. ■

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more or less invented, it is a late arrival to freight. Its earlier efforts to disrupt haulage with the purchase of Otto, a startup developing self-driving lorries, came to naught. Grand plans to expand abroad—in March it presented a European app—run up against home-grown incumbents: Timocom of Germany and Teleroute of Belgium in Europe, and Rivigo, a hit Indian app, in Asia.

At home, conventional brokers have shown digital savvy. Goldman Sachs, a bank, estimates that from January to September last year Uber Freight accounted for 30% of haulage-app downloads. That is im-

pressive, but shy of the combined 40% for the three apps from big brokers: C.H. Robinson's Navisphere, J.B. Hunt's Carrier 360 and DAT's Load Board. The boom in road freight provides these companies with cash to plough into apps and algorithms. Landstar, another big broker, claims that a recent software upgrade cut the time needed to process a delivery by nearly a third.

Chris O'Brien, C.H. Robinson's chief salesman, disputes the idea that the startups' data on traffic are better. Lorry routes differ from taxi rides. Brokers can bolt on services—warehousing, last-mile delivery,

assistance with customs or unforeseen problems—onto basic haulage. Here, Uber is miles behind.

The brokers see their main threat coming not from Uber's headquarters in San Francisco but from Seattle, home to Amazon. The e-commerce juggernaut launched an app in 2017 to help lorry drivers deliver merchandise to its warehouses. It is rumoured to be working on its own service. Unlike Uber, it has plenty of experience delivering cargo. It sits on more cash than Uber or the brokers. It may not take long to appear in their rear-view mirrors. ■

Bartleby The joy of absence

Fighting the curse of presenteeism

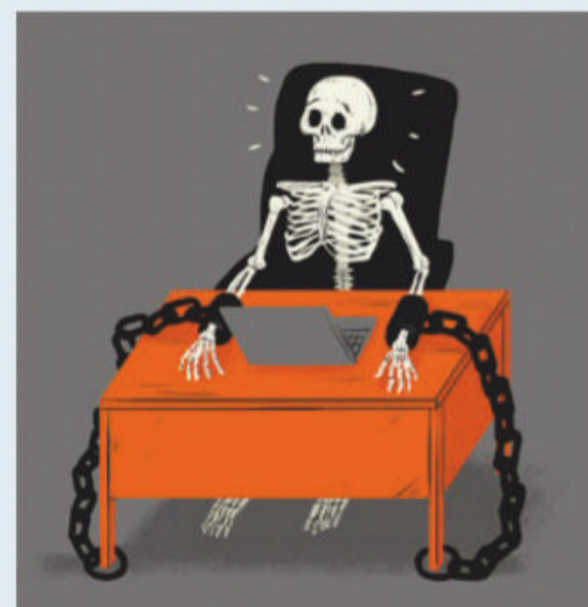
RONALD REAGAN famously quipped that "it's true hard work never killed anybody, but I figure, why take the chance?" Beyond a certain level, extra effort seems to be self-defeating. Studies suggest that, after 50 hours a week, employee productivity falls sharply.

But that doesn't stop some managers from demanding that workers stay chained to their desk for long periods. At the blood-testing firm Theranos, Sunny Balwani, then boyfriend of the founder, Elizabeth Holmes, had an obsession with employee hours, and would tour the engineering department at 7.30pm to check people were at their desks. All those hours were wasted when the company eventually collapsed (prosecutors have charged Ms Holmes and Mr Balwani with fraud).

Jack Ma, the founder of Alibaba, a Chinese e-commerce group, recently praised the "996" model, where employees work from 9am to 9pm, six days a week, as a "huge blessing". To be fair, Mr Ma said employers should not mandate such hours. Still, presenteeism is the curse of the modern office worker.

There will be days when you do not have much to do, perhaps because you are waiting for someone else in a different department, or a different company, to respond to a request. As the clock ticks past 5pm, there may be no purpose in staying at your desk. But you can see your boss hard at work and, more important, they can see you. So you make an effort to look busy.

Some of this may be a self-perpetuating cycle. If bosses do not like to go home before their underlings, and underlings fear leaving before their bosses, everyone is trapped. Staff may feel that they will not get a pay rise, or a promotion, if they are not seen to be putting in maximum



effort. This is easily confused with long hours. Managers, who are often no good at judging employees' performance, use time in the office as a proxy.

The consequence is often wasted effort. To adjust the old joke about the Soviet Union: "We pretend to work and managers pretend to believe us." Rather than work hard, you toil to make bosses think that you are. Leaving a jacket on your office chair, walking around purposefully with a notebook or clipboard and sending out emails at odd hours are three of the best-known tricks. After a while this can result in collective self-delusion that this pretence is actual work.

But presenteeism has more serious consequences. It is perhaps most prevalent in Japan, where people attend the office even when they are in discomfort. In doing so, they are doing neither themselves nor their employers any favours.

As well as reducing productivity, this can increase medical expenses for the employer. According to a study in the *Journal of Occupation and Environmental Medicine*, these costs can be six times

higher for employers than the costs of absenteeism among workers. To take one example, research published in the *British Medical Journal* found that Japanese employees with lower-back pain were three times more likely to turn up for work than in Britain. As a result, those workers were more likely to experience greater pain and to suffer from depression. What could be more dispiriting than being in pain while feeling trapped at work?

None of this is to say that employers are not entitled to expect workers to be in the office for a decent proportion of time. Inevitably there will be a need for some (preferably short) meetings. Dealing with colleagues face-to-face creates a feeling of camaraderie, allows for a useful exchange of ideas and enables workers to have a better sense of their mutual needs.

In the grand sweep of humanity, presenteeism is a recent phenomenon. Before the industrial era, most people worked in their own farm or workshop and were paid for the amount they produced. Factories emerged because new machines were much more efficient than cottage-industry methods, and only a large employer with capital could afford them. Suddenly, workers were paid not for their output but for their time, and were required to clock in and out.

But modern machinery like smartphones and laptops is portable. It can be used as easily at home as in the office. Turning an office into a prison, with inmates allowed home for the evenings, does nothing for the creativity that is increasingly demanded of office workers as routine tasks are automated. To be productive you need presence of mind, not being present in the flesh.

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Chinese business

The daughter rose in the East

ZHUHAI

How China forged dozens of self-made female billionaires

DONG MINGZHU is the most visible face of female enterprise in China. The 64-year-old boss of Gree, the world's biggest maker of air-conditioners, is everywhere: in television ads, on billboards and, last year, in two places at once—jaywalking in the city of Ningbo while at Gree's headquarters in Zhuhai (police cameras mistakenly captured her visage plastered on a bus).

Ms Dong joined Gree as a door-to-door saleswoman in 1990, as a widow with an eight-year-old son. In 2012 she became its chairwoman. Although Gree has state roots, Ms Dong acts like a high-profile entrepreneur. Her life was the subject of a TV drama, and she has written two popular memoirs. Her steely, unglamorous image (a confessed penchant for skirts notwithstanding) inspires young women. Matters of gender bore her. Asked about her rise in a country run by men, she responds: "Men or women, few are up to the challenge."

That may be so. But Ms Dong represents a generation of Chinese women who have climbed higher than their sisters in South Korea or Japan. Fully 51 of the 89 self-made female billionaires on this year's Hurun Rich List, a Who's Who of the ultra-wealthy, are Chinese—well above China's 20% share of the world's women. Relative to population (one for every 13.4m Chinese females), that is not far off America's tally of 18 (one for every 9.1m). South Korea has one, Yoo Jung-hyun of Nexon, a gaming giant. Japan has none (*Forbes* reckons that Yoshiko Shinohara, who founded a temporary-staffing

agency, became the first in 2017, aged 82). China's include Wu Yajun, a property mogul with a \$10bn fortune; Cheng Xue of Foshan Haitian Flavouring & Food Company, known as "the soy-sauce queen"; and Li Haiyan and Shu Ping, co-founders of Haidilao, a chain of hotpot restaurants. Ms Dong, with a net worth of 3bn yuan (\$440m), does not make Hurun's list.

Why have they done so well? If socialist egalitarianism—which encouraged, even required, women to work—were the whole story, you would expect many of them in the upper echelons of the Communist Party. In fact, just one sits on the 25-member Politburo. None has ever joined the inner sanctum of the Standing Committee.

Rosy for riveters

A likelier explanation is China's manufacturing boom, which afforded women unprecedented opportunities. In 1968 Mao Zedong enjoined female labourers to hold up "half the sky"; by the 1980s their labour-force participation hovered around 80%. Britain's then stood at 60%, and America's lower still. India, with a similar GDP per person to China at the time, barely managed 30%. Many successful Chinese businesswomen rose from the factory floor. In 2015 Zhou Qunfei, an erstwhile migrant worker who went on to found Lens Technology, maker of screens for Apple, took the title of the world's wealthiest self-made woman.

After the government expanded college

attendance in 1999, women began to prop up more than half the educational firmament: they make up 56% of graduates, though only 87 girls are born for every 100 boys (the world's most unbalanced sex ratio). According to the Global Entrepreneurship Monitor, an index of startup activity, for ten men starting a business in China, eight women launch theirs.

All that ought to guarantee a steady supply of talent to follow in Ms Dong's footsteps. But it may be stymied by a general slowdown in the pace of female progress, plus specific hurdles women face in the most promising avenue for today's aspiring entrepreneurs: China's internet sector.

Between 2010 and 2018 China dropped from 61st (among 134 countries) to 103rd (out of 149) in the World Economic Forum's Gender Gap Report. Economic disparities between the sexes tend to narrow as countries grow richer. China's have widened, as privatisations in the 1990s prompted a sharper decline in the number of women than of men in the urban workforce and as women moved into lower-paying service jobs. Relative to that of men, female participation has been flat or falling every year since 2009, to 69%, similar to Japan and below Vietnam, Cambodia and Laos. Female wages, which were 17% below male wages in the early 1990s, are now 36% lower.

Chinese tech, meanwhile, has displayed a misogynistic streak. New female hires can be asked to pick a "husband", "lover" and "brother" among male colleagues. China's globalising giants cast themselves as progressive. Yet of 29 board members at the four biggest—Alibaba, Baidu, Tencent and JD.com—one is a woman. Last year Human Rights Watch, an NGO, reported that Alibaba produced a video of female employees who "love tech guys", including one pole-dancing in hotpants. (Alibaba said it would conduct "stricter reviews" of recruitment ads.)

Investors, still predominantly male, openly admit that they are reluctant to fund female entrepreneurs who, they say, bow to pressure more easily than men do, observes Zhao Hejuan, creator of two news sites about the tech industry. In private, she says, male entrepreneurs speculate that pretty founders who got funded must have slept with the moneymen.

Ms Dong faced her share of misogyny early on. In her first book she recounts how saleswomen back then were expected to be young, pretty and hard-drinking. At first male clients turned her down. Compared with those days, she says, today's youngsters grow up "in a honeypot". Maybe. But future Ms Dongs have the right to feel bittersweet. A new Hurun list of 46 self-made billionaires under the age of 40 includes 16 Chinese founders, but just two—both of them wives in couples that launched internet platforms—are women. ■



The marvellous Ms Dong

Schumpeter | Sleepless in Silicon Valley

Why the techie obsession with sleep technology makes perfect sense



FIRST, CLOSE the blackout blinds in your bedroom. Eat dinner at 4pm, and do not eat or drink anything after 6pm. Put on your blue-light blocking glasses at 8pm. Set your bedroom temperature to 67°F (19.4°C) and your electric blanket to 69.8°F (21°C). At 8.45pm, meditate for five to ten minutes. Switch on your deep-wave sound machine. Put on your Oura sleep-tracking ring. You are now, finally, ready for slumber. This may all sound a bit over the top. But this is the “sleep hygiene” routine described in a recent blog post by Bryan Johnson, who sold his previous company to eBay for \$800m and is now chief executive of Kernel, a startup developing brain-computer interfaces. He admits that his sleep routine has “decimated my social life”, and that his partner sleeps in a different room, but says all this trouble is worth it, because it has boosted his level of “deep sleep” by as much as 157%. He has bought Oura rings for all his employees.

Mr Johnson does not expect other people to copy his routine, but made it public to encourage the sharing of sleep habits and tips. Like many other techies, he regards sleep hygiene as an effective way to maintain mental health, boost cognition and enhance productivity. In its most recent funding round, backers of Oura, the Finnish maker of the high-tech ring, included the co-founders of YouTube and Twitch, along with alumni of Facebook, Skype and Box.com. The ring’s most famous user is Jack Dorsey, the boss of Twitter, whose unusual wellness regime—which also incorporates near-infrared saunas, radiation-blocking Faraday tents, fasting and cryotherapy—prompted the *New York Times* this month to dub him “Gwyneth Paltrow for Silicon Valley”. For tech tycoons, it seems, sleep is the new fitness.

Those who want to monitor and improve their sleep have no shortage of gadgets to choose from. As well as electric blankets and mattress-chillers, sound machines and smart rings, there are also smart pillows, sleep-tracking watches and bracelets, intelligent sleep masks, brain-stimulating headbands, bedside sleep sensors and countless sleep-monitoring apps. The market for sleep technology was worth \$58bn in 2014 and is expected to grow to \$81bn by 2020, according to Persistence, a market-research firm. Big companies in the field include household names such as Apple, Bose, Nokia and Philips. After Mr Dorsey’s enthusiastic endorsement,

the Oura rings are back-ordered by four to six weeks.

The mania for sleep technology makes perfect sense for the tech industry, combining as it does several existing trends. For a start, it fits with the industry’s metrics-driven worldview. Techies obsess about OKRs (objectives and key results), KPIs (key performance indicators) and digital-analytics dashboards showing the performance of specific products and features. Applying similar techniques to sleep and other aspects of their personal lives—an approach known as the “quantified self”—seems a logical step. As those in the startup world like to say, channelling Peter Drucker, a management guru, “what’s measured improves.”

