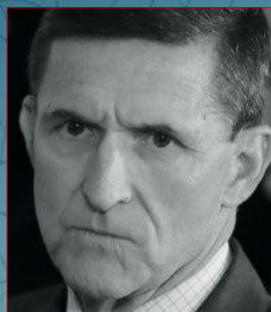


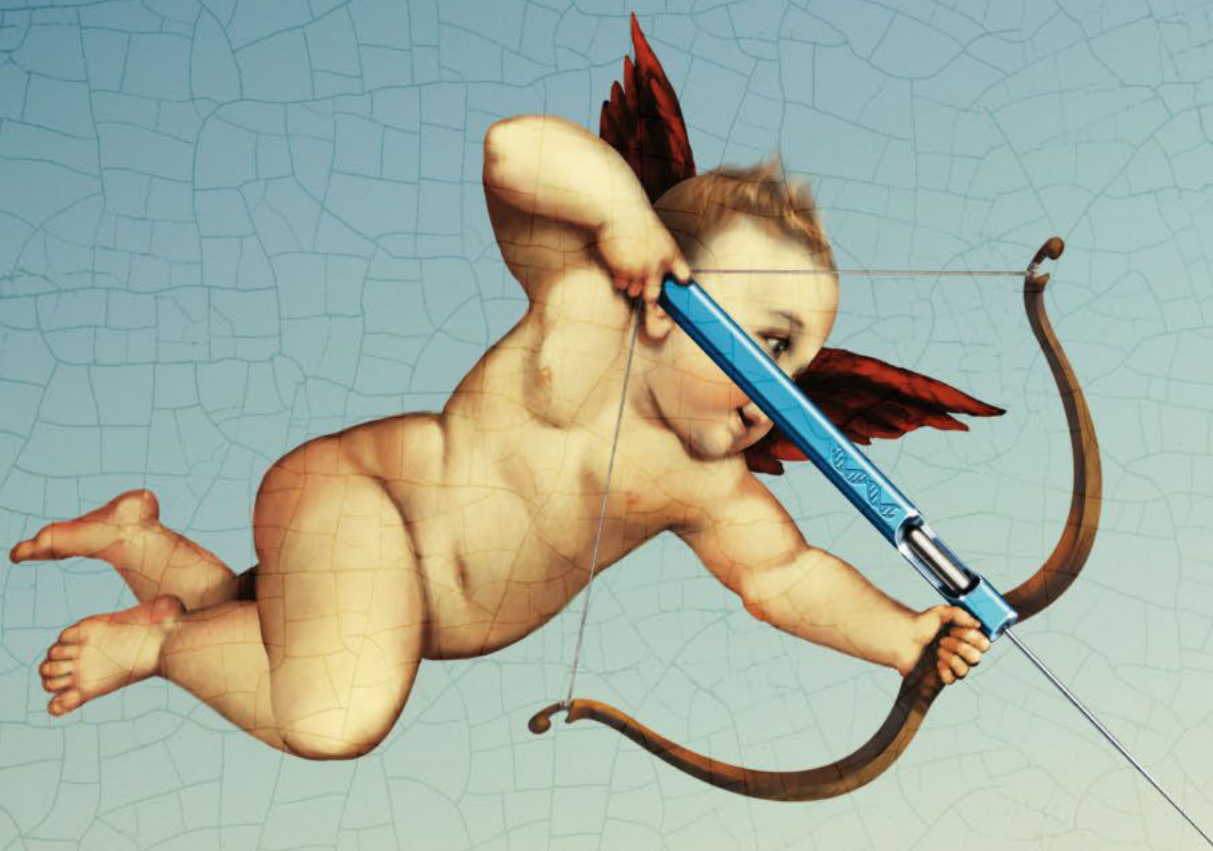
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Flynn and
the turmoil
in Trump's
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Sex and science



**Gene editing, clones and the
ethics of making babies**



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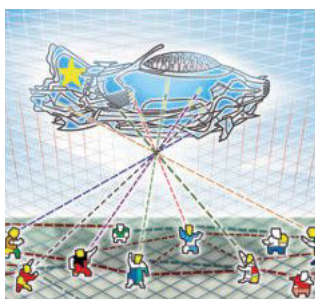
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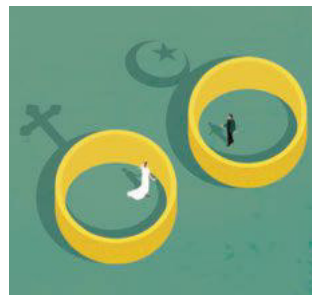
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Politics



After less than a month in the job, **Michael Flynn** departed as Donald Trump's national security adviser, having admitted that he had provided "incomplete information" to the White House about a conversation he had with the Russian ambassador weeks before Mr Trump was inaugurated as president. All this added to the growing sense of a disorderly Oval Office, and fuelled speculation about alleged links between the Trump campaign team and Russian officials.

Mr Trump described an appeals-court's decision to block his temporary **ban on refugees** and citizens from seven mainly Muslim countries as "disgraceful". He may introduce a new, legally tight order to enact the ban. Either way, the issue seems destined for the Supreme Court.

The Senate confirmed **Steven Mnuchin** as Mr Trump's Treasury secretary. But Andrew Puzder withdrew his name for consideration as labour secretary. He had come under criticism for, among other things, employing an illegal immigrant in his household.

The two-state twin step Binyamin Netanyahu, the prime minister of **Israel**, met Donald Trump at the White House. In what appeared to be a break from established American policy promising Palestinians their own state as part of a peace deal, Mr Trump said he could live with either one state or two states, depending on what both parties want. He urged both to com-

promise, and told Mr Netanyahu to "hold back" on building settlements in the West Bank.

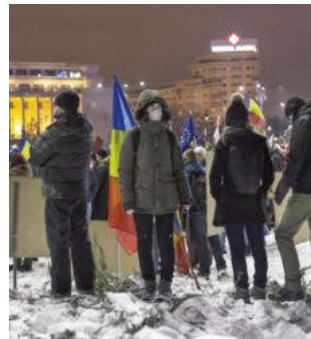
Hamas, the Palestinian Islamist group that controls the Gaza Strip, named a hardline military commander, Yehiya Sinwar, as its overall leader in the territory. Some fret that his appointment may increase the risk of conflict with Israel, which unilaterally pulled settlers and troops out of Gaza in 2005 but still controls its borders.

The number of mentally ill patients who have died after they were transferred out of state hospitals into unregulated community-care centres in **South Africa** reached 100, the country's health ombudsman said. The deaths arising from a mismanaged transfer add to pressure on the ruling African National Congress, which is losing support over concerns about poor governance.

While the world is distracted **Russia** reportedly deployed a new cruise missile, violating an arms-control treaty from 1987 that bans American and Russian intermediate-range missiles based on land. The Kremlin denied the report. The Obama administration criticised Russia when it tested the missile in 2014; deploying it would be provocative.

The European Union sent its commissioner for economic affairs to Athens for talks about **Greece's** debt woes. He discussed the economic reforms that creditors want the country to implement with Alexis Tsipras, the prime minister, and Euclid Tsakalotos, the finance minister. EU officials hope that the review can be completed by February 20th, when finance ministers meet in Brussels, so that the latest round of aid for Greece can be unlocked.

Pablo Iglesias, the head of **Spain's** far-left Podemos Party, won a leadership battle against a moderate rival, giving him a mandate to continue along a radical, anti-establishment track.



Anti-government protests continued in Bucharest, the capital of **Romania**. Demonstrations began several weeks ago against a proposed law that decriminalised most forms of corruption. Though the bill was dropped, protesters have continued to call for the resignation of senior politicians, including Sorin Grindeanu, the prime minister.

The Miami vice-president

The American government blacklisted the vice-president of **Venezuela**, Tareck El Aissami, calling him a "drug trafficker" and a "kingpin". The decision bars American firms from doing business with him and freezes his assets in the United States. Mr El Aissami said the order was an act of "infamy and aggression".

Canada's prime minister, Justin Trudeau, visited the White House. Donald Trump was friendlier to Canada than he is to Mexico, saying that trade relations are "outstanding". Any changes to the North American Free Trade Agreement would "benefit both our countries", he promised.

Emboldened

North Korea tested a missile in defiance of UN sanctions. The launch marked another step forward in the country's quest for a long-range missile that could carry a nuclear warhead. A day later, the half-brother of North Korea's dictator, Kim Jong Un, was assassinated in Malaysia, in an attack assumed to be the work of North Korean agents.

In a call with China's president, Xi Jinping, Donald Trump reaffirmed America's commitment to the "one-

China policy", backing away from a veiled threat to recognise **Taiwan's** independence.

Basuki Tjahaja Purnama, known as Ahok, topped the vote in an election for governor of **Jakarta**, the capital of Indonesia. Ahok, a Christian who has been falsely accused of insulting Islam, will now face Anies Baswedan, a former education minister, in a run-off on April 19th.

Just before she was due to be sworn in as chief minister of Tamil Nadu, Sasikala Natarajan was convicted of corruption by **India's** Supreme Court. That left other members of her party to fight over the mantle of Jayalalitha, Tamil Nadu's recently deceased, wildly popular chief minister, who was also Ms Sasikala's companion.

Sam Rainsy, the exiled leader of **Cambodia's** main opposition party, said he was stepping down, in a bid to prevent the Cambodian authorities from banning his party.

Officials in Xinjiang, a province in western **China**, said five people were killed by three assailants armed with knives in a residential compound. They said the attackers were shot dead by police. The authorities usually blame such violence on Islamist militants seeking Xinjiang's independence.