Sleep-tracking also aligns neatly with Silicon Valley’s cult of productivity, and the constant search for “life hacks” that will make entrepreneurs more effective, efficient and successful. This ranges from wearing the same clothes every day, Steve Jobs-style (thus avoiding wasting time deciding what to put on), to fastidious fitness routines and complicated diets. Elaborate sleep regimes slot right in, because they promise clarity of thought and improved cognitive performance. They also let people extend their quantified-self and life-hacking efforts into the one part of the day that was previously untouched: shut-eye. Relentlessly pursuing productivity only while you are awake is for wimps. Sleep-tracking means you can do it round the clock. Oura describes its sensor-packed ring as a “secret weapon for personal improvement”—another way to get ahead.

Never mind that a study published in 2015, by researchers at Massachusetts General Hospital and Harvard Medical School, found that sleep-tracking devices could not accurately measure sleep, and that claims made about them were long on hype and short on solid evidence. Ignore the fact that another study, published in 2017 by researchers at two medical schools in Chicago, warned of the dangers of “orthosomnia”, defined as a “perfectionistic quest for the ideal sleep in order to optimise daytime function”, as obsessive users of sleep-tech devices self-diagnose sleep disturbances based on dodgy data, or stay awake all night worrying that they are falling behind by not sleeping as efficiently as rivals.

It is hardly surprising that techies are not getting enough sleep, given the industry’s culture of long hours, and the widespread notion that for a true entrepreneur, everything else in life is secondary to succeeding at work. The enthusiasm for sleep-tech also fits a larger pattern of using technology to fix problems that the industry itself has created. Is your smartphone too addictive? Here’s an app to help you monitor and track your usage. Are the streets of your city clogged with Ubers? Try an electric scooter instead. Seen this way, the embrace of sleep-tracking is an indictment of the whole culture: it tackles the symptoms of sleep deprivation, but not the disease.

Sleepwalking into the future

But resist the temptation to dismiss all this as batty. Sleep-tracking is at exactly the stage that fitness-tracking technology was at a decade ago. Now fitness trackers (including the Apple Watch) are mainstream and nobody bats an eyelid when people share details of their morning runs on Facebook. The same could easily happen with sleep-tech. A series of previous examples—including the use of email, the embrace of online shopping, hailing a car with an app, or renting a room in an unfamiliar city from a complete stranger—are a reminder that the seemingly crazy things that Silicon Valley types do today, everyone else may end up doing in a decade’s time. In this case, in their sleep. ■



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Private equity

After Abraaj

The biggest collapse in private-equity history will have a lasting impact

IN SEPTEMBER 2017 executives at Hamilton Lane, an asset manager, received an email. Entitled “Abraaj Fund VI warning”, it accused the Abraaj Group, a buy-out firm based in Dubai, of inflating the value of its investments to lure capital into its latest fund. The email was anonymous and littered with typos and grammatical errors, but its tone was sinister. “The governance is not what it appears but employees are afraid to speak,” it said. Hamilton Lane forwarded it to Abraaj, requesting documents disproving the claims. The evidence provided allayed its concerns, and the firm backed Fund VI with over \$100m.

Similar emails went to other Abraaj clients. They had little effect: weeks later Fund VI had already attracted \$3bn, half its \$6bn target. But the firm's problems were real. Its collapse last year consumed millions of dollars of investors' money, the reputation of Dubai's financial regulator and Abraaj itself. Even as rivals divide up the firm's former empire, it threatens to cause yet more damage.

It had taken 16 years for Abraaj to become the best-known emerging-markets

buy-out firm. With over 30 funds spanning Africa, Asia, Latin America and Turkey, it managed \$14bn in assets. Its Pakistani boss, Arif Naqvi, was a Davos regular and arts patron. He presented a kinder, gentler face of private equity: Abraaj's \$1bn health fund, which closed in 2016, was backed by development banks and philanthropists.

Yet Abraaj faced a chronic problem: year after year of multi-million-dollar operating losses. According to sources with knowledge of its books, its revenues, made up of management and performance fees, were outweighed by bloated costs. To plug the gap, the group borrowed. In the nine months to March 2018 its financing costs came to \$41m, according to a confidential report by its liquidators. Throughout 2016 it hoped that by selling assets, including a \$1.8bn stake in a Pakistani utility firm, it could avoid a cash crunch. But deals were repeatedly delayed.

In a complaint filed last month against Abraaj and Mr Naqvi, the Securities and Exchange Commission (SEC), America's main financial regulator, alleged that between late 2016 and mid-2018 the firm diverted

over \$230m it said was for acquisitions from the health fund to its bank account. When several investments failed to materialise, clients started asking questions. According to the SEC, Mr Naqvi blamed delays on “reasons beyond our control” and lied about the cash's whereabouts.

At the end of 2017 four investors, including the Bill and Melinda Gates Foundation and the World Bank's private-sector arm, hired investigators to track the missing millions. When the news broke in February 2018, creditors turned off the taps and sought to have the firm wound up. Abraaj filed for provisional liquidation in the Cayman Islands, where it is incorporated, to give it greater leeway over its restructuring.

For the past several weeks Mr Naqvi has been in a British jail, awaiting a decision on his extradition to America. A bail hearing is due on May 17th. Two other executives have also been arrested. Mr Naqvi maintains his innocence and says he expects to be cleared of any charges.

Liquidators are searching for new managers for Abraaj's funds—a tedious task. Such deals must be approved by a pre-agreed share of the limited partners, as investors in buy-out funds are called—and Abraaj has over 500. “It's like herding cats,” says an adviser to the process. But there is progress. On May 9th TPG, an American buy-out firm, said it would become the health fund's custodian. Last month Colony Capital, based in California, bought Abraaj's Latin American business. Actis and Franklin Templeton are in talks to ac- ▶

►quire the African and Turkish units.

Last year Abraaj returned the money it owed, plus interest, to the health fund. Commitments secured for Fund VI have been released. The TPG and Colony deals have gathered sufficient support from investors (nearly all gave their backing). Many seem to think Abraaj, not the markets it operates in, was the problem, so business as usual can resume. “We cannot afford not to invest in private equity,” says Linda Mateza of South Africa’s Government Employees Pension Fund, an Abraaj investor, “because of the potentially higher returns.”

But the appearance of closure is misleading. Abraaj still owes over \$1.2bn to creditors; a source familiar with its books doubts that “anything close” to that will be repaid. A letter by lawyers for investors in its \$1.6bn Fund IV, seen by *The Economist*, alleges that \$300m “at the very least” from that vehicle went towards “wrongful transactions” and is still missing. For funds raised before 2013 Abraaj had no external administrator, notes a former partner. Another vehicle from the same era is also thought to be owed tens of millions. A spokesman says that since the start of the provisional liquidations Mr Naqvi has been “working tirelessly to maximise returns for Abraaj’s creditors”.

Abraaj’s collapse is being felt across the industry. Many large institutions have stopped investing in Africa and the Middle East, its home turf. In the year after its troubles became public, buy-out funds focused on the region raised just \$1bn, a third of their annual average in the previous five years, according to Private Equity International, a financial-information provider. That caution could contaminate other emerging markets.

The scandal has also made investors warier of private-equity firms’ less orthodox tactics. In recent years managers have increasingly used money promised by limited partners as security for short-term bank loans. Such “subscription lines” allow them to make investments without drawing investors’ capital. That flatters returns. The global stock of such debt has risen to \$400bn, experts reckon. Yet after Abraaj defaulted on several facilities, its limited partners were urged by banks to foot the bill. “They were not best pleased,” says Kelly DePonte of Probitas Partners, which advises firms on raising capital.

And many limited partners are seeking greater comfort by demanding an absurd amount of reporting. Some “side letters”—documents from each limited partner specifying the paperwork it requires from fund managers—now reach 100 pages, ten times what they used to be. Blue-chip firms can absorb heftier compliance costs, but smaller ones will struggle. The legacy of a flawed private-equity titan could be a slaughter of innovative upstarts. ■

US-China trade

Fighting words

SHANGHAI

Fears of escalation, hopes of progress

THOUGH CHINA runs a massive trade surplus with America, over the past year it has run a massive rhetoric deficit. During that period President Donald Trump has tweeted about China at least 130 times; Chinese leaders, by contrast, have mostly kept mum about the trade dispute with America. But in the past few days that has begun to change. A sudden barrage of commentaries about the trade war in state media has struck a note of defiant nationalism. “If you want to talk, our door is wide open,” said an anchor on China’s most-watched news programme on May 13th, in a clip that went viral. “If you want to fight, we’ll fight you to the end.”

The aggressive language comes as the two countries’ trade war heats up. Last week American negotiators alleged that China had reneged on a draft deal that was nearly complete. Chinese officials said it was the Americans who were making unreasonable demands. The breakdown in talks led to America’s decision on May 10th to raise tariffs on \$200bn-worth of Chinese imports from 10% to 25%, covering products such as car parts and circuit boards.

On May 13th Mr Trump tweeted, warning China not to retaliate. It will only get worse, he said. Barely an hour later China ratcheted up tariffs on \$60bn-worth of imports from America, including natural gas. And it did indeed get worse, with the United States Trade Representative shortly thereafter beginning the process of implementing tariffs on “essentially all” Chinese imports not currently covered by duties. When all is said and done, China’s nearly \$560bn-worth of annual exports to America could face tariffs of 25%. Much of America’s \$180bn of annual exports to China could also be subject to similar levies.

Those already in place will hurt. Many economists estimate that China’s growth this year could be dragged down by about half a percentage point, to 6%. In America consumers will start to see higher prices: inflation could rise by half a percentage point, according to economists at Société Générale, a French bank. If Mr Trump follows through on the threat to hit all Chinese imports with duties—and few doubt his love of tariffs—the damage could be far greater. Chad Bown and Eva Zhang of the Peterson Institute for International Economics in Washington, DC, reckon that the scale of American tariffs on China would resemble the Smoot-Hawley tariff of 1930,



No safe harbour

levied just before the Great Depression.

At that point China might well start making life difficult for American businesses in China. One possibility would be consumer boycotts, fanned by state media. Forecasting models scarcely capture the alarm that would spread through markets if the world’s two biggest economies engage in a full-blown trade war.

There is still hope that they will step back. A recovery in global share prices after a big sell-off on May 13th, when the tit-for-tat tariffs were announced, reflects optimism that cooler heads will prevail. Most of the latest measures are not yet in force. America’s new 25% tariffs apply only to goods that left China after they were announced. Because it takes about three weeks for ocean freighters to make the journey, it will be June before the pain is truly felt. China’s new tariffs take effect only on June 1st. So there is time to talk.

In its official statements China’s consistent message has been that, though it will not be bullied, it wants to work towards a deal with America. Mr Trump has also shown a willingness to resume talks, saying that he will hold meetings with Xi Jinping, China’s president, at a G20 summit in Japan at the end of June. The last time the two leaders met at a G20 summit, in November in Argentina, they agreed to a truce in the trade war. That might be a reason for optimism. Then again, given where the two countries are now, it could just as well be a reason for despair. ■

Pakistan's rocky finances

Catch 22

The IMF has agreed to break Pakistan's fall. Again

FAMILIARITY, THEY say, breeds contempt. Few countries are as familiar with the IMF as Pakistan, which has previously obtained 21 loans from the fund, as many as Argentina. On May 12th this familiarity deepened further. The government, led by Imran Khan, a former cricketer who heads the Pakistan Tehreek-e-Insaf party, said it had reached a deal to borrow \$6bn more over three years. The agreement now awaits formal approval from the fund's bosses in Washington and the support of other international lenders, including the World Bank and Asian Development Bank.

The loan will relieve Pakistan's dollar shortage but do little to improve the IMF's standing in the country. In return for its money, the fund expects the government to raise tax revenues and utility prices, impose discipline on provincial spending—and let the currency fall, if need be. That will help narrow Pakistan's wide trade and budget deficits. But it will also curb growth and increase inflation in the short term.

Targets include cutting the budget deficit (before interest payments) to 0.6% of GDP next fiscal year (which starts in July) from the 1.9% that the IMF reportedly expects for this year. The government has talked about removing tax breaks worth about 350bn rupees (\$2.5bn or 1% of GDP) and raising the price of gas and electricity for large consumers. It has pledged to give the central bank more autonomy in its fight against inflation, currently over 8%. It will also let market forces dictate the rupee's exchange rate, which has been devalued by 18% against the dollar in the past year.

To ease the public's pain, the IMF will allow more spending on welfare schemes, such as a cash-transfer programme named after Benazir Bhutto, a former prime minister who was assassinated in 2007. But her son, Bilawal Bhutto Zardari, who now leads her party in opposition, seems unimpressed. After the government this month appointed a former IMF official to head the central bank, Mr Bhutto Zardari accused it of surrendering Pakistan's autonomy. "How can IMF negotiate with IMF?" he asked. A cartoon in the *Friday Times*, a local news weekly, showed Christine Lagarde, head of the fund, negotiating with herself.

In truth, Mr Khan's government tried hard to keep its distance from the fund. Instead of agreeing to a deal as soon as it came to power last August, it turned for help to friendly countries, including Saudi Arabia

(which gave \$3bn and deferred a similar amount of oil payments), the United Arab Emirates (\$2bn already and more to come) and China (\$2.2bn). China is investing heavily in Pakistan's roads, ports and power plants: the so-called China-Pakistan Economic Corridor (CPEC). Some view this lending with suspicion, seeing Pakistan as a victim of China's "debt-trap diplomacy".

Such an assessment seems premature. CPEC spending may have contributed to the increase in Pakistan's imports (the country's current-account deficit exceeded 6% of GDP in the year to June 2018). But because this import spending was presumably matched by an inflow of Chinese capital, it cannot have been responsible for the dangerous dwindling of Pakistan's foreign-currency reserves over the past year.

That was Pakistan's own fault. The previous government maintained an exchange rate that was too strong for exporters and fiscal spending that was too strong for its revenue-raising powers. Restoring stability was always going to require the kind of painful policy reforms the IMF often prescribes and oversees.

Not that the IMF will find it easy. Pakistan is a regular taker of its loans but not a diligent follower of its advice. Many of the reforms it has just promised have been pledged repeatedly before, including widening the tax net, rationalising utility prices and respecting the central bank's autonomy. Successive governments have been slow to follow through, afraid of angering powerful domestic constituencies.

But the IMF has been similarly reluctant to cut Pakistan off, for fear of the upheaval that would ensue. "Governments have tried to 'game' the IMF, and achieved partial success each time," write Ehtisham Ahmad and Azizali Mohammed, former IMF advisers. Pakistan's public might dislike the IMF less, if they knew how frequently their leaders disregard it. ■



The usual, please

Initial public offerings

NOIPO?

SAN FRANCISCO

Uber's listing and a new stock exchange may herald change

ON MAY 10TH Uber, the world's biggest ride-hailing firm, listed on the New York Stock Exchange—and promptly tanked. As *The Economist* went to press it was trading at \$41.29, 8% below its listing price. On the first day of trading investors lost about \$650m. Some have called it the worst initial public offering (IPO) ever.

But it could give a boost to fresh thinking on how fast-growing startups should go public. And even as Uber's first shares were trading, one such innovation got the go-ahead from the Securities and Exchange Commission (SEC), America's main financial regulator.

The Long-Term Stock Exchange (LTSE) is based in San Francisco and backed by Silicon Valley luminaries including Marc Andreessen, Reid Hoffman and Peter Thiel. They are animated by the weaknesses of conventional exchanges when it comes to startups. Things such as quarterly results, short-sellers and high-frequency trading distract from building businesses for the long term, says Eric Ries, the LTSE's boss and the author of "The Lean Startup".

Such distractions are not all unwelcome. Public markets can bring discipline to badly governed startups. Short-sellers help keep companies honest. It would probably not have taken them long to sniff out the fraud at Theranos, for instance, had the blood-testing firm been public.

Nevertheless, the LTSE's backers are onto something. Startups have been staying private as long as possible and granting shares conferring greater voting rights to their founders when they do finally go public. In turn big private investors, including sovereign-wealth and hedge funds, have pumped billions into "unicorns" (private firms valued at more than \$1bn), capturing most of the value they create and leaving little for investors in public markets.

The LTSE wants to give entrepreneurs stability and smaller investors more of the upside. It aims for listing requirements that will encourage long-term thinking. One idea is to give longer-term shareholders more voting power. Instead of charging for transactions or data, as most stock exchanges do (though some offer rebates), it will charge for add-ons that appeal to startups, says Mr Ries, such as software enabling them to track which shareholders are "tourists" moving in and out and which are "citizens of the republic".

He is cagey about specifics, for fear of ▶▶

derailing negotiations with the SEC, which must approve them before the LTSE's launch later this year or early next. Within the limits set by the regulator and the LTSE's philosophy, he says, companies should have "maximum discretion" in how they reward investors' loyalty. The biggest difficulty, says Joseph Grundfest, a former SEC commissioner now at Stanford University, will be finding the right mix of listing requirements—a "sweet spot" where firms' desire for stability meets investors' desire for attractive returns.

Some see the LTSE as a disguised ploy to

entrench the power of founders, early investors and, ultimately, the Silicon Valley elite, who would like to take over public markets. But if it becomes attractive established bourses, such as the New York Stock Exchange and NASDAQ, are likely to launch "panels" of firms that sign up to similar listing requirements while continuing to be traded on these exchanges.

Indeed, instead of fighting the newcomer, incumbent exchanges should be rooting for it. Since a peak in 1996 the number of publicly traded companies in America has fallen by nearly half. The experience

of Uber and Lyft, a smaller competitor whose share price has fallen by even more since it floated in March, will have done nothing to make IPOs more appealing.

Rather, it is likely to speed up efforts under way in both Silicon Valley and New York to avoid IPOs altogether. Listings these days mostly happen to enable early investors and employees with stock options to cash out. But financial whizz-kids are already working on a fair, transparent way to value the shares of fast-growing private companies without taking them public. How about calling it NOIPO? ■

O cannabis

Dank stats, bro

Canada's statisticians toked up

"MADE IN CANADA", not "made in Colorado": that is how a Canadian senator described the country's approach to legalising the recreational use of cannabis in a debate last summer. As lawmakers sought to frame rules that would have the best possible chance of squeezing the illicit market and keeping teenagers off the grass, they looked around the world for evidence. Disappointed by how little they found, they decided to blaze a trail.

That meant establishing a baseline for comparison. Before the new law came into force in October 2018, Statistics Canada started to estimate prices and the size of the illicit market, and to carry out quarterly surveys of Canadians' cannabis usage. Earlier this month it released the fifth of these—the first before-and-after comparison of the same part of a year.

The main finding was a rise in the number of Canadians who had used cannabis in the three months before the survey, of 27% compared with a year earlier. People are probably more willing to admit to getting lit once weed has been legalised. However, half of new cannabis users are aged over 45, which suggests that some of the increase is genuine, says Rosalie Wyonch of the C.D. Howe Institute, a think-tank in Toronto. Middle-aged squares may have decided to try getting high for the first time.

Use by under-25s, by contrast, did not rise significantly. Nor was there a significant increase in the number of Canadians who said they used daily or near-daily. Both findings are reassuring, since younger people and committed stoners are most likely to suffer cannabis-induced psychosis.

Legal cannabis sold for C\$9.99 (\$7.42) per gram on average, compared with C\$6.37 for the illegal stuff. That may



In our home and native land

understate the gap, however, because cannabis on the illicit market is probably more potent. Nevertheless, legalisation does seem to be taking the buzz out of the illicit market. Statistics Canada reckoned it was worth C\$1.2bn in the final quarter of 2018, down from C\$1.3bn before legalisation, with the legal recreational market worth C\$152m. Nearly two-fifths of users said that they had bought cannabis from an illegal dealer, down from a little over half a year earlier.

More figures are to come. National data on pot-related tax revenues are due in June, and on cannabis-related offences such as driving while high in July. The health ministry is surveying health outcomes, and researchers hope to use hospital records to see if there has been a rise in cannabis-related illnesses. Whatever the effects of legalising weed, it is in Canada that they will be least hazy.

America's housing market

Flipping property

NEW YORK

Firms that buy and sell in a day

A WELL-FUNCTIONING market is one that enables buyers and sellers to execute transactions quickly, easily and cheaply. Take the market for oil, or for blue-chip shares. Lots of buyers and sellers, gathered on commodity or stock exchanges, mean lots of bids and offers. Transactions are speedy and fees low.

Company bonds, by contrast, vary in their tenor (the length of time till they fall due) and coupon (interest rate). That makes it much harder to match buyers and sellers. To create liquidity, institutions such as investment banks act as intermediaries, holding an inventory of corporate bonds and guaranteeing to buy from or sell to their clients at any time for a (hefty) fee.

The more varied a product is, the harder it is to create a liquid market. One of the most troublesome—and important—is the market for homes. No two are exactly alike. Compounding the difficulties, most buyers and sellers are links in a chain. Two-thirds of Americans who are selling a home are also looking to buy another. A delay at one point in a chain holds up transactions all along it. So intermediaries in the property market offer a bespoke service, matching individual buyers and sellers and taking a chunky fee.

Enter i-buyers (instant buyers), who aim to play the role in homebuying that investment banks play in the corporate-bond market. They use fancy algorithms that analyse data, from the number of bedrooms to local crime rates, to estimate what a property should sell for. Then they buy it, tidy it up and sell it. Opendoor, a startup based in San Francisco that launched in 2014, now offers i-buying services in 20 American cities.

Just over a year ago Zillow, America's ►►

▶ biggest online property marketplace, said it would move into i-buying. Its share price promptly fell by 7%. Investors feared it would be unable to price with enough certainty that its offers could compete with those of real-estate agents, and doubted that sellers would accept a discount in return for an instant sale.

On both counts they may have been mistaken. Stan Humphries, an economist at Zillow, says its listing platform yields enough fine-grained information that it can set prices accurately and competitively. Average fees are around 7%, not far

above the cut a conventional estate agent takes on a sale. And sellers are turning out to be keen on the service. I-buyers are not present in every region of America—they have entered big cities with large “cookie-cutter” housing stocks first—and therefore accounted for a tiny fraction of home sales in 2018. But where they operate they are becoming sizeable players. In Phoenix, Arizona, a city with several i-buyers, 7% of sales involved them last year.

On May 9th Zillow reported first-quarter earnings showing a better-than-expected 51% year-on-year increase in revenues,

to \$454m. Zillow Offers, its i-buying arm, contributed \$129m to that rise. Revenue for the year could climb by 79% compared with last year, the firm said, largely because of its i-buying programme. It says it expects revenue to reach \$20bn by 2024. Its share price had climbed to \$38 by May 15th, up by 22% in the year to date.

The service i-buyers offer is a difficult one to pull off. The greater the variety within an asset class, the harder it is to act as an intermediary. But the frictions inherent in the housing market mean it is also a very valuable one. ■

Buttonwood A tale of two stocks

Beneath the dull surface, Europe's stockmarket is a place of extremes

IT WOULD BE hard to tell a story about America's stockmarket without mention of at least one company that listed this century—Google or Facebook, say. Europe is rather different. Its bourses are heavy with giants from the age of industry but light on the digital champions of tomorrow. It is telling, perhaps, that its character can be captured in the contrasting fortunes of two companies, Nestlé and Daimler, with roots not even in the 20th century, but in the 19th.

Nestlé began in 1867 when Henri Nestlé, a German pharmacist, developed a powdered milk for babies. The firm, based in Switzerland, is now the world's largest food company. It owns a broad stable of well-known brands, including Nescafé and KitKat. Its coffee, cereals and stock cubes are sold everywhere, from air-conditioned supermarkets in rich countries to sun-scorched stalls in poor ones. Daimler was founded a bit later, in 1890. Its Mercedes-Benz brand of saloon cars and SUVs is favoured by the rich world's professionals and the developing world's politicians.

Though the two companies have lots in common, their stockmarket fortunes could scarcely be more different. Nestlé is the sort of “quality” stock that is increasingly prized in Europe for its steadiness. It is expensive: its price-to-earnings, or PE, ratio is 29. In contrast Daimler is a “value” stock, with a PE of eight. The disparity has steadily grown in recent years (see chart). Indeed the gap between the dearest stocks and the cheapest across the continent is at its widest in almost two decades, says Graham Secker of Morgan Stanley.

The valuation gap in Europe is related to a similar divide in America. For much of stockmarket history, buying value stocks—with a low price relative to earn-

ings or to the book value of tangible assets, such as equipment and buildings—has been a winning strategy for stockpickers. But the past decade has been miserable for value stocks in America. The rapid rise of a handful of tech firms—the Googles and Facebooks—and other “growth” stocks has left them in the shade.

Value stocks are, by definition, cheap. In the past they might have been cyclical stocks, those that do well when the world economy is picking up steam, but which suffer in downturns. These days the cheap stocks are in industries, such as carmaking and branch-based banking, that are ripe for disruption. But in Europe, they are especially cheap.

It is hard for banks to make money when yields on the safest of government bonds, the benchmark for lending rates, are negative, as they are in Europe. Banks face an additional threat from financial-technology firms, which do not share their burden of costly branches or surplus staff. Carmakers need pots of capital to equip them to make electric and self-driving cars. The returns are far from certain. It is

easy to imagine a future in which status is less entwined with car ownership. People may not care whether the robotaxi they fleetingly occupy is a luxury car or a bog-standard saloon. Before then, the prospect of punitive American tariffs on European-made cars is looming.

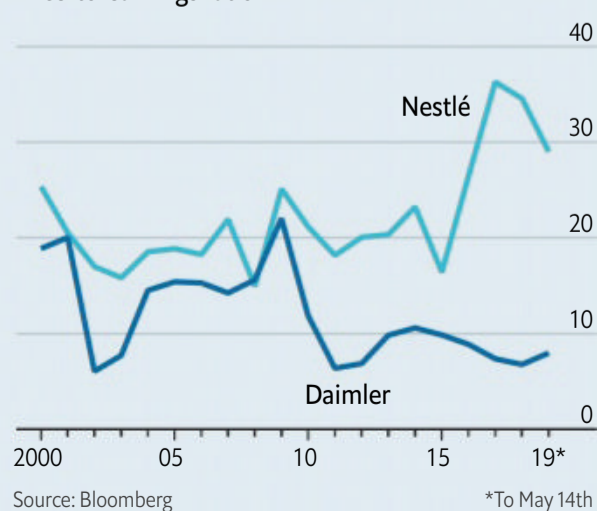
The value-growth axis is different in Europe, because there are no home-grown tech giants. The big stockmarket winners have been quality stocks. This is a category that combines stable profits and high return on capital with sensible debts and low staff turnover. Many are consumer firms with strong brands, such as Nestlé, Diageo (a British drinks giant) and LVMH (a French luxury-goods firm).

Value investors, however chastened, believe there is an opportunity here. For them, the Daimler-type stock is the one to buy. True, carmakers (and banks) have their troubles. But value stocks usually do. The trick is to buy them when everyone shuns them, because that is when they are cheap. The Nestlé-type stock is the sort of fad that the giddier sort of investor piles into, only to rue overpaying as it falls back to earth. Well, perhaps. But why be a hero? An investor in a low-cost index fund can own both types of stock without worrying too much about relative value.

A lot of stockpicking Americans stay away altogether. The cheap stocks look hopeless; the dear stocks look expensive. So they don't buy at all, says Robert Buckland of Citigroup. The Nestlé-Daimler breach mirrors the divide within property markets in cities such as London. You could try to make a killing on a fixer-upper in a down-at-heel suburb. That bet requires patience and luck. Or you could buy a nice house in a ritzy neighbourhood. It will not be cheap. But it may never get much cheaper.