Gurbanguly Berdimukhamedov, the president of **Turkmenistan**, won re-election in a nine-man field with 98% of the vote. The election was supposed to showcase Turkmenistan's recent embrace of multi-party democracy. Turnout was said to be 97%. ▶▶

Business

Toshiba's share price



Source: Thomson Reuters

Cost overruns at its American nuclear-power subsidiary and a general deterioration in the outlook for its other nuclear businesses abroad caused **Toshiba** to announce a ¥712.5bn (\$6.3bn) write-down. Its chairman resigned. The troubled Japanese conglomerate also revealed it had received further allegations about how its American division had accounted a takeover deal. Toshiba's ever-lengthening list of problems has caused it to consider selling its lucrative memory-chip business; it had said only recently that it would limit any potential buyer's stake to 19.9%.

Rolls-Royce reported an annual headline loss of £4.6bn (\$6.2bn), the biggest in the British engineering group's history. This was in part because of a £671m fine that Rolls-Royce incurred to settle allegations that it had bribed officials in various countries. But the vast bulk of the loss was attributed to an accounting charge the company had to book after it revalued its currency positions following the slump in the pound.

Up in the air

The increasing costs of petrol, clothing and cars helped push America's annual rate of **inflation** up to 2.5% in January, from 2.1% in December. Speaking to congressmen this week, Janet Yellen cited rising inflation as a reason to push ahead with interest-rate rises. The head of the Federal Reserve also warned of the high degree of uncertainty about what effects the new administration's policies will have on the economy.

Britain's annual inflation rate rose to 1.8% in January. A **weaker pound** is expected to add to inflationary pressures because producers will pay more for imported raw materials and goods, though it is debatable how much of this cost they will pass on to consumers. The growth in **wages**, meanwhile, slowed to 2.6% in December.

A rebound in exports towards the end of the year helped **Japan's GDP** grow by 1% in 2016, down slightly from the 1.2% it recorded in 2015. With domestic consumption still stagnant, international trade remains the driver of the Japanese economy, which makes it vulnerable to any tariffs that might be imposed by the Trump administration.

The European Commission raised its forecast slightly for growth in the **euro zone** to 1.6% this year and 1.8% for next year. But it also pointed to the "exceptional risks" surrounding its forecast, not least of which is the start of negotiations for Britain to leave the European Union.

General Motors confirmed that it is in talks to sell its business in Europe to **PSA Group** in France, which makes Peug-

geot and Citroën cars. GM recently reported another loss at the business, which comprises the Opel brand in Germany and Vauxhall in Britain.

India's biggest carmaker, **Tata Motors**, said net profit in the last three months of 2016 had slumped by 96% compared with the same period a year earlier, to just \$16m. It was hit by falling income from its Jaguar Land Rover subsidiary, and also by the surprise withdrawal of 86% of the country's banknotes by the government in November.

Feeling poorly

There were further reverberations from court decisions in America that struck down two mergers of health-care insurers on antitrust grounds. **Cigna** launched a lawsuit against **Anthem** claiming \$13bn in damages, the amount it says shareholders will lose because their merger was blocked. It said Anthem had "assumed full responsibility" for attaining regulatory approval. And **Humana**, which had its merger with Aetna overturned, pulled out of Obamacare's state insurance-exchanges.

Swiss voters rejected a referendum proposal to streamline Switzerland's corporate-tax

system and end the privileged treatment of **multinational companies**. The measure had been backed by the government to fulfil its obligation to the OECD to abolish the "special status" of multinationals by 2019.

A \$3bn quarterly loss at **American International Group** sent its share price tumbling. The insurance company took a \$5.6bn charge because of ballooning costs from commercial claims.

Snap, the parent company of **Snapchat**, reportedly set the price range of its forthcoming IPO at \$14-16 a share, which values it between \$19.5bn and \$22.2bn. That is lower than the valuation it listed in recent regulatory filings, but still makes it the biggest tech stock-market flotation in America since Alibaba's in 2014.

The ethical bank

The Co-operative Bank in Britain put itself up for sale. It had never properly recovered from the losses it incurred from bad property loans and the dent to its reputation from a sex-and-drugs scandal involving a former chairman.

Other economic data and news can be found on pages 72-73



Sex and science

Ways of making babies without sex are multiplying. History suggests that they should be embraced



IT USED to be so simple. Girl met boy. Gametes were transferred through plumbing optimised by millions of years of evolution. Then, nine months later, part of that plumbing presented the finished product to the world. Now things are becoming a lot more complicated. A report published on February 14th by America's National Academy of Sciences gives qualified support to research into gene-editing techniques so precise that genetic diseases like haemophilia and sickle-cell anaemia can be fixed before an embryo even starts to develop. The idea of human cloning triggered a furore when, 20 years ago this week, Dolly the sheep was revealed to the world (see pages 17-20); much fuss about nothing, some would say, looking back. But other technological advances are making cloning humans steadily more feasible.

Some are horrified at the prospect of people "playing God" with reproduction. Others, whose lives are blighted by childlessness or genetic disease, argue passionately for the right to alleviate suffering. Either way, the science is coming and society will have to work out what it thinks.

Where have you been, my blue-eyed son?

The range of reproductive options has steadily widened. AID (artificial insemination by donor, which dates back to the 19th century) and IVF (in vitro fertilisation, first used in the 1970s) have become everyday techniques. So has ICSI, intracytoplasmic sperm injection, in which a sperm cell is physically inserted into an egg, bringing fatherhood to otherwise infertile men. Last year another practice was added—mitochondrial transplantation or, as the headlines would have it, three-parent children. The world may soon face the possibility of eggs and sperm made from putative parents' body cells (probably their skin) rather than in their ovaries and testes.

Such methods separate sexual intercourse from reproduction. Most of them bring the possibility of choosing which embryo will live, and which will die. At first they can seem bewildering—disgusting, even. But one thing experience has shown is that, in this area, disgust is not a good guide to policy. AID was treated by at least one American court as a species of adultery and its progeny deemed illegitimate in the eyes of the law. IVF led to anguish among some theologians about whether "test-tube" babies would have souls.

Disgust often goes along with dystopian alarm. Science-fiction versions of gene editing imagine, say, the creation of supermen and superwomen of great intelligence or physical prowess. When Dolly was announced the press was full of headlines about clone armies. In truth no one has the slightest clue how to create *Übermenschen* even if they wanted to. Yet the record shows how fast reproductive science can progress. So it makes sense to think about the ethics of reproductive science even for outcomes that are not yet available.

It helps to start with IVF and AID, which have made the journey from freakishness to familiarity. Both give healthy

children to happy parents, who would otherwise have been alone. The same will no doubt prove true for mitochondrial transplants, which are intended to avoid rare but dangerous diseases that affect cellular energy production.

Happy parents and healthy children make a pretty good rule for thinking about any reproductive technology. A procedure's safety is the central concern. Proving this is a high hurdle. Researchers are, wrongly in the eyes of some, allowed to experiment on human embryos when they consist of just a few cells. They cannot, though, experiment on human fetuses. Nor can they experiment easily on fetuses from humanity's closest relatives, the great apes, since these animals are rare and often legally protected, too. So far, therefore, there has had to be a "leap of faith" when a technique that has been tested as far as is possible within the law's bounds is used for real. That should continue, in order to avoid "freelance" operations outside reliable jurisdictions. This is not a theoretical concern. Although Britain developed mitochondrial transplants and was the first country to license them, the first couple known to have had such a transplant travelled from Jordan to Mexico to do so.

Defining the limits of what should be allowed is more slippery. But again, the test of happy parents and healthy children is the right one. Growing sperm and eggs from body cells is surely the least problematic new technique soon to be on offer. One advantage of this approach is that gay couples could have children related to both parents. But the law should insist that two people be involved. If one person tried to be both father and mother to a child, the resulting eggs and sperm would, without recourse to wholesale gene editing, combine to concentrate harmful mutations in what would amount to the ultimate form of inbreeding.

Gene editing and cloning involve more than parents' happiness and children's health. The first gene editing will eliminate genetic diseases in a way that now requires embryo selection—an advance many would applaud. Adults should be able to clone perfect copies of themselves, as an aspect of self-determination. But breeding babies with new traits and cloning other people raises questions of equality and of whether it is ever right to use other people's tissues without their consent.

A sense of identity

The questions will be legion. Should bereaved parents be able to clone a lost child? Or a widow her departed husband? Should the wealthy be able to pay for their children to be intelligent and diligent, if nobody else can afford to do so?

Commissions of experts will need to search for answers; and courts will need to apply the rules—to protect the interests of the unborn. They will be able to draw on precedents, such as identical twins, where society copes with clones perfectly well, or "saviour siblings", selected using IVF to provide stem cells that can cure a critically ill older brother or sister. Any regime must be adaptable, because opinions change as people get used to new techniques. Going by the past, though, the risk is not of people rushing headlong to the reproductive extremes, but of holding back, and leaving people to suffer out of a misplaced sense of what feels right. ■

Donald Trump's White House

The Flynn fiasco

The firing of America's national security adviser is welcome, but raises questions that won't go away



LESS than a month into Donald Trump's presidency, it is clear this is a Wild West Wing. Mr Trump is engulfed by a scandal that this week led to the firing of his national security adviser, Michael Flynn. Dismissal will not be the end of the Flynn affair. It invites bigger questions, about both the nature of the Trump administration's ties with Russia and the way the new president runs his administration.

First, Russia. At the end of December the Obama administration imposed sanctions on Russia after the Kremlin interfered with the presidential election—an attack on American democracy (see page 29). That same day Mr Flynn spoke on the phone to the Russian ambassador to Washington. After this came to light, Mr Flynn denied, both in public and in private, having discussed the sanctions with the ambassador. It turns out he did, a disclosure that the administration says cost Mr Flynn the president's trust.