Hot coffee, cool cars

Price-to-earnings ratio



Fiscal policy

Consolidation programme

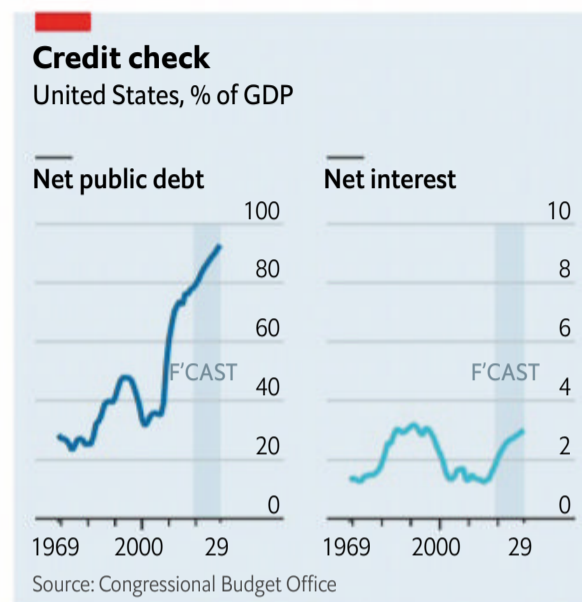
WASHINGTON, DC

Economists look afresh at the risks of public debt

EVERY SO OFTEN a right-leaning economist raises the alarm about the apparently parlous state of America's public finances. The subject gripped Washington in the early 2010s but has since been mostly disregarded. At 78% of GDP, America's net public debt is high, if not yet huge. Thanks to President Donald Trump's tax cuts, the federal deficit will exceed 4% of GDP this year, a level that is more typical after economic slumps than in the benign conditions seen today, with unemployment at 3.6%. What is more, unless taxes go up or spending on pensions and health care for the elderly is contained, public debt will rise to 92% of GDP in 2029, the highest since 1947, and go on rising for decades more, according to official projections.

Such warnings have fallen on deaf ears not just in Washington, but on Wall Street too. Financial markets, hungry for dollar-denominated safe assets, betray no concern about America's debts. The risk of a crisis is not the only theoretical downside to public borrowing, but the others are looking unconvincing. For example, the argument that debt is crowding out private investment is hard to sustain when firms are awash with cash and can borrow at extremely low rates.

In January Olivier Blanchard, a former chief economist of the IMF, told the annual meeting of the American Economic Association that there were many reasons to



doubt the supposed costs of public debt. Since then Jason Furman and Larry Summers of Harvard University, both of whom advised Barack Obama on economics, have written in *Foreign Affairs*, a journal, that it is time to kill off the “debt obsession”. A flurry of commentators have since declared that economists are fundamentally rethinking their ideas about fiscal policy.

That is an overstatement. The central observation of fiscal doves is that interest rates are very low by historical standards, and are not expected to rebound any time soon. As a result, though debt has grown as a share of GDP, interest payments are near their historical average (see chart). Most important, rates are lower than the nominal growth rate of the economy (that is, before adjusting for inflation). In such circumstances a debt will shrink as a share of GDP over time. If the economy grows faster than interest builds up, the government could run a small deficit for ever.

Economists find that weird. Their theories say that budgets must balance in the long term. But Mr Blanchard gave his lecture after realising that in America nominal growth outpacing the interest rate is the historical norm. He thinks that will continue. He also gave a reason not to worry about crowding-out. Low rates could be signalling that the risk-adjusted return to capital—loosely speaking, what the economy eventually gains from additional private investment—is also low. As a result, even if government debt does displace investment, society may not lose much.

According to Mr Furman and Mr Summers, the fear that government debt is discouraging private investment is based on

an “absurd diagnosis of today's economic problems”. The real issue, they say, is that America's interest rates might again fall to near-zero, at which point the Federal Reserve could not lower them any further. Any attempt to cut debt and deficits today might weaken the economy and bring that constraint into view. In a recent paper with Lukasz Rachel of the Bank of England, Mr Summers argues that deficits have been propping up interest rates since the 1970s, slowing what would otherwise have been a more marked decline.

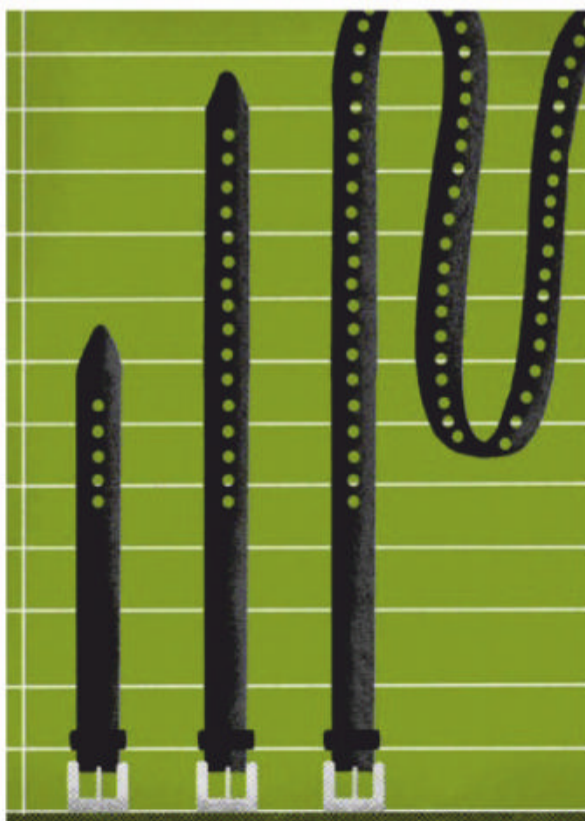
Not all of this is as new as it seems. In 1998 Laurence Ball of Johns Hopkins University and Douglas Elmendorf and Gregory Mankiw of Harvard University observed that America's nominal growth tends to exceed its interest rates. (They argued that exploiting this condition could pay off most of the time, but came with a small risk of provoking a crisis.) In 2017 Mr Elmendorf and Louise Sheiner of the Brookings Institution, a think-tank, argued in the *Journal of Economic Perspectives* that a glut of saving and falling returns to capital were making government debt less harmful. Mr Summers has been calling for bigger deficits to fund spending on investment for years, fearing “secular stagnation”—permanently weak private-sector demand. Nonetheless, his essay with Mr Furman recommends that most new spending is paid for—an impeccably conventional idea that was written into congressional rules in 1990.

Today's rethink is gaining attention for several reasons. One is Mr Blanchard's stature and past job—the IMF has long been associated with austere fiscal policy. Another is growing curiosity about “Modern Monetary Theory” (MMT), a fringe economic doctrine which holds that debt-to-GDP ratios are irrelevant in countries that issue their own currency—and that the only constraint on spending is inflation. Left-wing Democrats who want to spend hell-for-leather on a “Green New Deal” to fight climate change and cut inequality sometimes appeal to MMT, as inflation is low today.

But the theory has scant support among mainstream economists. Mr Furman and Mr Summers both recently signed a letter recommending that climate change be fought with a carbon tax, an approach that most Green New Dealers pooh-poohed.

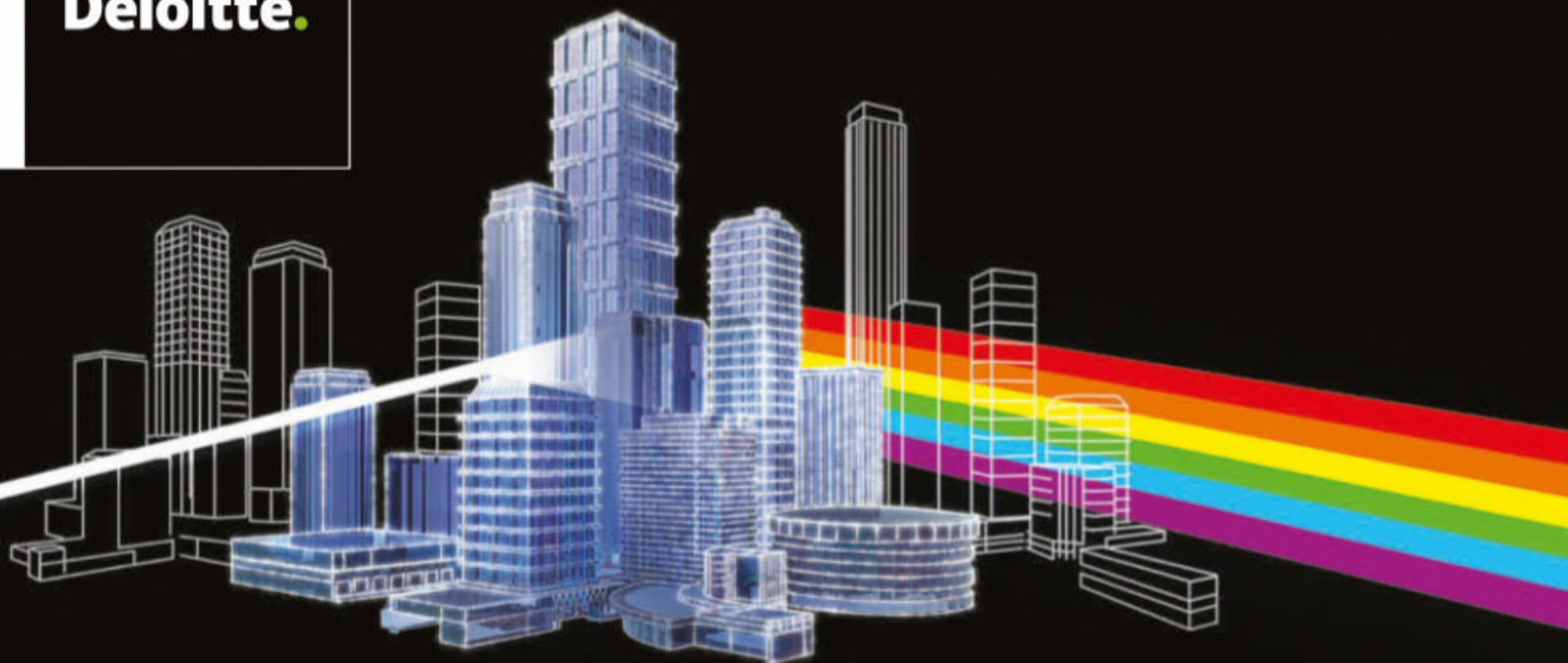
Ripping up the textbook

It may be harder to find economists who back harsh austerity to shrink debts, rather than merely to contain them. But few of today's politicians display much of an appetite for belt-tightening. In an age of populism, unfunded tax cuts and the Green New Deal, even economists' increasingly nuanced views on the balance between tax and spending will probably land them on the hawkish side. ■





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Amazon's boss reckons that humanity needs an HQ2



JEFF BEZOS wants humans to live in space. On May 9th the founder and boss of Amazon, who also runs Blue Origin, a private rocketry firm, unveiled plans for a lunar lander. “Blue Moon”, as it is called, is just one phase of a bold plan to establish large off-world settlements. It is a vision ripped directly from 20th-century science fiction. Having persuaded people to take other leaps of faith, from shopping online to placing his firm’s always-on listening posts in their homes, he could be just the person to convince millions to leave Earth. But it will take a unique economic pitch.

Unless Mr Bezos obtains the state-like power to order masses of people around, his plans will require émigré Earthlings to leave voluntarily. Their motives need not be entirely economic. The Puritans left Britain for America in search of freedom from religious persecution. Mr Bezos might well find recruits among unhappy minorities—or among deeply devoted believers in his vision for humanity. He is not an entirely implausible cult figure.

Per his presentation, however, Mr Bezos’s cities will be home to millions: numbers demanding a cost-benefit proposition with mass appeal. People might line up if the costs or risks of staying on Earth were to rise—because of a deteriorating environment, say, or imminent collision with a massive asteroid. But there are problems with the notion of space settlements as doomsday arks. Even an Earth dramatically less habitable than it is now would be substantially more so than anywhere else in the solar system. Any technology that could conceivably be used to create huge, human-friendly environments in space or on other planets could presumably be used at less expense on Earth. The logistics would be challenging, too. Elon Musk, the boss of Tesla, who also operates a private space firm, aims to settle Mars to ensure humanity’s continuation as a species against an extinction-level event. But relocating a great number of people to a desolate planet millions of miles away is fantastically hard. He wants to build an interplanetary ship with a capacity of 100. Even one departing every minute would not keep pace with Earth’s population growth.

Space cities might lure settlers by offering to make them rich. But if extraterrestrial settlements remained dependent on imports from Earth, then their cost of living would be astronomical, and the income paid by space work would need to be correspondingly

high to provide residents with a generous level of welfare. That, in turn, would require export industries selling things to Earthlings that could not be made on Earth far more cheaply.

Might such space niches exist? Mining extraterrestrial objects could be economical, but would provide a weak reason for mass habitation, since it could be done most easily and cheaply by robots. Service industries offer more potential. If life in space were to prove therapeutic in some way, then off-world sanitariums could turn a profit. Space tourism would create a steady demand for off-world labour. The space economy might also thrive as a hub for activities banned on Earth, such as human cloning. Once a viable source of exports was found, agglomeration could drive further growth as Earthlings sought their fortunes off-world, plying goods and services to workers in the export industries. There would be obstacles, not all related to survival. The laws governing space enterprise are murky. An Outer Space Treaty signed in 1967 prohibits governments from asserting claims over extraterrestrial land and resources, but says they retain jurisdiction over their own crafts (in the manner of ships in international waters). An American law passed in 2015 gives companies the right to own whatever useful material they can harvest in space, though not all countries accept this. Tech bros who prefer asking forgiveness to begging permission are unlikely to be much impeded by such uncertainties.

Mr Bezos appears to have in mind something other than a trade-based interplanetary economy, however. His plans take for granted speedy technological progress of the sort that would enable large-scale mining and materials processing by autonomous robots, and construction of vast off-world habitats. The works of science fiction from which his vision borrows often assume the emergence of “fully automated luxury communism”, in which clever machines enable the emergence of a post-scarcity world.

Such advances might not just enable the settlement of space, but might be realisable only in space. The resource demands of a world where everyone can have everything they want would probably outstrip Earth’s material capacity. Space, however, holds a virtually unlimited supply of the raw materials needed for universal abundance. But intensive use of extraterrestrial resources on Earth could pose environmental hazards or nuisance costs that humans would lobby to prevent. And even nearly free resources would not enable 9bn people to live where and how they want. Not everyone can have an estate on the Californian coast.

Free enterprise

Space, on the other hand, has plenty. In addition to its countless resource-rich rocks, it offers more than enough room to build whatever habitats, with whichever climates and vistas, are needed to satisfy humanity’s demands. In the context of the finitude of Earth, insatiable resource consumption seems wasteful, even obscene. But off-world, why be stingy? Given a choice between a cheek-by-jowl existence down here and indecent luxury up there, many might accept the risks of starting a new life in the heavens.