That Mr Flynn may have sought to undermine his country's policy was bad enough. But press reports this week, based on leaks from the intelligence services, suggest that other members of the Trump team were in contact with Russia during the campaign. If so, what was discussed? And what hold might Russia have over officials who now know from the example of Mr Flynn that exposure can cost them their job?

The Trump camp denies having any untoward Russian contacts. Yet the readiness of America's spies to leak damning information from wire taps and intercepts against their commander-in-chief shows how deeply unhealthy the situation has become. It reflects concerns about the second question—the way Mr Trump manages his administration.

Mr Trump's judgment is in question. The choice of such a

flawed man as Mr Flynn to fill a vital role looks reckless. After being told by the Justice Department of the conversations between Mr Flynn and the ambassador, Mr Trump took two weeks to ask for his resignation—while the vice-president knew nothing. After he went, Mr Trump continued to defend Mr Flynn as a “wonderful man”. Mr Trump faces accusations that his decisions were clouded by the lingering controversy over Russia's election-tampering. Or was Mr Flynn operating with his master's blessing? A barrage of furious Trump tweets against the intelligence services points to trouble ahead.

No more Flynn-flam

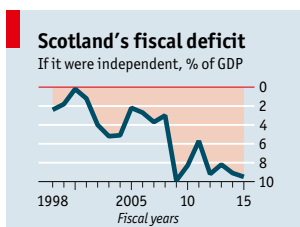
Until these matters are clarified, Russia will dog Mr Trump. Congress now needs to stiffen its spine and conduct a thorough investigation of the Flynn affair, despite the temptation of many Republicans to shelter the president, whom they hope will further their own agenda. Separately, investigations by the FBI into Russia's interference in the election needs to be seen to be scrupulously independent—which means that Mr Trump's attorney-general, Jeff Sessions, should step aside from them. And the president, who sold himself to voters as a straight-talker, needs to avoid the suspicion that he is trying to sweep the Russian questions under the Oval Office carpet.

If anything good is to come of this, it will be to strengthen the defence secretary, James Mattis, and the secretary of state, Rex Tillerson—the axis of the sensible. Mr Trump has the chance to appoint a solid figure, such as Robert Harward, a former Navy SEAL commander, as his national security adviser. That might lead to a steadier foreign policy to bolster recent affirmations of America's support for the one-China principle, Japan and NATO, which had been in doubt. It would also allow Mr Trump to deal with Russia on the issues, rather than through the prism of a scandal. But that supposes Mr Trump can get a grip on his administration. ■

The United Kingdom

Sliding towards Scoxit

Britain's exit from the EU appears to strengthen the case for Scottish independence. In fact, it weakens it



a clear margin less than three years ago. But Brexit, which they also opposed, has put the issue back on the table. Scotland's nationalist government has drafted a bill for another independence vote. Polls suggest that it could have a shot at success.

No wonder: the nationalists' argument that Scotland is a

different country has never looked more convincing. Regarding Brexit, the defining issue of the times, 62% of Scots voted to Remain but will be dragged out anyway by the English. The dominant parties in Westminster, the Tories and Labour, have a grand total of two of Scotland's 59 MPs. And many of the arguments made in favour of the union in 2014 have evaporated. Scots were told that staying with Britain was their only way to remain in the EU, since independence would require them to reapply and face opposition from Spain, which wants to discourage its own Catalan separatists. Instead, being part of Britain has proved a one-way ticket out of Europe. The strong British economy that they were urged to remain part of is forecast to slow. And rousing talk about the union—the “precious, pre- ▶▶



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icious bond” that Theresa May evoked in her maiden speech as prime minister—rings hollow, given the casualness with which Scottish concerns have been cast aside.

Yet if Brexit was a political earthquake, Scotland has suffered a less-noticed economic earthquake, too. At the time of the independence referendum, Scotland was growing at a similar rate to the rest of Britain. Since then it has been on a different track (see page 48). In two of the past five quarters it has failed to grow at all. The main reason is its reliance on fossil fuels and finance, which are doing badly. In 2014 a barrel of Brent crude cost \$110, leading the nationalist government to forecast that an independent Scotland would enjoy tax revenues from energy of £8.3bn (\$12.5bn) in 2015-16. Oil’s subsequent crash (it is now \$55) meant the actual figure was 1% of that forecast. And the black gold is running out: the original Brent rig will be dismantled this summer. Finance, which along with oil and gas has generated exports equivalent to up to a third of Scotland’s GDP in recent years, is also suffering. Since September 2014 Scotland has lost a tenth of its financial jobs. (London gained some.) Last year average pay in the industry fell by 5%.

For a country of 5m people that depends on two sputtering industries, to go it alone would be a gamble. Yet Scots may conclude that remaining in the Brexit-bound union would be riskier still. They would be wrong. For although Mrs May’s willingness to leave the single market and customs union is likely to be bad for Britain, it also makes independence more complicated. If the EU were prepared to readmit it, Scotland would

face a harder border with England. Nationalists say they could import whatever arrangement is made in Ireland, where a similar problem exists. But there may be no such neat solution. And rejoining the EU’s single market at the cost of leaving Britain’s would make no sense: Scotland exports four times as much to the rest of Britain as it does to the EU.

Scotland the brave

This uncomfortable truth may be lost in the heat of another independence campaign. The ruling Scottish National Party has a knack for combining power with protest, claiming credit for Scotland’s successes while pinning blame for its failures on Westminster. As economic conditions in Scotland decline, the blame will fall on Brexit and Tory austerity. And whereas independence was once a frightening unknown, it now looks like a chance to turn back the clock to the safe old days of EU membership. When English ministers warn about the risks of secession, their own Brexit lines will be thrown back at them: Scots will be urged to seize control from distant politicians they never elected; those pointing out the costs will be branded members of “project fear”; the trashing by Brexiteers of institutions from the Treasury to the Bank of England will mean that impartial warnings can be dismissed as biased or incompetent.

Many of those Scots who voted to stay in the union in 2014 did so for clear economic reasons. Britain’s exit from the EU muddies that case. The alarming result is that Brexit has made Scottish independence more harmful—and more likely. ■

Greece and the euro

Uphill task

A worrying twist in the saga of Greece’s bail-out: creditor v creditor



SISYPHUS was condemned to push a boulder uphill only to watch it roll down again. Yet an eternity of boulder-shoving seems purposeful next to the unending labour of keeping Greece in the euro zone and out of default. It is nearly seven

years since the first Greek bail-out. A second rescue package soon followed. In 2015 Greece came close to dropping out of the euro before its newish prime minister, Alexis Tsipras, buckled down to the task of pruning the budget as part of a third bail-out. Now a Greek disaster is looming all over again.

This time the source of the trouble is a row among the two main creditors over how to assess Greece’s public debt (see page 43). The stand-off threatens a payment to Greece from the euro zone’s bail-out fund, the European Stability Mechanism (ESM), which would redeem €6.3bn (\$6.7bn) of bonds that are due in July. If the money is withheld, Greece will be in default. Sooner or later, Grexit would be hard to avoid.

Hopes of an agreement before a meeting of euro-zone finance ministers on February 20th have evaporated. A deal is in everyone’s interest, and the Greek crisis has a history of last-minute fixes. Sadly, there are reasons to fear that brinkmanship and politics will get in the way.

Before this new impasse, Greece’s economy was improving. Deposits had trickled back to the banks, letting the Euro-

pean Central Bank (ECB) cut its emergency lending. GDP has risen fitfully after years of persistent decline. Unemployment is still woefully high, at 23%, but is down from a peak of 28%. And Greece comfortably surpassed a crucial target by recording a primary budget surplus (which excludes debt-interest costs) above 0.5% of GDP in 2016.

Still, the economy is too weak to withstand a fresh bout of austerity. Almost half of bank loans are non-performing. Investment is feeble. Credit to small firms, the backbone of the economy, is scarce. Business rules and tax codes are unfriendly and changeable. In addition, Greece’s primary surplus is the result of policies that are inefficient and unfair. Marginal tax rates have been increased while exemptions proliferate, a recipe for Greeks to exercise their mastery of tax avoidance. More than half of wage earners in Greece are still exempt from income tax. Essential spending has been cut even as pensions remain generous. A newly retired Greek receives 81% of average wages, compared with 43% for a German.

Against this backdrop, a row between Greece’s creditors has been brewing. At issue is the IMF’s role in the bail-out. Germany and the Netherlands do not trust the European Commission to police Greece, and have made the fund’s involvement a condition of their support. The fund is reluctant. Its officials reckon that the programme’s target of a sustained 3.5% primary budget surplus might push the Greek economy into recession. They would prefer to delay further austerity and to insist on more tenable fiscal measures that would do less harm. Europe ►►

thinks the IMF is too gloomy about Greece's prospects.

These are not the only sticking-points. By the IMF's own rules, it cannot take part unless it believes that the bail-out will leave a debt burden that is "sustainable"—one that is steadily falling and easily financed. For the Greek bail-out to pass muster would require a commitment to debt relief from the euro-zone partners. But an explicit pledge to let Greece off its debts would be politically poisonous, because it might increase support for anti-EU parties ahead of elections in the Netherlands, France and Germany. Instead Klaus Regling, the ESM's boss, argues that the euro zone's evident "solidarity" with Greece (the ESM holds two-thirds of its debt, much of it at long maturities and low rates) is enough to make the sums add up.

This is a farce. Most of the bonds due for redemption in July belong to the ECB. In essence, therefore, Greece's creditors are arguing among themselves over whether to agree on a pay-

ment from one euro-zone institution to another. The shape of a compromise is plain. Greece will have to pass legislation that commits the government to reducing pensions and income-tax allowances after 2018. European creditors will need to pledge to finance Greece's debts at today's low interest rates. And the IMF will have to stomach a higher fiscal-surplus target for Greece than it would like.

Boulder games

Yet everything could still go wrong. Mr Tsipras seems to think he can wait for the IMF, egged on by America under Donald Trump, to abandon its stewardship of the bail-out. The resulting uncertainty will set back Greece's fragile economy. Growing political turmoil in Germany and France could also make a deal harder to reach. A long stand-off risks seeing Greece roll down to the bottom again. Nobody would benefit. ■

China's beleaguered liberals

The two faces of Mr Xi

China's president sometimes talks like a free-trader and a reformist. Do not set much store by it



THE words of few global leaders these days sound as pleasing to liberal ears as those of Xi Jinping. How comforting it was when, shortly before Donald Trump's swearing-in as America's president, Mr Xi advised the assembled elite at the

World Economic Forum in Davos that blaming globalisation for the world's problems was "inconsistent with reality" and that protectionism was "like locking oneself in a dark room". These were not just platitudes crafted for foreigners. Back in his own country, Mr Xi has been striking a similar tone. He chaired a meeting this month that called on reluctant officials not to shilly-shally with economic and social reforms, but to "choose the heaviest burden and chew on the hardest of bones". The main state-run news agency said the central government's demands for reform were becoming "ever clearer".

If only there were evidence in China that Mr Xi really means what he says, and that, if he does, bureaucrats are paying heed. Recent news has suggested quite the opposite. Officials have been trying to crush dissent with even greater vigour. Their targets now are not only the usual suspects—those few who dare to challenge the Communist Party openly—but also mainstream liberals who want to work within the system to make China a better place. In the past few months hardliners have taken control of a leading magazine once beloved of such reformists. Popular online forums for moderate, pro-reform debate have been closed down—including, in January, those run by one of the country's most prominent think-tanks, Unirule (see page 27). Mr Xi's predecessors had put up with them. He looks keen to keep even the moderates quiet.

It is tempting to pin all the blame for the suffering of China's liberals on Mr Xi himself. After all, he is often described as the country's most powerful leader at least since Deng Xiaoping. Who else could be responsible? But getting the measure of this colossally important figure, for China's destiny as well as the rest of the world's, is fiendishly hard. Since he came to power

in 2012, Mr Xi has abhorred consistency. At times his language has been even more reformist than Deng's, at others it has been coloured by nationalism, with warnings against the "infiltration" of China by "Western thinking and culture". He has called for the Communist Party's power to be "put in a cage". But China's chief justice (presumably with Mr Xi's blessing) has recently railed against the "erroneous influence" of those who want an independent judiciary. At times Mr Xi sounds pro-market, yet he refers to debt-laden and market-distorting state-owned enterprises as his party's "most dependable source of support". The consensus among China-watchers is that, under Mr Xi, the country has been more protectionist and intolerant of dissent than for many years.

Who he, Xi?

There are two possible explanations for these contradictions. The first is that Mr Xi has no real interest in reform: that his talk about it is largely a sop to the West and an attempt to deceive those Chinese who are eager for change. If so, he is using his enormous power for precisely the purpose he intends: crushing all opposition and keeping the party in control of everything, including the main levers of the economy. The other possibility is that Mr Xi is less powerful than he appears—that he wants reform (at least of the economy), but feels he must make concessions to his party's hardliners, or that he tries to initiate reform but is stymied by conservative subordinates.

It would be better for China if the second explanation were true. A five-yearly reshuffle of the leadership is due later this year; it may leave Mr Xi feeling stronger and therefore more able to pursue the reforms he says he wants and that his country needs. But in the years ahead China must grapple with slowing growth, an ageing population and social unrest. Despite the best efforts of the government's internet censors, social media have provided unprecedented opportunities for the disaffected to join forces and put pressure on the party. It would take consummate skill to navigate those hazards while keeping reforms on course. Whether Mr Xi is a despot or a frustrated reformer, China is unlikely to loosen up. ■

TVs and the environment

Your story about energy-efficiency testing for televisions in America omitted the fact that the test procedure which the National Resources Defence Council is complaining about was created by all interested parties, including the NRDC (“Screen shocker”, February 4th). The television energy-test standard was approved by the International Electrotechnical Commission and is used in energy-efficiency programmes around the world. Everyone must abide by the current test method until that procedure is officially changed. Rather than acknowledging its own responsibility the NRDC is airing its objections publicly, as its agenda-driven study demonstrates.

The fact is, televisions are a success story in terms of energy efficiency. The average on-power mode density for flat-panel TVs decreased considerably between 2003 and 2015, even as average screen sizes got bigger by half, televisions became internet-connected and screen resolution increased greatly. The average cost to power a television in the American home is less than six cents a day, and that is assuming the viewer watches TV five hours a day, every day of the week.

Televisions are becoming thinner, lighter and more energy efficient, spurred not by misstated facts, but through the power of innovation. The history of technology proves that innovation, not hype and propaganda, is the best driver of fundamental advances in video-screen technology.

GARY SHAPIRO
President and CEO
Consumer Technology
Association
Arlington, Virginia

Politics in Venezuela

“Maduro’s dance of disaster” (January 28th) outlined the disastrous economic crisis, including shortages of food and medicine, that Venezuela has suffered under President Nicolás Maduro. But it was wrong to suggest that there is

“disarray” among the opposition. The Democratic Unity alliance is more united than ever in its effort to establish sound policies and constitutional order. What we lack are elections.

The ruling Socialist Party is well aware that it would be trounced at the ballot box. Although you noted the regime’s illegal suspension of a referendum to recall President Maduro and its refusal to recognise the legislative powers of the opposition-controlled Congress, you did not mention the indefinite postponement of regional elections that were supposed to be held in December last year.

Those elections remain in limbo, with no indication from the government that they will ever be held. In practice, Venezuela has now joined Cuba as one of only two countries in the Americas to eliminate the right to vote.

Faced with a government that has shifted from authoritarianism to classic dictatorship, and thus relishes public unrest and violence, the opposition remains committed to peaceful and democratic change. To this end, we are moving forward with public protests, and we appeal to the international community to demand that elections be held.

EUDORO GONZÁLEZ DELLÁN
Secretary for international affairs for Primero Justicia
Caracas

What awaits Brexit Britain

As a Briton who has been living in Singapore for more than 25 years, I chuckled to read that Theresa May’s idea of Britain’s future might be a sort of Singapore-on-Thames (“A hard road”, January 21st). Perhaps Brexiteers will lead the way in adopting some typical Singaporean habits: working 60-plus hours a week, sacrificing recreational time to acquire a high level of education, sharing small apartments with their parents until they get married, welcoming immigrant labour on a far higher scale than Britain ever has, and other such things.

That proven model

explains how Singapore went from being a poor place to one of the richest countries in the world in 50 years.

PETE KELLOCK
Singapore

They had their day

Regarding the declining profits of multinational companies (“In retreat”, January 28th), is this not a natural progression of liberal, open markets? Established Western firms were allowed to enter new, previously closed markets, most notably China. As the first entrants, they enjoyed dominant positions, and with that, they earned huge returns. But local firms grew in expertise and also offered attractive profits. Multinationals subsequently suffered as they carried burdensome costs compared with their local, nimbler rivals. It will be interesting to see whether the same holds true for today’s dominant technology companies.

NEDIM BAZDAR
Brisbane, Australia

In defence of Trump

An insurgent in the White House



To understand the cover art of the February 4th issue, I consulted my Oxford dictionary. An “insurgent” is one who rises in active revolt against authority. The word precisely describes the blockading, firebomb-throwing, window-smashing, intimidating, club-wielding protesters whose avowed mission is to neutralise a lawfully elected president. Donald Trump’s actions may grievously exercise liberal sensibilities, but so far, at least, they have been within his lawful authority.

RONALD MASSON
Topanga, California

You described the tactics used by the Republicans in blocking a vote on Barack Obama’s choice of a Supreme Court justice as obstructionist (“Gorsuch test”, February 4th). However, what you did not mention is that during the last year of George W. Bush’s administration senior Democrats in the Senate at the time, including Charles Schumer and Joe Biden, were arguing that no vote should be held on a president’s nomination of a judge to the Supreme Court if a vacancy comes up in his final year. The Republicans were merely following the Democratic script.

MICHAEL CLAREY
Sydney

Transfigured tech titans

Schumpeter’s tirade against Silicon Valley’s hypocrisies over social and economic issues was not entirely unfair, but it lacked perspective (February 4th). Google’s “Don’t be evil” motto and the holier-than-thou stance adopted by many new technology companies was intended to set them apart from the old guard: the infamous misanthropy of Steve Jobs at Apple, the aggressive monopolism of Bill Gates at Microsoft and the self-aggrandisement of Larry Ellison at Oracle. If Silicon Valley’s revolutionaries made a mistake it was to believe their own rhetoric, and now the tables have turned.

As they matured, Google and the rest turned out much like other big companies, seeking to establish de facto monopolies and milking them for their shareholders. Meanwhile, Steve Jobs has become a cultural deity, Bill Gates is now the world’s greatest philanthropist and Larry Ellison... well, some things never change.