In the 19th century Europeans streamed into America because wages were higher. They were high because of the continent’s extraordinary abundance—an abundance resulting from the mass deaths and displacement of indigenous people, but abundance nonetheless. The living that could be made on the near-inexhaustible supply of resource-rich land forced urban firms to pay high wages, lest workers left for the frontier. Space is a forbidding place for frail humans. But the final frontier may be the only one capable of providing humankind with endless material wealth. ■



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3D printing

Inside the body shop

CARRIGTWOHILL

Using 3D printers to make implants should improve orthopaedic surgery

A ROBOTIC LAWNMOWER keeping the grass neat and tidy outside a modern industrial building in Carrigtwohill, near Cork in Ireland, is a good indication that something whizzy may be going on inside. And so it proves. The airy production hall contains row after row of 3D printers, each the size of a large fridge-freezer. The machines are humming away as they steadily make orthopaedic implants, such as replacement hip and knee joints. Even though several hundred employees' cars are parked outside, the hall is almost deserted. Every so often a team appears, a bit like a Formula One pit crew, to unload a machine, service it and set it running again to make another batch of implants.

It is not unusual in modern, highly automated plants to find the workforce distributed like this, with most of them in the surrounding offices engaged in engineering tasks, logistics, sales and so on, rather than on the factory floor. But this two-year-old factory, owned by Stryker, an American medical-technology company, differs from conventional manufacturing

in another way as well. It is an example of how 3D printing, which a decade ago was seen by manufacturers as suitable only for making one-off prototypes, is quickly entering the world of mass production. For commercial reasons, Stryker keeps some of the details secret. But the factory, the largest 3D-printing centre of its type in the world, works around the clock and is said to be capable of producing "hundreds of thousands" of implants a year.

Those made at Carrigtwohill have a feature that is impossible to create with conventional techniques such as casting and machining. Because 3D printing lays down an object layer by layer, complex shapes

with intricate internal structures can be built. Stryker uses this facility to print a special porous surface onto the implants. That surface encourages bone to grow into the implant, which secures it more firmly in place. When combined with the precision of robotic surgical processes the firm has developed, this makes replacements more successful, says Robert Cohen, the company's technology chief.

Replacing worn and damaged body joints with implants is an old idea. The first hip-replacement operation was performed in 1891, in Germany, by Themistocles Glück, using a ball and socket carved from ivory. And Phillip Wiles, a surgeon based in London, carried out the first successful total-hip replacement in 1938, screwing a stainless-steel joint into the patient's bone.

Since then, things have moved on. Cobalt and chromium alloys, along with titanium, are now more commonly employed for implants than steel is. And operating procedures and devices have improved greatly, including the use of hard-wearing ceramic surfaces as bearings. Nevertheless, complications still arise.

One of the commonest is dislocation—with, for instance, the hip ball coming out of the socket because soft tissue has not healed properly. A loosening of the implant over time is also a frequent problem, causing pain and a need for remedial surgery. That, though, should be helped by the implant's porous surface encouraging bone and implant to meld, making such loosen-

→ Also in this section

72 Growing better cell cultures

72 Saving bilbies

74 Living in outer space

75 New units for old

75 Dung beetles and organic farming

▶ ing far rarer than it was.

The implants themselves are made by a type of 3D printing called direct-metal laser sintering. The printers are driven by software that takes thousands of digital slices through the design of the object to be manufactured. The process starts by spreading a bed of metal powder onto a special table. A laser then creates the first layer of the object, which can be as thin as a fiftieth of a millimetre, by melting particles of powder in the correct pattern. When this molten metal has solidified the table is lowered and another layer of powder spread. That second layer is then processed. And so on. Once the object is finished it is removed, cleaned and any final machining carried out. Unused powder is recycled back through the printer.

Stryker is not alone in using 3D printing to make implants. Other companies, including DePuy Synthes, the orthopaedics business of Johnson & Johnson, a giant

American health-care group, and LimaCorporate, an Italian firm, also print features intended to enhance bone growth on their implants. Generally, devices such as hip and knee implants can be made in such a wide range of sizes with 3D printing that customised shapes are not required. But some bespoke parts are printed, especially for reconstructive surgery in which patient-specific features are necessary. LimaCorporate, for example, is putting a 3D-printing facility directly into the Hospital for Special Surgery in New York, to produce complex, customised implants.

Toothsome

Doctors were among the first to use 3D printing, employing body scans to produce anatomical models of organs, which can help them plan operations. That and other medical use has grown rapidly. According to a recent report from Wohlers Associates, a consultancy, the medical and dental use

of 3D printing was worth more than \$1bn in 2018, 11.5% of the entire market in 3D-printed goods and services.

Much of this work now involves large numbers. Align Technology, an American firm, prints 17m plastic orthodontic aligners, an increasingly popular alternative to orthodontic braces, every year. Millions of metal copings, used to make dental crowns and bridges, are being churned out by 3D printers owned by companies such as Renishaw, a British engineering firm.

Wohlers reckons it is only a matter of time before firms start printing ceramic material directly onto the copings, to make complete replacement teeth. Researchers are also coming up with new ways to print tiny scaffolds onto which human cells are grown. These structures can be used for drug testing or, potentially, to grow complete organs for transplant (see box). Making body bits with 3D printers is turning into a big business. ■

Cellular engineering

March to the scaffold

3D printing makes it easier to grow artificial tissue for medical research

CULTIVATING CELLS in a Petri dish is a time-honoured way of experimenting on biological tissues. But it is not particularly reliable. The problem is that cells often need specific structural support to function correctly. To provide this, tissue engineers are turning to 3D printers to make tiny bespoke scaffolds onto which cells are “seeded”. This encourages those cells to grow and develop. As research into tissue engineering advances, so too do ways of printing the scaffolds. As two recent examples show, this could lead to better drug treatments for diseases such as cancer, and even to complete artificial organs suitable for transplant.

Glioblastoma is an aggressive cancer that begins in the brain, and rapidly evolves resistance to drugs. The best chance of treatment is to cultivate, in the laboratory, samples of an individual’s tumour and then bombard these with different combinations of drugs until an effective mixture is found.

Two South Korean researchers, Cho Dong-Woo of Pohang University of Science and Technology and Sun Ha-Paek of Seoul National University Hospital, have come up with a way to print 3D structures out of glioblastoma cells. These develop into mature cancers within two weeks and can, as the researchers reported recently in *Nature Biomedical Engineering*, be used to test novel drug cocktails—apparently with success, although exist-

ing regulations mean that such drug combinations cannot yet be given the ultimate test, in patients.

In the second example, Filippos Tourlomousis of the Massachusetts Institute of Technology, working with a team at the Stevens Institute of Technology, in New Jersey, produced a scaffold from polymer fibres a mere hundredth of a millimetre wide—far smaller than most 3D printers can manage. The team did this by drawing the fibres out using an electric field applied between the print nozzle and the surface onto which the fibres were being printed.

As Dr Tourlomousis and his colleagues report in *Microsystems and Nano-engineering*, cells stuck well to this scaffold and grew in a uniform way—essential if the technique is to result, ultimately, in a transplantable organ. In particular, the researchers found that certain stem cells (cells which can be coaxed into differentiating into more specialised cells that carry out specific functions) survived on the scaffold for much longer, without losing their properties, than would have been the case if they had been grown in a Petri dish. This discovery could help those trying to find ways of encouraging stem cells to generate tissue and organs for transplant. A bonus is that if the stem cells in question were taken from the patient to be treated, such transplants would be less likely to be rejected.

Conservation

Hunger games

How to train rare animals to avoid predators

MORE THAN a score of Australian mammals have been exterminated by feral cats. These predators, which arrived with European settlers, still threaten native wildlife—and are too abundant on the mainland to eliminate, as has been achieved on some small islands which were previously infested with them. But Alexandra Ross of the University of New South Wales thinks she has come up with a different way to deal with the problem. As she writes in a paper in the *Journal of Applied Ecology*, she is giving feline-awareness lessons to wild animals involved in re- ▶▶



Better together

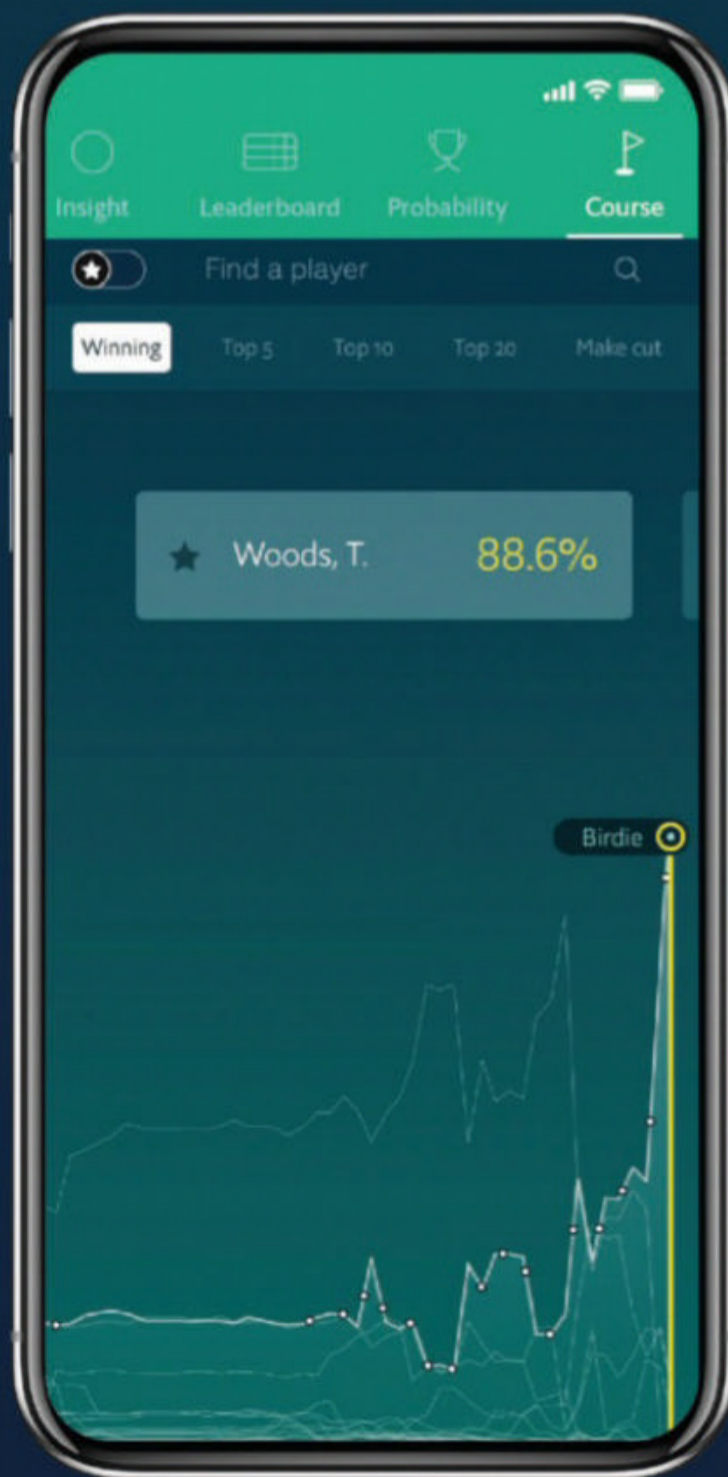
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▶ introduction programmes, in order to try to make them cat-savvy.

Many Australian mammals, though not actually extinct, are confined to fragments of cat-free habitat. That offers the possibility of taking colonists from these refuges to places where a species once existed but is no more. This will, however, put the enforced migrants back in the sights of the cats that caused the problem in the first place. Training the migrants while they are in captivity, using stuffed models and the sorts of sounds made by cats, has proved expensive and ineffective. Ms Ross therefore wondered whether putting them in large naturalistic enclosures with a scattering of predators might serve as a form of boot camp to prepare them for introduction into their new, cat-ridden homes.

She tested this idea on greater bilbies, a type of bandicoot that superficially resembles a rabbit. She and her colleagues raised a couple of hundred bilbies in a huge enclosure that also contained five feral cats. As a control, she raised a nearly identical popu-

lation in a similar enclosure without the cats. She left the animals to get on with life for two years, which, given that bilbies breed four times a year and live for around eight years, was a substantial period for them. After some predation and presumably some learning she abstracted 21 bilbies from each enclosure, fitted radio transmitters to them and released them into a third enclosure that had ten hungry cats in it. She then monitored what happened next.

The upshot was that the training worked. Over the subsequent 40 days, ten of the untrained animals were eaten by cats, but only four of the trained ones. One particular behavioural difference she noticed was that bilbies brought up in a predator-free environment were much more likely to sleep alone than were those brought up around cats. And when cats are around, sleeping alone is dangerous.

How well bilbies that have undergone this extreme training will survive in the wild remains to be seen. But Ms Ross has at least provided reason for hope. ■

dows. And all are on a heroic scale. The biggest are tens of kilometres long and have enough living room for millions of people.

For that reason, they would have to be built by a species that had already mastered space travel, using resources harvested from the asteroid belt (like Mr Musk, Mr Bezos hopes to drive down the cost of space flight as a first step). They would be strange places to live. The land would curve visibly up the sides of the structure. The superstructure of the habitat would arch across the “sky”. And rotation is not a perfect substitute for gravity, so moving objects would behave oddly, particularly if the habitat were small. But, said Mr Bezos, they also offer several advantages. Climates could be engineered (“Maui on its best day, all year long”). The best bits of Earth could be replicated elsewhere (one of his illustrations, shown below, depicted a space-going version of Florence).

Their biggest advantage, though, is the sheer amount of living space they would create. Mr Bezos’s ultimate justification for pursuing such megaprojects is his worry about the mismatch between the exponential process of population growth and the finiteness of Earth’s resources. He gave the example of energy demand, which, he says, has historically grown by around 3% a year. He argues that if this were to continue, Earth would, in a couple of centuries, need to be covered completely by solar panels. With the resources of the solar system at its command, however, and thousands of habitats scattered through space, the human population could comfortably grow to a trillion or more.