TIMO HANNAY
London ■

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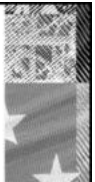
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The sheep of things to come

What happened after Dolly was revealed to the world 20 years ago as the first animal clone—and what didn't

IN THE summer of 1996 Karen Mycock, a cell biologist, was attending a wedding in the Scottish highlands. Returning to her hotel to change her hat, she found a fax pushed under her door. It said: “She’s been born and she has a white face and furry legs.” An unusual birth announcement; an unusual birth.

In February Ms Mycock (now Mrs Walker), who worked at the Roslin Institute, an animal-research centre near Edinburgh, had passed a tiny jolt of electricity through two sheep cells in a dish. One was an egg cell which had had its nucleus, the bit of the cell which contains almost all its genes, removed. The other, its gene-bearing nucleus intact, was from the udder of another ewe. The electric jolt had caused the two cells to fuse, forming an embryo.

The egg donor was a Scottish Blackface sheep; so was the surrogate mother that took the embryo to term. The udder cell came from a white-faced Finn Dorset. And that, the fax told Mrs Walker, was what the newborn lamb looked like, too. The “nuclear transfer” she had overseen had worked. An adult sheep had been cloned.

Instantly understandable to an excited Mrs Walker—“I knew we had done what we had thought we had done”—the fax had been kept terse and cryptic because the breakthrough was, at the time, hush-hush.

The existence of Dolly the sheep would not be revealed to the world at large until the following February, when a scientific paper was published in *Nature*—at which point a furore broke out that went far beyond the scientific world.

The fuss among scientists was due to the fact that many believed cloning animals was impossible. John Gurdon of Oxford University had cloned frogs by nuclear transfer in 1958—but his creations never developed beyond the tadpole stage. All efforts to do the same in mammals had failed. These failures had led biologists to believe that, although all cells in a body shared the same genetic material, they were not equally capable of the same reproductive feats. “Stem cells”, such as those found in early embryos, could develop into the various sorts of specialist cells found in skin, muscle or nerves. But those “differentiated” cells could not change back into stem cells. Development was a one-way street.

The research at the Roslin Institute showed that this need not be the case. The key advance was made by Keith Campbell, who realised the importance of synchronised “cell cycles”—the rhythms according to which cells grow and divide. By starving the donor cells in a way that forced them to stop dividing, Campbell matched them to

the eggs’ cycle.

By showing that the DNA in a differentiated cell could be repurposed through nuclear transfer, Dolly opened up two new possibilities. One, which came to be known as “reproductive cloning”, was the copying of individual animals. The other was the creation of embryonic stem cells (ES cells) capable of being turned into all sorts of other cells. Various ailments are caused by a lack of specific types of differentiated cell: insulin-secreting beta cells in the case of diabetes, for example, or myelin-forming cells in multiple sclerosis. Making embryos through nuclear transfer seemed likely to provide copious ES cells with which to research and treat such conditions—something which came to be known as “therapeutic cloning”.

The udder mother

The Roslin Institute’s main concern was reproductive cloning. Its researchers were interested in improving the “transgenic” animal business, in which genes are added to an animal so that it secretes some protein of particular value. The ability to produce multiple copies of the most productive such animals would be a great boon.

The Roslin scientists knew that nuclear transfer would have other uses. Mrs Walker recalls that when the sheep was still a secret, the team would talk among themselves about the therapies she might lead to. What they did not appreciate was that, once Dolly was unveiled, the public would pretty much want to talk about one thing only: making copies of people.

Dolly was supposed to be announced at a press conference timed to the *Nature* paper. But the news broke a few days early ►►

▶ when the *Observer*, a British newspaper, scooped it. The story's second paragraph predicted that: "It is the prospect of cloning people, creating armies of dictators, that will attract most attention." It duly did. "Dreaded Possibilities Are Raised" one headline declared; "Cloned Sheep in Nazi Storm" shouted another. *Der Spiegel* put a regiment of Hitlers and Einsteins on its cover. The media and public became obsessed with the idea that human clones were just around the corner.

Hank Greeley, a law professor at Stanford University who specialises in issues surrounding reproductive technology, points out that the alarm at such a prospect was hardly surprising. People are often disconcerted and disgusted by changes in human reproduction. In vitro fertilisation (IVF) and surrogacy were worried about, debated and staunchly opposed in some quarters. "People were used to babies coming out the old fashioned way," says Dr Greeley. The way that cloning could conceivably render men unnecessary added to the concerns. Much was made of the fact that Dolly was cloned from an udder and named after a singer noted for her ample bosom as well as her talent.

Baaad news

And cloning tapped into deeper concerns. From the Frankenstein-y frisson of Mrs Walker's vital spark of electricity to the fact that the most famous fatherless human in history is known to believers as the "lamb of God", it would have been hard to craft a scientific advance with a richer and more treacherous cultural context. Blasphemy, "Brave New World" and "The Boys from Brazil", a story about efforts to clone Adolf Hitler, all added to the brew—and the backlash. There were nightmares of reproductive cloning and therapeutic cloning becoming the same thing, with sentient clones harvested for spare parts, as in Michael Marshall Smith's novel "Spares"—published shortly before Dolly's unveiling—or, later, Kazuo Ishiguro's "Never Let

Me Go". It did not help that a previous unnatural intervention into British agriculture—the addition of cows' brains to cattle food—had earlier in the 1990s led to the scandal of "mad cow" disease and the culling of 4.4m animals.

Zanussi, a washing-machine-maker known in Britain for its slogan "the appliance of science", captured the mood with an advertisement that branded Dolly the "the misappliance of science." President Bill Clinton instructed America's National Bioethics Advisory Commission to report on human cloning within 90 days; similar instructions were issued by the French president, the president of the European Commission and the director of UNESCO. The Biotechnology Industry Organisation, a pro-technology lobby group in America, called for an outright ban. The Vatican also wanted a ban, saying that humans had a right to be born in a "human way and not in a laboratory."

Many argued that human reproductive cloning was contrary to nature and undermined human dignity. For those who did not feel this, the obstacles, both practical and ethical, seemed enormous. In the case of Dolly, 277 successful nuclear transfers had produced just 29 normal-looking embryos, which were implanted into 13 surrogate mothers. Only one survived. It was hard to see an ethical defence of applying such a wasteful process to potential people, even if the end was, in itself, not offensive. A further concern was the health of the offspring. Dolly developed osteoarthritis and a lung infection at an early age, prompting an unresolved debate about whether she died prematurely; experience with clones in other species has shown a tendency to various other anomalies. That said, four clones of Dolly herself are currently enjoying a healthy old age at the University of Nottingham.

The fact that most researchers considered human reproductive cloning a quagmire did not stop some attention-seekers from stepping forward to claim they were

going to clone humans—or, later, that they had. First came Richard Seed, a Chicago physicist. Then there was a Swiss sect called the Raélians, who claimed success in 2002. An Italian gynaecologist, Severino Antinori, also said he had succeeded in 2009. Experts remain highly sceptical about these claims, which have not been backed up by scientific evidence.

The bleat goes on

Yet moves in the late 1990s towards an outright ban on human cloning hit a snag: the apparently impressive potential of therapeutic cloning. This could not be realised if scientists were not allowed to develop nuclear-transfer techniques for humans. No embryos, no ES cells. Some opposed therapeutic-cloning research as another form of embryo research, a practice to which many were already opposed; in 2001 the American government banned the use of federal funds to produce new embryonic cell lines through nuclear transfer. But some countries, including Britain, already had a more liberal attitude to the use in scientific research of "spare" embryos originally created for the purpose of IVF, and sought a regulatory distinction between admissible applications of nuclear transfer for therapeutic research and prohibited reproductive applications.

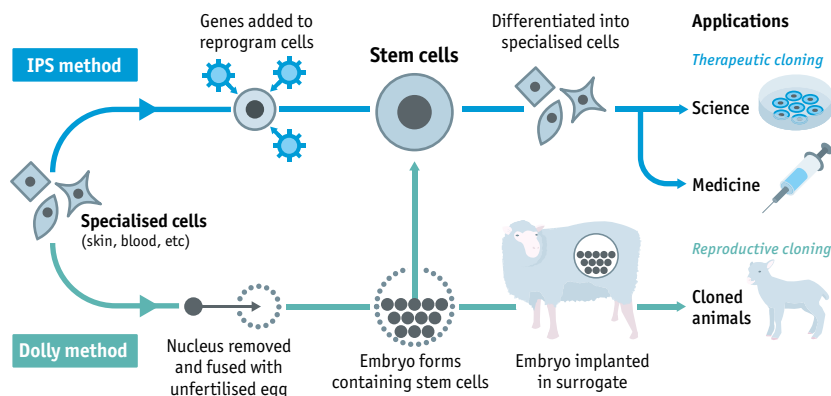
But regulatory approval or no, producing human ES cells through nuclear transfer turned out to be a tall order. In 2004 Hwang Woo-suk, a South Korean researcher, announced that he had successfully created a new line of ES cells from a cloned human embryo. The following year he said he had created 11 more such cell lines. His results, published in eminent journals, were far more credible than those of the Raélians or Dr Antinori. But by 2006 an investigation had concluded that almost all his research was fraudulent—though he had cloned a dog.

By the time Dolly would have been celebrating her tenth birthday, in 2006, nuclear transfer had still not produced human ES-cell lines. Different species and groups of animals take to nuclear transfer in different ways. Cats and mice, it now turns out, are quite easy: dogs and rats hard. In primates, according to Ian Wilmut, who led the Roslin team, the technique proved persistently disappointing, with "very limited development and no offspring". But an alternative technique that Dolly inspired had produced something almost as good—and much less morally problematic.

Shinya Yamanaka, a Japanese scientist, says that when he first read of Dolly as a post-doctoral researcher he had become "almost depressed" over wondering what to do. Dolly excited him and gave him a goal. Her creation showed that chemical factors in the egg had been able to force adult DNA to rejuvenate itself. Dr Yamanaka set about looking for them. He started ▶▶

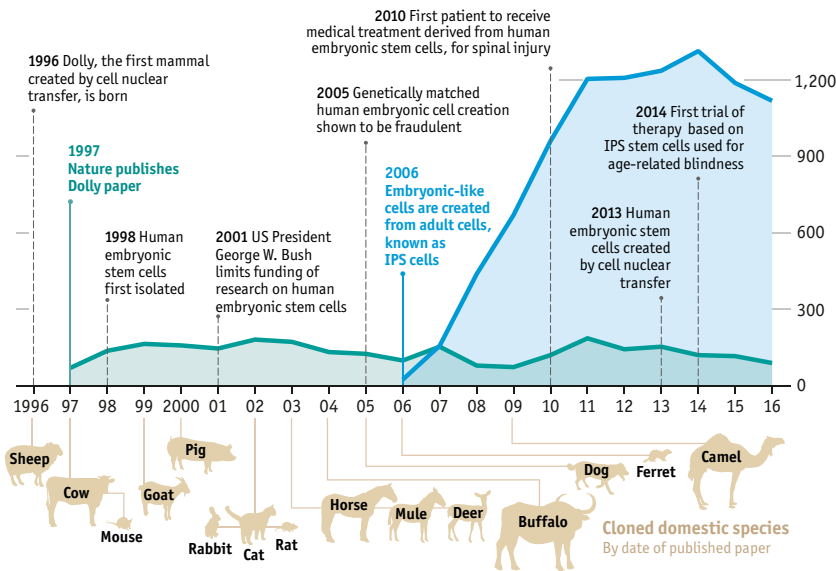
Separated at birth

Two ways of creating patient-matched stem cells



Clones alone

Papers citing: **Original "Dolly" paper (1997)** "Viable offspring derived from fetal and adult mammalian cells", by Wilmut *et al* **IPS cells paper (2006)** "Induction of pluripotent stem cells from mouse embryonic and adult fibroblast cultures by defined factors", by Takahashi & Yamanaka



▶ by putting into mouse cells the genes for 24 factors known to have a role in keeping stem cells from differentiating. The results looked quite similar to ES cells. Assuming not all the factors were essential he repeated the work with fewer of them. By 2006 he had narrowed the field to four factors which, administered together, could convert differentiated tissues back into stem cells. It was a way of turning back the biological clock without the fiddly business of nuclear transfer.

Pluripotent possibilities

Dr Yamanaka called his cells “induced pluripotent stem cells”. These IPS cells garnered a huge amount of attention, funding and effort (see timeline). Not only could they be made without the ethically troubling intermediary of an embryo. They could also be made from cells donated by a potential patient. This meant that if they were then used for therapy, the patient’s immune system would raise no objections—something which was not necessarily the case for ES cells. Many labs trying to make human ES cells from cloned embryos stopped when IPS cells came out, says Robin Lovell-Badge, a stem-cell expert at the new Francis Crick Institute in London.

In 2012 Dr Yamanaka received a Nobel prize for this work. The IPS cells he invented have become a scientific workhorse, providing limitless supplies of differentiated cells and tissue for use in the lab. They are an invaluable tool for modelling human diseases and screening drugs. New techniques such as genome editing are extending their uses. But they have yet to prove their therapeutic mettle.

Dr Yamanaka now runs an institute in Kyoto where hundreds of researchers are pushing forward on IPS cells. There have been advances. Scientists at the New York Stem Cell Foundation have turned skin samples from patients with progressive multiple sclerosis into IPS cells and then into myelin-forming cells. Yet turning such achievements into treatments has proved challenging. The only clinical trial of IPS cells to date, conducted by the Riken Centre for Developmental Biology in Kobe, was stopped abruptly in 2015. The idea was to take stem cells made from skin cells and turn them into retinal cells which could be used to reverse macular degeneration, which leads to blindness. After just one patient had been treated, the trial was halted because mutations were found in the cells. It may well be possible to overcome such problems, but any adult cell that is turned back into a younger state through genetic engineering is likely to have its genome scarred in some way.

And IPS cells are no longer the only game in town. In 2013 Shoukhrat Mitalipov, a reproductive biologist at Oregon Health and Science University, finally cracked the tricky problem of how to create human ES cell lines. The timely addition of a little caffeine to stop the egg developing too fast turns out to be crucial.

Dr Mitalipov has compared his nuclear-transfer ES cells to IPS cells and ES cells taken from embryos created by IVF; the sort of cells which provide the gold standard in such matters, according to Dr Lovell-Badge. The nuclear-transfer ES cells look more like the gold standard than the IPS cells, perhaps because the IPS cells retain “epigenet-

ic” memories of their differentiated past—chemical modifications to their DNA that influence their genes’ expression.

So, 16 years after the world was wowed by Dolly, a technique for cloning embryos had finally been demonstrated in the laboratory. But nuclear transfer remains difficult and the creation of cloned embryos for research or therapy remains ethically fraught. It is banned in some countries, including France, Germany and Russia; in other places, such as America, there is no overarching regulation, which brings its own problems. And even in places like Britain and Japan, where it is allowed, getting permission takes time and effort.

What is more, cell lines made this way might not match a patient’s immune system in the way an IPS-cell therapy produced from the patient’s own cells can. Researchers at ViaCyte in San Diego, California, have used IVF-derived ES cells to create insulin-producing beta cells with which to treat type 1 diabetes. They anticipate that the cells will, when placed in patients’ bodies, need to be encapsulated in a plastic mesh to protect them from the immune system. That may work for some conditions; it won’t work for all of them.

That is why many feel that, whatever flaws IPS cells have, they are the most promising option for future therapies. More than half a century after creating the first cloned tadpoles, Dr Gurdon is now one of those searching for factors beyond those identified by Dr Yamanaka that will take the technology further, bringing IPS cells closer to the gold standard.

Copy cats and dogs

After 20 years of work on such possibilities (more, in Dr Gurdon’s case) some see the Petri dish as half-full, some as half-empty. A couple of decades seem to some a reasonable timeline for such technically demanding and fiddly work; run-of-the-mill drugs can often take a decade to develop, and this sort of thing is far less well understood and more demanding. What’s more, regulations have slowed things down; Dr Mitalipov says much of the time between his successful cloning of monkey cell lines in 2007 and his production of cloned human ES cells in 2013 was “navigating US regulations on embryo research”. The fact that progress has been slower than once hoped has costs. One of the members of the team that created Dolly, Marjorie Ritchie, died in 2015 after suffering with multiple sclerosis—a disease that many hoped would benefit from advances in stem-cell medicine. But that is not to say there is no progress.

Others, more sceptical, see the 20 years as evidence that even if such therapies can eventually be produced they will always be complicated affairs, and therapies “matched” to the immune system will of their very nature have to be handcrafted. Even if they can be made to work they will ▶▶

▶ be very costly. A guide to quite how expensive these might be came last year when GSK, a drug giant, unveiled the pricing for a personalised, stem-cell therapy for severe combined immunodeficiency. The therapy extracts adult stem cells from bone marrow, introduces a missing gene and then uses the corrected cells to cure the patient. It costs \$665,000.

Beyond the clinic, and beyond the human, cloning has made slow but steady progress; it has now been successfully used on more than 20 species. The original idea of applying it to transgenic animals has not amounted to much, but the technique has proven useful in cattle and dairy farming, allowing multiple copies of elite animals. In New Zealand and America it is regarded as a normal animal-breeding procedure and clones are part of the pedigree market. Meat and milk from cloned animals is routinely farmed and sold in America, Argentina and Brazil. In Europe, though, it is banned on grounds of animal wellbeing. A study by the European Food Safety Authority in 2008 said that developmental abnormalities in clones and unusually large offspring resulted in difficult births and excessive neonatal deaths.

As well as cloning thousands of farm animals ViaGen, a small firm based in Cedar Park, Texas, has cloned many horses and pets; there are people happy to spend lavishly in the hope that they can get a genetic copy of a lost companion. According to the firm's website, a cloned horse will set you back \$85,000. The disgraced Dr Hwang has also started a firm that seems to have cloned more than 400 dogs for customers willing to pay about \$100,000 a pup. In Tianjin, China, an outfit called Boyalife has been building an enormous new facility, capable of producing 1m calves a year as well as dogs and horses. But its clone factory seems to be well behind schedule.

One lucrative niche unanticipated by science-fiction writers is polo. Crestview Genetics of Buenos Aires, owned by Adolfo Cambiaso, the world's best polo player, and two partners, has cloned more than 45 steeds including over 25 copies of Mr Cambiaso's polo ponies—one sold at auction for \$800,000. One of the ponies he cloned was a much-loved chestnut stallion called Aiken Cura which he had to have put down more than a decade ago, after it broke its leg in a match. Last December his team, La Dolfina, rode six clones of the same mare to victory in a prestigious match in Buenos Aires.

One of Crestview's founders, Alan Meeker, says that "rich individuals" have from time to time asked about cloning humans. He refused. Yet there can be little doubt that there is at least some demand for human cloning—and it doesn't come from Nazis. After Dolly's existence was announced the Roslin Institute received ago-

nising requests from parents whose children had died; researchers at fertility clinics also suddenly found themselves asked about the possibility. It is likely that they still are.