Perhaps. It is notable that Mr Bezos’s justifications come from the same era as his proposed solutions. It is a mathematical truism that exponential growth will eventually overwhelm any fixed, finite quantity. Such arguments were most famously applied to natural resources in “The Limits to Growth”, published by the Club of Rome in 1972. Not so much a bold new future, then, but a blast from the past. ■

Living in outer space

Back to the future

Jeff Bezos’s ambition to colonise space is straight from the 1970s

IT WAS MORE interesting than another quarterly business update. On May 9th Jeff Bezos, the boss of Amazon, had his coming-out party as a space cadet. Mr Bezos, who is the world’s richest man, has long been interested in using his fortune to advance the cause of space flight. His private rocketry firm, Blue Origin, was founded in 2000. But he has been less of a publicity seeker than Elon Musk, the founder of SpaceX and the world’s best-known enthusiast for outer space.

No longer. During an hour-long presentation, Mr Bezos introduced Blue Origin’s prototype lunar lander, a machine that could be ready, he said, to meet America’s ambitions to return to the Moon by 2024. More striking were his plans for the farther future. Mr Musk wants humans to colonise Mars as an insurance policy should anything happen to Earth. Mr Bezos has no interest in Mars, or indeed any other planet in the solar system, all of which (except Earth) are pretty inhospitable places. Instead, he thinks humans should build their new space-going homes from scratch.

The idea is not new. Mr Bezos studied at Princeton, and one of his professors was Gerard O’Neill, a physicist. In 1976 O’Neill published “The High Frontier”, a bestselling book in which he sketched out the basic

engineering principles of how such space habitats might work. It was exactly those sorts of habitat that Mr Bezos advocated as the way humans would live in the future.

O’Neill’s book offered three shapes: a cylinder, a pair of cylinders or a torus. All are hollow, with the living surface built on the inside. All rotate, with the centrifugal force felt at the walls standing in for gravity. Sunlight provides both energy—through solar panels—and illumination, thanks to a system of mirrors and win-



Florentine renaissance

Metrology

Perfectly constant

A new way to measure the world is about to be introduced

ON MAY 20TH the world gets a new kilogram. It also gets a new ampere, kelvin and mole. And, more important, it gets a new way of defining all these units—which lie, along with the metre and the second, at the heart of the *Système International d'Unités* (SI) that human beings use to measure things. Even the pounds, miles, gallons and so on, clung on to by a few benighted Anglophones, are, *malgré eux*, defined in terms of the SI.

Measuring anything means comparing it with an agreed standard. Until now, for instance, the standard kilogram (see picture) has been the mass of a lump of metal sitting, nestled under a series of bell jars, in a vault in a suburb of Paris. However, the best sort of standard by which to define a unit is a constant of nature, such as the speed of light in a vacuum. And the metre is indeed so defined—or, rather, the speed of light is defined as 299,792,458 metres per second, and the second itself is defined as the duration of 9,192,631,770 periods of the radiation corresponding to the transition between the two hyperfine levels of the ground state of the caesium-133 atom at absolute zero. The calculation is therefore a simple one.

The other basic units, the ampere (electric current), candela (luminous intensity), kelvin (temperature) and mole (quantity of particles, such as atoms or molecules, regardless of their mass) are defined in terms of things that can be measured fairly easily in a laboratory. An ampere is proportional to the mechanical force generated between two wires (strictly speaking of infinite length, but let that pass) as a current flows through them. A kelvin is defined as 1/273.16 of the temperature of the point (known as the “triple point”) at which water, ice and vapour exist in equilibrium in a sealed glass vessel. And so on.

But all that is now to change. From Monday onwards, several other fundamental constants will go, like the speed of light, from being things that are measured to things that are defined, and are then used as references for measurement.

A kilogram, for instance, will be derived from Planck's constant, which relates the energy carried by a photon to its frequency. An ampere will depend on the charge on an electron, a kelvin on Boltzmann's constant (the average relative kinetic energy of particles in a gas, compared with the temperature of the gas) and the mole on Avogadro's



Off to the scrap yard

number— 6.0221409×10^{23} , originally measured as the number of atoms in a kilogram of a particular isotope of carbon. Only the metre, the second and the candela (already defined in terms of a particular frequency of light) remain unchanged.

With luck, this will be the last change ever needed to the system. By definition, the fundamental constants of the universe do not alter with time or place. Neither, even in America and Britain, need the SI. ■

Organic farming

Not a pile of dung

Organic farms' fields are free of faeces because things that live there eat them

SO-CALLED ORGANIC crops, grown without recourse to synthetic fertilisers and pesticides, are credited with miraculous properties by many of their fans. Unfortunately, there is little scientific evidence that they are more nutritious than those produced by conventional means. But their supporters argue that the methods used to raise them bring other benefits, too. And here they may be correct. That, at least, is the conclusion of a study by Matthew Jones of Washington State University, in America, which he has just published in the *Journal of Applied Ecology*.

Contamination of fresh produce with bacteria-laden wild-animal faeces is a problem in many places. For this reason farmers often remove hedgerows, ponds and other habitats to discourage visits by such animals. That is necessarily (indeed, deliberately) detrimental to wildlife, and also requires the application of more pesticides because it reduces the number of insectivorous birds and mammals around. Dr Jones speculated that an alternative way of dealing with animal dung would be to encourage dung beetles to bury it and bacteria to break it down, and that this encouragement might be an automatic consequence of organic farming.

To test this theory he and his team dug pitfall traps, baited with pig faeces to lure dung beetles, in 41 broccoli fields on the west coast of North America, a region that grows well over a third of that continent's fresh produce. They also collected soil samples from the fields in question. Western North America has been the source of several outbreaks of food poisoning caused by toxin-producing strains of *E. coli*, a gut bacterium. Research suggests these are linked to contamination by wild-boar faeces (hence the choice of pig dung as the lure). Dr Jones focused on broccoli because it is frequently eaten raw, and is thus likely to carry live pathogens into the human gut.

Of the fields in the study, 15 were farmed conventionally and 26 organically. Dr Jones and his colleagues found from their traps that organic farms did indeed foster large dung-beetle populations, which removed significantly more pig faeces over the course of a week than did beetles dwelling on conventional farms. They also found, by analysing the soil samples, that organic farms had more diverse populations of faeces-consuming microbes than did conventional farms.

To establish whether high beetle numbers and good microbe diversity really did result in fewer disease-causing bacteria, the researchers followed up their field work with laboratory experiments. In one such they presented three species of dung beetles with pig faeces that had been inoculated with a cocktail of harmful strains of *E. coli*. One of these species, *Aphodius pseudolividus*, had no effect on those strains. But the other two, *Onthophagus taurus* and *Onthophagus nuchicornis*, reduced pathogenic *E. coli* numbers by 90% and 50% respectively.

In a second experiment the researchers presented microbes from the various fields with the same faecal mix. This showed that the bacterial floras of organic farms were much more effective at suppressing dangerous strains of *E. coli* than those of conventional farms. The order of business, then, seems to be that beetles bury the dung and soil bacteria render it harmless. One up to organic farming. ■



Intellectual history

Live and let live

A thoughtful history of a liberal ideal lays bare its power and fragility

TOLERANCE IS a strange but indispensable civic virtue. It requires people to accept and live calmly with individuals and practices of which they disapprove. Some take it for spineless laxity in the face of what ought to be fought or forbidden. Others see it as a demeaning fraud that spares prohibition but withholds approval. The tolerant themselves are not immune to its tricks and subtleties. It takes little for them to shout intolerantly at each other about how far toleration should go.

Denis Lacorne, a French historian, is alive to those cross-currents. In “The Limits of Tolerance”, he describes how an enlightened ideal was championed by John Locke, Pierre Bayle and Voltaire, and how toleration was actually practised, using as examples the young United States, the Ottoman Empire and 16th-17th-century Venice. Then he turns to disputes over hate speech, public dress, and religious exemptions and frictions that vex present-day societies. His translators, C. Jon Delogu and Robin Emlein, use “tolerance” for both the civic virtue of forbearance and the state policy of upholding tolerant laws (often distinguished as “toleration”).

The Limits of Tolerance. By Denis Lacorne. Translated by C. Jon Delogu and Robin Emlein. *Columbia University Press*; 296 pages; \$35 and £27

He gives no pat answers, but an implicit lesson runs throughout. Defending toleration is not like protecting a jewel. It takes fixity of aim but also a feel for the changing context, persistence with a task that never ends and readiness to start again. Toleration does gradually spread. It can also suddenly vanish.

In late medieval thought, against a backdrop of punitive intolerance, two powerful arguments emerged against enforcing orthodoxy of belief or manners: ignorance and perversity. Unaware of God’s

deeper aims, church authorities could not for sure tell heresy from orthodoxy. Since God alone knew who was saved and who damned, secular authorities in turn had (like it or not) to protect both. That counsel was encapsulated in an early-15th-century catchphrase, “one faith, many rites”. Second, the widespread persecution was perverse and counter-productive. It made people suffer without changing their minds. Morally, persecution injured the Christian principles it claimed to uphold.

Faced by decades of confessional warfare and the bald fact of religious disunity, later defenders of toleration built on those two ideas. This is where Mr Lacorne’s story begins. Locke argued that you could coerce only public assent, not private conviction; that suppression encouraged revolt; and—a new element—that religious persecution was bad for trade. Bayle stressed the pacifying effect of having many sects, none strong enough to dominate. Voltaire contended that a unique faith, if granted secular power, was bound to degenerate into cruelty and fanaticism.

Toleration in action stretched from curtailing the burning or imprisoning of heretics, to lifting fines for practising an unorthodox faith and, later, to removing civic sanctions. That sequence from non-persecution and decriminalisation to civic equality included halts and reversals. A quarter of a century after the St Bartholomew’s Day massacre (pictured above), the Edict of Nantes (1598) gave French Protestants limited religious liberty. But the grant of civic rights was withdrawn 60 years be- ▶▶

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fore the revocation of the edict itself in 1685. The English Toleration Act (1689) put Anglicans and Nonconformists on a footing in specified areas of public life; but it excluded Catholics and Unitarians, accepted Quakers only conditionally, and barred all but Anglicans from many posts. Catholics and Nonconformists in England did not gain equal rights as citizens until 1829, Jews not until 1858.

E pluribus unum

Enlightenment hopes for cohabitation in diversity thus rested heavily on the growth of religious indifference, the spread of faith-blind commerce and the multiplication of creeds. As faith withdrew from public orthodoxy into private choice, it was trusted that religious differences would no more excite or enrage than dress. Two, perhaps three, great faiths might do battle. With a wide choice of denominations, as Bayle had argued, there seemed little point.

On the independence of the American colonies, religious variety underpinned the separation of church and state. For its part, commerce-minded Venice ignored the injunctions of Catholic preachers and accommodated Jewish traders, as well as Muslims, when not fighting the Ottomans.

For five centuries, meanwhile, the Ottoman Empire was widely regarded as a model of confessional peace, its “millet” system serving a vast trading bloc in which Muslims were a minority until the mid-19th century. Millets were religious communities with their own courts and practices. The Ottomans recognised and protected Jews, Christian and Muslims alike, though they were not treated equally. For Islam, in Muslim eyes, was the only true religion. Its adherents enjoyed public privileges in what they could wear (including the colour of their turbans), ride (horses, not donkeys) or build (tall houses and places of worship). Each community collected state taxes, making faiths in effect tax farms.

As Mr Lacorne tells it, the system’s breakdown was a lesson in how fast worldly forbearance can end. Ottoman toleration was finished off in the 19th century by nationalism and centralising reform. Balkan independence flooded Ottoman Turkey with 5m Muslims fleeing Christian persecution; everywhere national passions rose. By the early 20th century a proud record of toleration was blotted out by the genocide of Armenians.

The book’s second part is a swift, pointed reminder of how well or badly present-day societies cope with the demands of religious toleration and free speech. It takes in the *fatwa* against Salman Rushdie, the Muhammad cartoons, French changes of mind on religious dress in public, arguments for and against laws criminalising hate speech and American court rulings on religious exemptions (yes for Amish non-

schooling, no for Mormon polygamy and the ritual use of mescaline).

This rich historical tour may leave liberal-minded readers disheartened. Evidently the intellectual and commercial characteristics of modernity on which the Enlightenment placed such hope have not, in the end, made the puzzles of toleration go away. But they can take heart from the weaknesses of toleration’s enemies. Noisy as they are, they are even less coherent than its defenders.

To begin with, moral conservatives mistake toleration for permissiveness. But these are distinct. In a democracy, if everyone thinks certain conduct abhorrent, the case for prohibition becomes compelling. If nobody thinks it wrong, the case vanishes. Where opinion is split, as it often is, toleration enjoins the law to stand back. To recast those medieval arguments for toleration from ignorance and perversity in democratic terms: a public divided in its moral opinions cannot guide the state reliably; and, as experience suggests, policing morality tends to invite lawbreaking.

The charge that liberals are too wet and feeble about intolerance is again misplaced. There are perfectly liberal weapons in the legal armoury for use against intolerance, if only liberal society will use them: laws protecting speech (including the offensive kind); personal protections against abuse or discrimination that the devout enjoy, not as privileged believers, but as citizens like everyone else; bans, as in Germany, against anti-constitutional politics; ruthlessness in the pursuit and punishment of ethnic or religious violence.

The silent majority

Treating toleration itself as a patronising fraud likewise rests on a conceptual muddle. It confuses equality under the law with equal social prestige. Toleration, it is complained, demeans by holding back positive approval of belief or believer. But laws neither approve nor disapprove; only people do. The most citizens can ask of laws is not to be discriminated against. Laws cannot eradicate prejudices; for that, they must rely not on coercion but on free speech.