The thrust in reproductive technology remains a desire to allow people who could not otherwise be able to do so to have any child at all, rather than to make specific people. That does not mean the field does not still throw up ethical and legal issues. Its most recent *cause célèbre* is the development of "three-parent babies", in which faulty mitochondria—power stations that drive a cell's metabolism—in an egg are replaced by healthy mitochondria from a donor before IVF. And it does not mean, in time, that the issue of reproductive cloning, or something similar, might not re-emerge.

Parents: three, two or one?

One odd possibility comes from work on iPS cells that might provide a new alternative for the infertile. In mice it is now possible to turn iPS cells derived from skin cells into sperm and eggs. If this technique—known as in vitro gametogenesis or IVG—can be perfected and adapted to humans (still, at this stage, an imposing if) it could allow people afflicted by various disorders that stop their bodies from producing eggs and sperm to have children. It would also allow same-sex couples to have biological children of their own, with sperm derived from one woman fertilising another's egg, or an egg derived from one man's cells being fertilised by his partner's sperm (though that would also require a surrogate mother).

And it would also, in principle, allow one parent to provide both the sperm and the egg. Because people have two copies of every gene, but eggs and sperm get only one, the resulting child would not be ge-

netically quite identical to its parent—but it would be far closer than any natural relative. Such creations would have to be screened carefully for genetic disorders and perhaps even gene edited. Reproducing this way would be, in effect, the closest sort of inbreeding imaginable. And it is not clear what might lead someone to want such a child.

But if IVG becomes a part of the toolkit for reproductive biology such possibilities will open up. And Dr Greeley thinks that IVG could eventually become a big thing. As the possibilities of genetic screening—and in time, perhaps, genome editing—become clearer, people may see having embryos made carefully outside the body as a much safer bet than letting them haphazardly assemble themselves within it. And if that is the case, a plentiful supply of eggs derived from skin cells would suit many women much better than the difficult procedures needed to dig eggs out of ovaries. Some specific applications of IVG—including, most definitely, any attempts to produce "one parent" children—would undoubtedly trigger the "yuck factor" that has always greeted developments in reproductive technology. But, if the technology can be made safe, it may well become accepted. As it did with IVF, the sight of grateful parents with beloved children will prove a powerful argument.

This may not be the way things work out. It may be that IVG proves impossibly hard to apply to primates. There may turn out to be no demand for what it offers, or at least not enough to encourage clinics or companies to involve themselves in developing it; the commercial obstacles seem high. And there may be a public outcry. But the prospect of children created in this way is probably a lot closer today than human clones were 20 years ago. And so far the world has made barely a bleat of protest. ■





The Kim family

Half-brotherly love

TOKYO

An inconvenient relative of North Korea's despot is murdered in dramatic style

THE last time Kim Jong Nam made the headlines he was also at an airport, travelling under a false name. In 2001 “Fat Bear”—the Chinese alias used by the son of North Korea’s leader at the time, Kim Jong Il—was arrested after arriving in Tokyo on a forged Dominican Republic passport, on his way to Disneyland. This time it was “Kim Chol” who was waiting for a flight from Kuala Lumpur to Macau on February 13th when two women assumed to be North Korean agents attacked him. He is said to have died on his way to hospital.

As *The Economist* went to press, the results of an autopsy had not yet been released. Rumours suggest that Mr Kim was poisoned, with a needle, spray or toxic cloth to the face. Malaysian police said they thought six people had been involved in the attack; they have detained two women and one man, travelling on Vietnamese and Indonesian passports.

The 45-year-old Mr Kim had once been Kim Jong Il’s favourite son: witnesses described a 10,000-square-foot playroom filled with toys. Before each birthday, North Korean diplomats would be sent on a month-long hunt for exotic presents. A cousin of his who defected in 1982 said that Kim Jong Il would take his son to the grand halls of state and say, “Jong Nam, this is where you’ll be able to talk big one day.”

But in the end it was Kim Jong Il’s third son, Kim Jong Un, born to his second wife and educated, like his half-brother, in Switzerland, who succeeded their father in 2011.

Kim Jong Nam was not visible at his father’s funeral. He was known in recent years to have been living in exile in Macau, a semi-autonomous enclave within China.

Since the 30-something Kim Jong Un came to power, he has consolidated power by executing about 140 senior officials, most notably his uncle and security chief, Jang Song Thaek. Yet exile had typically been the fate of members of the Kim family who had fallen out of favour. Kim Jong Il’s half-brother, Kim Pyong Il, was sent abroad on never-ending diplomatic service, for instance. (Jang was not a blood relative of Jong Un, unlike Jong Nam.) Some say Jong Nam was sidelined by Jong Un’s mother and her family long before his Disneyland disgrace. As a political irrelevance, he had seemed likely to survive Jong Un’s purges.

The Macanese candidate

Wild rumours had circulated in the South Korean press that Jong Nam had conspired against his brother with Jang. Jong Nam had been close to Jang, who was his escort during his school days in Switzerland. But Michael Madden, who runs “North Korea Leadership Watch”, a blog, says tales of fraternal hostility have been overdone. Some sources say Jong Nam did in fact attend a private family funeral for his father in Pyongyang, the North Korean capital. Yoji Gomi, a Japanese journalist with whom Jong Nam exchanged 100-odd e-mails from 2004, quoted him in a book in 2012 as having said that he wanted to “co-operate”

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with his half-brother.

It is possible that Jong Nam was involved in financial dealings that Jong Un wanted to wind up. Some suspect he was laundering money through Macau’s casinos. Mr Madden says he had ties with Office 39, a department that seeks foreign income for the Kim regime through illicit means. More likely, however, is that Jong Nam simply irritated his half-brother by criticising him. Mr Gomi quoted him as saying Jong Un would “not last” as leader. Around the same time his son called the North Korean regime a “dictatorship” on a Finnish talk show. Given that North Korean officials have been executed for slumping in their chairs at meetings, such comments would surely qualify as capital offences.

Jong Nam was thought to have been under the protection of the Chinese security services. China’s government, which had had good relations with Jang, is bound to be irked by the murder of yet another protégé. Kim Kwang Jin, a defector who once worked in North Korea’s “royal court” economy, says that even if rumours that China had hoped to install Jong Nam if Jong Un fell from power are far-fetched, China would nonetheless have seen Jong Nam as useful leverage.

North Korea frequently irks China, however, without changing its apparent conclusion that a violent nuclear dictatorship makes a better neighbour than a unified Korea packed with American troops. The timing, hard on the heels of a North Korean missile test (see next story), is probably coincidental. North Korea had been trying to kill Jong Nam for some time, according to South Korea’s spooks: a North Korean spy jailed by South Korea in 2012 allegedly confessed to planning a hit-and-run on him in China. And given how little clout he seems to have had in North Korea, there is no hint that his murder is a sign of turmoil within the regime. ■

North Korea tests another missile

Got a rocket in your pocket

Kim Jong Un challenges Donald Trump

IF NORTH KOREA'S test of a ballistic missile on February 12th was intended as a provocation, Donald Trump, unusually, failed to take the bait. For once, the president's Twitter account stayed silent. When Mr Trump was given the news, he was entertaining Japan's prime minister, Shinzo Abe, at Mar-a-Lago, his resort in Florida. In a joint appearance, Mr Abe described the launch as "absolutely intolerable" and demanded that North Korea should comply with a raft of UN Security Council resolutions that have so far done little to restrain its missile and nuclear programmes. Mr Trump did not refer to the missile test directly, but pledged that America would stand "100%" behind "its great ally" Japan.

The statement was far more measured than some of his previous pronouncements on North Korea. After Kim Jong Un, the country's leader, gave a bombastic New Year address in which he boasted of being in the "final stages" of preparations to test-launch a missile with the range to threaten America, Mr Trump tweeted back: "It won't happen!" Mr Trump's retort suggested that any such attempt would be met with a military response.

The missile tested on Sunday may not have crossed Mr Trump's red line (it fell into the Sea of Japan, some 500km from its launch site). But it was indicative of North Korea's rapid progress towards developing medium-range and, eventually, interconti-



Off the roads, on a roll

mental missiles capable of carrying nuclear warheads. At first, South Korean officials monitoring the launch said the missile was either a modified version of the Nodong, first deployed more than a decade ago, or the 3,000km-range Musadan, possibly equipped with a solid-fuel rocket motor. The Musadan was tested eight times last year, though only once successfully.

North Korea's official newspaper said the missile had used solid fuel, and identified it as the Pukguksong-2. According to John Schilling, an analyst who writes for the website *38 North*, it looked very similar to the submarine-launched missile North Korea successfully tested in August (known in the West as the KN-11 and by the North Koreans as the Pukguksong-1). Mr Schilling estimates that it has a range of 1,200km, based on the trajectory of the test launch—enough to reach the whole of South Korea and much of Japan.

More important than its range are its greater mobility, durability and ease of use compared with liquid-fuelled missiles, such as the Nodong. Solid-fuel missiles do not have to travel with a retinue of tankers carrying propellant, and they can be launched at five minutes' notice, against the hour required to prepare the Nodong.

Michael Elleman, a missile expert at the International Institute for Strategic Studies (IISS), is surprised by the speed with which the North Koreans have developed a powerful solid-fuel motor. He thinks it possible that they have acquired the engines illicitly from either China or Russia. A further concern is that the Pukguksong-2 was fired from a transporter-erector-launcher vehicle with tracks like a tank, rather than wheels, giving it the ability to move beyond North Korea's limited road network. Mr Schilling concludes that the Pukguksong-2 would be much harder to find and destroy than other North Korean missiles.