“The Limits of Tolerance” ends with a reminder of a resource available in liberal societies but easy to forget: liberal opinion. It recalls the outpouring of support after the killing of journalists at *Charlie Hebdo* in Paris in 2015. The book appeared, originally in French, before the recent slaughter of Muslim worshippers in New Zealand. But there was a lesson there, too. A simple gesture—the wearing of a headscarf by the prime minister—was a reminder of politicians’ role in sustaining (or poisoning) a climate of forbearance. Leaders can always stoke up the few who want a fight. They can also mobilise the many who would rather live in calm, even with those they dislike. ■



Harper Lee’s lost book

After cold blood

Furious Hours: Murder, Fraud and the Last Trial of Harper Lee. By Casey Cep. Knopf; 336 pages; \$26.95. William Heinemann; £20

“FROM THE time there were murders in America,” Casey Cep observes in her intriguing book, “there were writers trying to write about them.” One work made the perennial true-crime genre “respectable”: “In Cold Blood”, Truman Capote’s “non-fiction novel” (as he put it) about the dreadful murder of a Kansas family. Ms Cep’s focus is on another crime, and another author’s attempts to write about it. What gives “Furious Hours” its frisson is that the author who hoped to follow in Capote’s footsteps was his old friend, Harper Lee (pictured).

Lee’s fame rests on two pillars: the publication in 1960 of “To Kill a Mockingbird”, and the fact that, until the year before her death, she never published another book. It was while writing about the emergence in 2015 of “Go Set a Watchman”—in fact an early draft of “Mockingbird”—that Ms Cep learned of the existence of at least part of another Lee manuscript. In “The Reverend” she had planned to tell the story of Willie Maxwell, a charismatic African-American preacher from her native Alabama.

In 1970 the body of Maxwell’s first wife was found in her car on an Alabama highway. At his trial for her murder, the prosecution’s star witness recanted and, after his acquittal, married the accused—before herself dying in similarly mysterious circumstances, as did Maxwell’s brother, nephew and stepdaughter. Then, for all his alleged proficiency in voodoo, Maxwell was fatally shot at the stepdaughter’s funeral. His killer, Robert Burns, would be de- ▶▶

►fended by Tom Radney, a larger-than-life lawyer and politician somewhat in the vein of Atticus Finch. The third principal character in Ms Cep's narrative, after the reverend and Lee, Radney had previously defended Maxwell himself—and pressed his voluminous life-insurance claims.

"He might not have believed in what he preached," Lee wrote of Maxwell, "he might not have believed in voodoo, but he had a profound and abiding belief in insurance." Lee had worked closely with Capote in researching "In Cold Blood"; privately she objected to what she knew to be Capote's fabrications. "The Reverend" would be her chance to play a straight hand.

It is no spoiler to reveal that she never finished the book she planned to write about the Maxwell case. In the first part of "Furious Hours", Ms Cep ably takes on the task that Lee may or may not have abandoned (there is no way of knowing how far she got, as her surviving literary assets remain "unpublished and unknown"). Ms Cep paints a portrait of a hermetic society still riven by prejudice, with its revival tents and sharecroppers. Then she pieces together Lee's struggle not only with Maxwell's tale but with the legacy of her overwhelming success. Mostly living anonymously in her apartment in Manhattan, she struggled with what Ms Cep calls the "seesaw of perfectionism and despair".

"Furious Hours" is a well-told, ingeniously structured double mystery—one an unsolved serial killing, the other an elusive book—rich in droll humour and deep but lightly worn research. If at the final page it seems curiously unsatisfying, that is because readers and writers both long for resolution—and Harper Lee's story, like that of her proposed subject, stubbornly resists a neat ending. ■

Spanish fiction

Neighbours from hell

Homeland. By Fernando Aramburu. Translated by Alfred MacAdam. *Pantheon*; 608 pages; \$29.95. *Picador*; £16.99

ONLY A FEW miles from San Sebastián, Hernani is a prosperous Basque town with a medieval centre, several industrial estates and a sculpture museum. It hardly seems oppressed. Yet for decades it was under the thumb of ETA, the terrorist group which fought for an independent Basque state. Its town hall is still run by ETA's sympathisers from the so-called *abertzale* (patriotic) left. Murals on the walls glorify convicted ETA prisoners.



Hometown heroes

Hernani is the setting for "Homeland", a powerful novel which has a strong claim to be the definitive fictional account of the Basque troubles. Its author, Fernando Aramburu, was born in San Sebastián but has lived in Germany since 1985. He has recreated ETA's insidious violence and psychological intimidation, the threats and the terror that, amid the brooding mountains and tight valleys of the Spanish Basque country, set friends, neighbours and families against each other in asphyxiatingly claustrophobic towns like Hernani.

The novel tells the story of two families who were neighbours and friends. Txato sets up a successful haulage company; he helps his pals Joxian and Miren, who is so close to Txato's wife, Bittori, as to seem like a sister. Then Miren's middle child, Joxe Mari, joins ETA, having become entangled in the *abertzale* world through his drinking buddies. Txato becomes a target of ETA's extortion. The first time, he pays up. But when another demand is made, he refuses. After all, his father was wounded defending the Basque Country against Franco in the Spanish civil war. "I'm from here, I speak Basque, I don't get involved in politics, I create jobs," he reasons. "Don't they say they're defending the Basque people? Well, if I'm not the Basque people, who is?"

Overnight Txato's and Bittori's lifelong friends ostracise them. Txato is murdered. The lives of Bittori and her two children are traumatised by grief, which each handles in their own way. Miren's family is scarred too: Joxe Mari is captured, tortured and jailed. His sister, Arantxa, who rejects ETA, is disabled by a stroke; Gorka, his younger brother, escapes to Bilbao. "In a small town," Gorka says, "you can't be invisible."

Mr Aramburu skilfully spins their stories in short, punchy chapters that dart back and forth in time. He is careful not to

caricature, portraying both police brutality and Joxe Mari's belief—instantly adopted by Miren—that Spanish democracy is oppressive, misguided though that is. His prose has been rendered into propulsive American English by Alfred MacAdam (though it jars to translate this particular *pueblo* as "village" rather than "town").

In all, ETA murdered 850 people before disbanding last year. The vast majority of its victims were killed after Franco died in 1975 and Basques were offered an amnesty, as well as a democratic settlement that grants to one of Spain's richest regions generous fiscal privileges. Basques run much of Spanish business. Indeed, of all the world's terrorisms, ETA's was one of the hardest to understand. It was fuelled by a toxic combination of racist anti-Spanish nationalism, Catholic mysticism and a dogmatic Marxist-Leninism.

Basques and other Spaniards are now trying to come to terms with the legacies of the conflict. "Patria", to give Mr Aramburu's novel its more effective original title, has played a role in that; it has sold more than 1m copies in Spanish since its publication in 2016. Its message is ultimately redemptive. Forgiveness is extraordinarily hard, but it is not impossible. ■

Art and gender

Portrait by a lady

Why art by women sells at a discount

AROSE PAINTED by another name would cost more. In a new paper*, four academics show that art made by women sells for lower prices at auction than men's, and suggest that this discount has nothing to do with talent or thematic choices. It is solely because the artists are female.

The authors used a sample of 1.9m transactions in art auctions across 49 countries in the period from 1970 to 2016. They found that art made by women sold at an average discount of 42% compared with works by men. However, auction prices can be distorted by a few famous artists whose output is perceived as extremely valuable. If transactions above \$1m are excluded, then the discount falls to 19%.

One explanation for this gap could be that women choose different subjects. This is partly true; for example, a higher proportion of women than men paint roses (including Helen Allingham, a British watercolourist: see picture on next page), whereas a smaller share create landscapes. But it turns out that themes that are more associated with female artists sell at a pre- ►►



Flower power

► mium, not a discount. Indeed, the researchers could not explain the female discount in terms of other factors such as the size, style or medium of the works, or the age of the artist.

In theory, another possibility could be that women are just less talented than men. To test that proposition, the authors conducted a couple of experiments. In one, they showed 1,000 people a selection of ten lesser-known paintings and asked them to guess the gender of the artists. The respondents were right only 50.5% of the time, no better than tossing a coin. In short, the general public cannot discriminate between male and female art.

In a second test, the researchers used a computer programme to generate paintings and randomly assign the results to artists with male or female names. They then asked participants to rate the paintings and ascribe a value. The experiment found that affluent individuals (those most likely to bid at auctions) attributed a lower value to works which the programme assigned to a woman. Clearly, this gap was unrelated to the artistic merit of the picture.

It could be that these well-heeled observers were aware of the market discount for female artists, and applied it accordingly. But that does not solve the puzzle of why the gulf opened in the first place.

Two more findings imply that the difference relates to culture rather than talent. First, the academics considered the relationship between the female discount and the level of gender inequality in the countries where the auctions took place. The inequality measure was derived from indices (such as those compiled by the UN and the World Economic Forum) which look at factors such as educational attainment and political empowerment. The average discount applied to the work of a giv-

ARTISTS HAVE long been inspired by the great issues of their day. Eugène Delacroix's topless amazon, Liberty, celebrated the revolution that toppled the French king in 1830. Picasso's "Guer-nica" mourned the horror of the Spanish civil war. Earlier this month a panel backed by the UN warned that 1m species were under threat because of human interference. So it is fitting that the Venice Biennale, which opened as those findings were released, should at last have discovered the theme of climate change. Alas, much of the resulting art is polemical rather than arresting.

For instance, Christine and Margaret Wertheim's hand-crocheted coral reefs look good on Instagram, but in "May You Live In Interesting Times", an international exhibition curated by Ralph Rugoff of the Hayward Gallery in London, they fall flat. In the Biennale's national pavilions, the Canadians are showing well-meaning videos about the impact of the changing climate on the Inuit people. Artists in the Nordic pavilion have strung leguminous loops of green tissue and red "seaweed" on a clothesline. Humanity has hung the planet out to dry, they seem to say: hardly an original metaphor.

One of the most memorable previous examples of climate-change art was Olafur Eliasson's "Weather Project", in which the Icelandic artist rigged up a huge circular mirror and orange lights to suffuse Tate Modern's Turbine Hall in a golden glow. It seemed to bring the sun into the lives of the more than 2m people who visited the show in 2003; it returns this July. Two artists who seem to be influenced by that installation are Joan Jonas (pictured) and Dane Mitchell.

Both have brought powerful works to Venice (itself threatened by rising seas). In the New Zealand pavilion, Mr Mitchell has gathered a list of 3m things that no longer exist—extinct species but also

en female artist was lowest in countries where women were more equal. (There are some exceptions to the rule, such as Brazil, where women's art was highly rated.)

The good news is that the female discount has fallen over time. For transactions under \$1m, the study calculated, the discount has dropped from 33% in the 1970s to 8% after 2010. Again, though, that only confirms that ability never had anything to do with the disparity. But the reduction in the discount has another implication. As it

The Venice Biennale

Beneath the waves

VENICE

Why is climate-change art often so dull?

ghost towns, discontinued perfumes, vanished borders. The list is being declaimed in what amounts to an epic poem of loss; the history of progress, it implies, is also a history of obsolescence. The roll-call is so long it can be read out for eight hours a day, seven days a week for the six months of the Biennale, and no item will ever be repeated.

Ms Jonas combines film and performance in a piece created for Ocean Space, a new platform that brings together scientists and artists. On a stage in a Venetian church, she dances and mimes like a water wraith. Behind her is a video she shot of the ocean around Jamaica. At nearly 83, Ms Jonas slips into the blue. In a chiffon dress that discreetly masks her aged limbs, she glides through the water—a reminder that humans emerged from the sea and many still live by its bounty. With climate-change art, as with all kinds, it is the effect on the heart, as much as the head, that counts.



At sea with Joan Jonas

has shrunk, so the returns on women's art have grown; since the 1970s they have been higher than for their male peers. Collectors should put aside their prejudices. As the art world's ingrained chauvinism abates, the female of the species has become a better investment than the male. ■

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* "Is gender in the eye of the beholder? Identifying cultural attitudes with art auction prices", by Renée Adams, Roman Kräussl, Marco Navone and Patrick Verwijmeren

Economic data

	Gross domestic product				Consumer prices		Unemployment rate		Current-account balance	Budget balance	Interest rates		Currency units			
	% change on year ago		2019†		% change on year ago		%		% of GDP, 2019†	% of GDP, 2019†	10-yr gov't bonds	change on	per \$	% change		
	latest	quarter*			latest	2019†					latest,%	year ago, bp	May 15th on year ago			
United States	3.2	Q1	3.2	2.2	2.0	Apr	2.2	3.6	Apr	-2.6	-4.7	2.4	-59.0	-		
China	6.4	Q1	5.7	6.4	2.5	Apr	2.5	3.7	Q1§	0.3	-4.5	3.2	§§	8.0	6.87	-7.6
Japan	0.3	Q4	1.9	1.0	0.5	Mar	1.1	2.5	Mar	3.9	-3.4	-0.1	-8.0	109	0.8	
Britain	1.8	Q1	2.0	1.0	1.9	Mar	1.8	3.8	Feb††	-4.1	-1.6	1.2	-35.0	0.78	-5.1	
Canada	1.6	Q4	0.4	1.6	2.0	Apr	1.7	5.7	Apr	-2.6	-1.1	1.7	-81.0	1.35	-4.4	
Euro area	1.2	Q1	1.6	1.3	1.7	Apr	1.3	7.7	Mar	3.2	-1.2	-0.1	-75.0	0.89	-5.6	
Austria	2.4	Q4	5.1	1.3	1.8	Mar	1.8	4.8	Mar	2.0	0.1	0.2	-62.0	0.89	-5.6	
Belgium	1.1	Q1	0.7	1.3	2.1	Apr	2.2	5.7	Mar	0.1	-0.9	0.4	-49.0	0.89	-5.6	
France	1.1	Q1	1.2	1.2	1.3	Apr	1.3	8.8	Mar	-0.6	-3.3	0.3	-46.0	0.89	-5.6	
Germany	0.7	Q1	1.7	1.0	2.0	Apr	1.4	3.2	Mar‡	6.6	0.8	-0.1	-75.0	0.89	-5.6	
Greece	1.6	Q4	-0.4	1.8	1.0	Apr	0.9	18.5	Jan	-2.5	-0.4	3.6	-57.0	0.89	-5.6	
Italy	0.1	Q1	0.9	0.1	1.1	Apr	0.9	10.2	Mar	2.1	-2.9	2.8	79.0	0.89	-5.6	
Netherlands	1.7	Q1	1.9	1.4	2.9	Apr	2.6	4.2	Mar	10.2	0.7	0.1	-63.0	0.89	-5.6	
Spain	2.4	Q1	2.9	2.1	1.5	Apr	1.2	14.0	Mar	0.8	-2.4	0.9	-33.0	0.89	-5.6	
Czech Republic	3.0	Q4	2.0	2.8	2.8	Apr	2.2	2.0	Mar‡	0.2	0.7	1.8	-5.0	23.0	-6.2	
Denmark	2.5	Q4	1.2	1.9	1.0	Apr	1.1	3.7	Mar	6.3	1.0	nil	-68.0	6.66	-5.7	
Norway	2.5	Q1	-0.3	1.9	2.9	Apr	2.5	3.8	Feb††	7.7	6.6	1.7	-27.0	8.72	-6.9	
Poland	4.5	Q4	5.7	3.8	2.2	Apr	1.7	5.9	Mar§	-0.6	-2.4	2.9	-44.0	3.84	-5.7	
Russia	2.7	Q4	na	1.5	5.2	Apr	4.9	4.7	Mar§	6.5	2.4	8.3	78.0	64.6	-3.2	
Sweden	2.4	Q4	4.7	1.6	2.1	Apr	1.7	7.1	Mar§	2.6	0.3	0.1	-69.0	9.61	-9.3	
Switzerland	1.4	Q4	0.7	1.8	0.7	Apr	0.5	2.4	Apr	9.7	0.5	-0.3	-47.0	1.01	-1.0	
Turkey	-3.0	Q4	na	-1.7	19.5	Apr	16.1	14.7	Feb§	-0.7	-2.3	19.5	485	6.01	-25.8	
Australia	2.3	Q4	0.7	2.5	1.3	Q1	1.7	5.2	Apr	-2.4	-0.2	1.7	-107	1.44	-6.9	
Hong Kong	1.3	Q4	-1.4	2.0	2.1	Mar	2.3	2.8	Mar††	4.6	0.5	1.6	-62.0	7.85	nil	
India	6.6	Q4	5.1	6.9	2.9	Apr	3.7	7.6	Apr	-1.8	-3.4	7.4	-52.0	70.3	-3.3	
Indonesia	5.1	Q1	na	5.2	2.8	Apr	2.8	5.0	Q1§	-2.7	-2.1	8.0	98.0	14,460	-2.9	
Malaysia	4.7	Q4	na	4.5	0.2	Mar	0.8	3.4	Mar§	2.4	-3.4	3.8	-33.0	4.17	-5.0	
Pakistan	5.4	2018**	na	3.4	8.8	Apr	8.2	5.8	2018	-4.0	-7.0	13.5	†††	496	141	-18.2
Philippines	5.6	Q1	4.1	5.9	3.0	Apr	4.4	5.2	Q1§	-2.2	-2.5	5.8	-23.0	52.4	0.1	
Singapore	1.3	Q1	2.0	2.4	0.6	Mar	0.5	2.2	Q1	17.0	-0.6	2.1	-48.0	1.37	-2.2	
South Korea	1.8	Q1	-1.4	2.4	0.6	Apr	1.1	4.4	Apr§	4.5	0.7	1.9	-95.0	1,189	-9.7	
Taiwan	1.7	Q1	2.0	1.8	0.7	Apr	0.1	3.7	Mar	13.1	-1.2	0.7	-27.0	31.1	-4.0	
Thailand	3.7	Q4	3.3	3.5	1.2	Apr	0.9	0.9	Mar§	8.8	-2.8	2.1	-54.0	31.6	1.0	
Argentina	-6.2	Q4	-4.7	-0.9	55.1	Apr	46.1	9.1	Q4§	-2.1	-3.2	11.3	562	45.1	-44.6	
Brazil	1.1	Q4	0.5	1.5	4.9	Apr	4.0	12.7	Mar§	-1.3	-5.8	6.8	-154	4.00	-8.0	
Chile	3.6	Q4	5.3	3.2	2.0	Apr	2.2	6.9	Mar†††	-2.5	-1.4	3.9	-60.0	693	-8.7	
Colombia	2.3	Q1	nil	3.1	3.2	Apr	3.1	10.8	Mar§	-3.5	-2.0	6.5	-9.0	3,294	-12.3	
Mexico	1.3	Q1	-0.8	1.4	4.4	Apr	4.2	3.6	Mar	-1.7	-2.3	8.2	37.0	19.1	3.3	
Peru	4.8	Q4	11.4	3.7	2.6	Apr	2.2	7.5	Mar§	-1.7	-2.0	5.6	64.0	3.32	-1.5	
Egypt	5.5	Q4	na	5.5	13.0	Apr	12.2	8.1	Q1§	-1.0	-7.9	na	nil	17.1	4.4	
Israel	2.9	Q4	3.1	3.1	1.3	Apr	1.2	3.9	Mar	2.7	-3.9	1.8	-12.0	3.57	0.6	
Saudi Arabia	2.2	2018	na	1.9	-2.1	Mar	-1.1	6.0	Q4	3.6	-6.7	na	nil	3.75	nil	
South Africa	1.1	Q4	1.4	1.5	4.5	Mar	5.0	27.6	Q1§	-3.2	-4.0	8.4	-7.0	14.2	-11.4	

Source: Haver Analytics. *% change on previous quarter, annual rate. †The Economist Intelligence Unit estimate/forecast. §Not seasonally adjusted. ‡New series. **Year ending June. ††Latest 3 months. †††3-month moving average. §§5-year yield. ††††Dollar-denominated bonds.

Markets

In local currency	Index	% change on:	
		May 15th	Dec 31st 2018
United States S&P 500	2,851.0	-1.0	13.7
United States NAScomp	7,822.2	-1.5	17.9
China Shanghai Comp	2,938.7	1.6	17.8
China Shenzhen Comp	1,577.9	3.1	24.5
Japan Nikkei 225	21,188.6	-1.9	5.9
Japan Topix	1,544.2	-1.8	3.4
Britain FTSE 100	7,297.0	0.4	8.5
Canada S&P TSX	16,318.1	-0.5	13.9
Euro area EURO STOXX 50	3,385.8	-0.9	12.8
France CAC 40	5,374.3	-0.8	13.6
Germany DAX*	12,099.6	-0.7	14.6
Italy FTSE/MIB	20,863.1	-1.6	13.9
Netherlands AEX	553.1	-1.0	13.4
Spain IBEX 35	9,177.1	-0.5	7.5
Poland WIG	56,373.4	-2.0	-2.3
Russia RTS, \$ terms	1,247.0	1.1	17.0
Switzerland SMI	9,480.8	-1.5	12.5
Turkey BIST	87,380.4	-3.2	-4.3
Australia All Ord.	6,370.9	0.3	11.6
Hong Kong Hang Seng	28,268.7	-2.5	9.4
India BSE	37,114.9	-1.8	2.9
Indonesia IDX	5,980.9	-4.6	-3.4
Malaysia KLSE	1,611.4	-1.4	-4.7

	index	% change on:	
		May 15th	Dec 31st 2018
Pakistan KSE	34,291.7	-2.1	-7.5
Singapore STI	3,218.8	-2.0	4.9
South Korea KOSPI	2,092.8	-3.5	2.5
Taiwan TWI	10,560.7	-3.3	8.6
Thailand SET	1,621.3	-2.0	3.7
Argentina MERV	33,218.1	-1.7	9.7
Brazil BVSP	91,623.4	-4.2	4.3
Mexico IPC	43,338.8	-0.2	4.1
Egypt EGX 30	13,809.5	-1.5	5.9
Israel TA-125	1,430.6	-2.0	7.3
Saudi Arabia Tadawul	8,480.7	-4.7	8.4
South Africa JSE AS	56,043.2	-3.4	6.3
World, dev'd MSCI	2,110.4	-1.0	12.0
Emerging markets MSCI	1,016.0	-3.3	5.2

US corporate bonds, spread over Treasuries

	latest	Dec 31st 2018
Basis points		
Investment grade	163	190
High-yield	464	571

Sources: Datastream from Refinitiv; Standard & Poor's Global Fixed Income Research. *Total return index.

Commodities

The Economist commodity-price index

2005=100	% change on			
	May 7th	May 14th*	month	year
Dollar Index				
All Items	134.4	132.6	-4.4	-15.0
Food	138.8	138.0	-3.0	-13.4
Industrials				
All	129.8	127.0	-5.9	-16.7
Non-food agriculturals	122.2	117.1	-6.5	-18.8
Metals	133.1	131.2	-5.7	-15.9
Sterling Index				
All items	128.3	186.7	-3.4	-11.2
Euro Index				
All items	149.4	147.0	-3.7	-10.1
Gold				
\$ per oz	1,283.8	1,297.0	1.6	0.2
West Texas Intermediate				
\$ per barrel	61.4	61.8	-3.5	-13.4

Sources: CME Group; Cotlook; Darmann & Curl; Datastream from Refinitiv; FT; ICCO; ICO; ISO; Live Rice Index; LME; NZ Wool Services; Thompson Lloyd & Ewart; Urner Barry; WSJ. *Provisional.

For more countries and additional data, visit Economist.com/indicators



The beauty of humans

Jean Vanier, founder of the L'Arche communities, died on May 7th, aged 90

THE VILLAGE of Trosly-Breuil, north of Paris, lay so close to the forest of Compiègne that it seemed about to be engulfed by it. The village mental institution, which Jean Vanier visited in the early 1960s, was gloomier still, a place of horror. With little work to do, the young men sat around for most of the day. They were not allowed to leave the building. Some were violent, and screaming; they were pacified with injections. He was struck by an overwhelming atmosphere of sadness. But amid that sadness shone the beauty of the human beings incarcerated there.

He made several visits. His spiritual adviser, Father Thomas Philippe, was the chaplain and encouraged him to come. He also paid visits, in those years when he was trying to discern what Jesus was wanting of him, to other places where people dismissed as “stupid” or “idiots” were locked away. In one, built of cement blocks, the inmates spent their day walking round in circles. In another, he found a boy chained up in a garage. Their families and the world had abandoned them. They cried out to be looked on with kindness, called by their name, not despised, but loved. He already knew they would return that love, for he felt it whenever he was among them. And to love was to be with God.

Feeling he must do something, in 1964 he bought a small stone house in Trosly-Breuil. It was falling to bits, with no electricity or plumbing, but it would serve the purpose. Then he invited two of the young men from the institution, Raphael Simi and Philippe Seux, to live with him there. They would share meals and chores and make a little *foyer*, like a family. They said yes at once. Philippe had a paralysed leg, a withered right hand and poor eyesight, and repeated himself constantly. Raphael, damaged by meningitis, knew only 20 words, fell often and had fits of anger. Yet in both boys he saw radiance and, most important, tenderness. From his invitation and their acceptance sprang a network of 150 house-based communities in 38 countries, from India to Ivory Coast,

from Honduras to Palestine. Here those with mental impairment and those without it live and work together as friends. Each person does what they can manage, whether baking bread or mending tractors or binding books, and everyone has value. Communal meals are at the core of it; as Aristotle said, men cannot know each other until they have eaten salt together.

He had no professional experience in this sort of care. He had been a professor of philosophy at the University of Toronto (hence Aristotle) and before that a midshipman in the British and Canadian navies, drawn to serve as a teenager during the war. When he set up the house in Trosly-Breuil, in his late 30s, he put aside all ambition for success in the world's eyes. No more climbing up the ladder, hungry for applause; instead, the tiny joys of a bowl of soup carried without spilling to the table, or an apple crop shaken wildly down on the overgrown garden, or a song sung loudly out of tune. Though his lanky figure towered over “the boys”, as he always thought of his first recruits, he had left behind that life of controlling and commanding people. Now he listened, or spoke softly in a voice inflected by English public school as well as his Canadian parents. He let Raphael and Philippe choose the food and paint the rooms, discovering the gifts they had, laughed at the mess they all made together and, because they were in the same boat, named the house L'Arche, the Ark. It soon drew not only more young people, needing 12 more houses by 1977, but assistants from Europe, North America and South Asia. Support from the French government spread his idea all the faster, though he was careful to insist that no two houses were alike; he feared the dead hand of administration. His life became one of incessant travelling, in his simple blue anorak, to nurture his flowers as they grew.

For him L'Arche was rooted in his following of Jesus. Whatever was done for the poor, the suffering and the imprisoned was done for him. For Jesus too was vulnerable, and a servant. He was moved especially by Jesus's washing of his disciples' feet, and once implicitly admonished a fractious Lambeth Conference by seeing that all 800 bishops present did the same for each other. Though he was not a priest, despite having thought about it, his life of navy-disciplined holiness often seemed as close as a layman could get. In the earliest L'Arche communities his own Catholic practice underpinned the day, and he would often retire to find the “anaesthetic” of quiet prayer. But his arms were wide open to Hindus, Muslims, Jews and those of no faith at all, as long as they acknowledged that at the heart of the universe, bringing everything together, was love; and as long as they could sit, as he did, beside a young man twisted and immobile from birth, repeating to him simply: “Sébastien, you are beautiful.”

The same message appeared in his lectures and his books, more than 30 of them. Those who were most rejected and despised by society had the most to teach it. Those who seemed weakest exposed the weakness in others. Living with them was not plain sailing, and every L'Arche community kept doctors and psychiatrists on hand. But he found that displays of violence or rage led him to see the sources of violence in himself, instructing him in his own failings and allowing him to grow. And he was constantly inspired by the simplicity and joy of people the world thought crazy, by the amount of time he spent laughing with them (at music practices, or sports days, or the many celebratory meals), by the primacy of heart over head in their responses and the lessons they gave him in tenderness. He and his assistants might be helping them, but it was they who were doing the work of transformation.

He thought of Pauline, an epileptic with a paralysed arm and leg, who had come to L'Arche-Trosly after 40 years of humiliation by her family and neighbours. For them, she had no value. For him, she was a friend who, despite her bouts of furious screaming, also loved to sing Parisian songs and to dance, even with one leg. Whenever she was not too angry, they would talk. Sometimes she would put her good hand on his head and say gently, “Poor old man!” He knew then that L'Arche was doing its work: in her, and in him. ■

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