When North Korea comes to testing a missile with the range to hit America, it is likely to use liquid fuel, since that is an easier technology to master. Even so, keeping Mr Trump's pledge to prevent such a test would be far from straightforward. One approach would be to try to destroy North Korean missile bases pre-emptively. Earlier this month the commander of American forces in South Korea, General Vincent Brooks, called for greater capability to do just that. However, as Mark Fitzpatrick, also of the IISS, points out, South Korea would bear the full brunt of the North's retaliation. Convincing it that a shower of missiles on Seoul was a fair exchange for protecting America from a notional threat would not be easy.

Another approach would be to try to destroy the long-range missile early in its flight using interceptors fired from a naval vessel. But Mr Elleman warns that until the much faster and more capable version of America's SM-3 interceptor becomes avail-

able, perhaps by next year, the chances of success would be low.

So too is the likelihood of diverting North Korea diplomatically. The day after the test the UN Security Council did what it usually does, deploring the launch and calling for a redoubling of efforts to enforce existing sanctions. These include measures aimed at cutting North Korea's exports of coal and metals, which were passed in November after a nuclear test. But until China decides that the dangers of its exasperating neighbour's nuclear programme outweigh those that might follow the collapse of his regime, Mr Kim will not be deterred. Mr Trump promised on February 13th to deal with the "big, big" problem of North Korea "very strongly". But as ever, the options are dismal. ■

Cambodian politics

One down, 54 to go

KANDAL

A leading opposition figure steps down, but the regime keeps harrying the rest

AT A wedding in the southern province of Kandal, the resignation of Sam Rainsy, the country's longtime opposition leader, is announced in passing by a teenager scrolling through Facebook. The apparent departure of a figure who has been central to Cambodian politics for 20 years created a kerfuffle among Cambodia-watchers when it emerged this week. The wedding guests simply shrug.

The apathy reflects the disconnect between Mr Sam Rainsy, who describes himself as the "national and international symbol of resistance" to Cambodia's authoritarian government, and the country from which he has been absent since 2015 in order to avoid arrest on various charges. As local elections approach in June, with parliamentary elections looming a year on, this cosmopolitan former banker campaigning from Paris was always going to struggle to energise the provinces.

Cambodia's strongman prime minister, Hun Sen, had threatened a week earlier to teach Mr Sam Rainsy "a lesson". The courts had already convicted him in several dubious cases. Next the ruling Cambodian People's Party (CPP) drafted a law that would allow the authorities to dissolve any party led by someone convicted of a crime. Mr Sam Rainsy said he was stepping down to avoid the dissolution of his Cambodia National Rescue Party (CNRP), the only credible opposition.

But the CPP is pressing on with its plans to amend the election law, adding a vague clause that would allow the closure of parties that foment "disunity" and a rule ban- ▶▶

Presidential elections in Turkmenistan

Protection racket

ALMATY

The incumbent wins 98% of the vote

THERE are no dark horses in elections in Turkmenistan, only stalking horses. The country was a one-party state until 2012 and the presidential election held on February 12th was the first to feature candidates from rival parties. But a multiplicity of parties, alas, is not the same as a meaningful opposition. In a nine-way race, the incumbent, Gurbanguly Berdimukhamedov (pictured), took 98% of the vote. That was an improvement on 2012, when he pulled in a mere 97%.

Mr Berdimukhamedov, a former dentist who styles himself “Arkadag”, the “Protector”, threw himself into the campaign, crooning a song of his own composition to gas workers and doling out televisions to herdsmen in the desert. He also repressed all dissent with “a concerted campaign of harassment against civil society activists and journalists”, according to three human-rights groups.

Mr Berdimukhamedov has held power since the death of the previous eccentric dictator, Saparmurat Niyazov, in 2006. He is 59—young by the standards of Central Asian despots—and may remain president for life, after reforms passed last year removed term limits and scrapped the requirement that presidential candidates be younger than 70. The reforms also extended the presidential term from



A one-horse race

five to seven years, sparing Arkadag the bother of campaigning again until 2024.

That is just as well: rather than the “Era of Supreme Happiness” that Mr Berdimukhamedov promised at his previous re-election, he is presiding over an era of low prices for Turkmenistan’s sole export, gas. Subsidies for utilities may be cut, staple goods are in short supply in some parts of the country and wages at state-owned firms are said to have gone unpaid for many workers. Humbler Turkmen, in short, do not have much to sing about.

ning donations from abroad, among other things. Both measures are aimed at the CNRP, which is fiercely critical of the government and gets most of its funding from Cambodian expatriates.

The hounding of the opposition is relentless. Kem Sokha, the CNRP’s acting leader, has also been repeatedly dragged into court. Pro-CPP websites, meanwhile, have leaked recordings of senior CNRP members’ phone calls, fuelling suspicions of state-backed wiretapping. All critics of the government are frightened after the murder last summer of Kem Ley, a political commentator; Mr Hun Sen fuels the fire by calling on them by name to watch out.

But even by the grim standards of Mr Hun Sen’s 32-year rule, his latest efforts to dismantle the opposition mark a lurch towards autocracy. The CNRP won 55 out of the 123 seats in the National Assembly in the most recent parliamentary election, in 2013. Its strength seems to stem not from the charisma of its leaders but from a general discontent with the status quo. Even with Mr Sam Rainsy out of the picture, in other words, Mr Hun Sen will keep tormenting the opposition. ■

Elections in Jakarta

Fighting fake news

JAKARTA

Voters plump for tolerance—by a hair

MILLIONS of Indonesians went to the polls on February 15th to elect local leaders, from Aceh in the west to Papua in the east. Voters braved the floods and landslides of the rainy season to cast their ballots in a massive exercise of democracy. But the day was dominated by the race for governor of Jakarta, the capital, which had become a test of tolerance in the world’s most populous Muslim country. The embattled incumbent, Basuki Tjahaja Purnama, is a Christian of Chinese descent and thus a member of two tiny minorities.

Islamists tried to turn voters against Mr Basuki, known to all as Ahok, by accusing him of insulting the Koran. On the day, Ahok came first but fell short of an absolute majority, with 43% of the vote, accord-

ing to unofficial results. This means the election will be decided by a run-off on April 19th. Ahok will face Anies Baswedan, a former education minister, who had been trailing in early polls but ended up taking 40% of the vote. Agus Yudhoyono, the son of a former president, got just 17%. He is now out of the race.

Speaking at his ramshackle campaign headquarters in a leafy neighbourhood, Ahok vowed to fight on. He will have to campaign vigorously to win the run-off. Many Jakartans approve of his urban-renewal schemes, but Islamists are not his only detractors: many oppose the evictions of slum-dwellers that his infrastructure schemes necessitate. Marcus Mietzner of the Australian National University reckons that Ahok will struggle to woo Mr Yudhoyono’s voters, given the “extreme acrimony” between the two camps.

Ahok had been deputy governor, but won an automatic promotion when his predecessor, Joko Widodo, known as Jokowi, stood down to run for president in 2014. He had therefore faced voters only as Jokowi’s running-mate, during the previous election for governor in 2012. Ahok’s re-election had seemed assured until September, when he told a group of fishermen that he understood some of them would not vote for him because they had been deceived into believing that the Koran forbids them to vote for a Christian.

Islamists accused Ahok of denigrating the word of God. They stirred up sectarian outrage further by spreading a doctored clip of the speech on the internet and staged protests to press the authorities to arrest him. Prosecutors eventually charged Ahok with blasphemy. Since December he has appeared in court once a week as the trial proceeds.

On the final day of the campaign, tens of thousands of people gathered at Jakarta’s largest mosque to hear preachers tell them it was God’s will that they cast their ballot for one of the two Muslim candidates. The driving force behind the rally was Rizieq Shihab, the fiery leader of the Islamic Defenders Front (FPI), a vigilante group. Outside the mosque, a giant banner strung across a highway read “Arrest Ahok the blasphemous”. Crowds posed beside placards claiming that it is sinful for Muslims to vote for a *kafir*, or infidel. Hawkers sold knick-knacks depicting Mr Shihab, the self-proclaimed “imam besar” (supreme leader) of all Indonesia’s Muslims.

But the latest anti-Ahok protest was much smaller than the biggest one, in December, which drew some 500,000 people. This may signal waning support for the Islamist agitators, notably the sanctimonious Mr Shihab, who is caught up in a sexting scandal. Nonetheless, the next two months of campaigning are widely expected to turn even nastier now that the election is a two-man race between a Christian ►►



Still standing, despite the slander

▶ and a Muslim.

Ahok's opponents seem to have concluded that the surest path to victory is to pander to the sectarians. Both Mr Baswedan and Mr Yudhoyono attended dawn prayers with Mr Shihab at the latest rally, even though moderate Muslim groups had told their members to stay away. Mr Baswedan, who was once feted as a model of tolerance, also gave a speech at FPI's headquarters in January alongside Mr Shihab, who has twice been convicted of hate speech and used to be shunned by mainstream politicians.

Even if Ahok (pictured) were to win in April, the courts could yet convict him. Blasphemy carries a prison sentence of up to five years, and almost all those charged with it are convicted, presumably because judges are afraid of being harassed by Islamists themselves if they dare to acquit supposed enemies of the faith. In theory, Ahok could still serve as governor while he exhausts the lengthy appeals process. In practice, however, he would come under intense pressure to step down.

Although voters' continued, if diminished, enthusiasm for Ahok is encouraging, the election has propelled fringe Islamist groups to the forefront of politics. That is also likely to be a feature of the next presidential poll, in 2019. Ahok is a close ally of Jokowi and is backed by the same party. Mr Baswedan, for his part, is backed by Prabowo Subianto, a former army general who narrowly lost the last presidential election. Mr Prabowo is an old-fashioned nationalist, not an Islamist, but he has mobilised the Muslim vote partly by allying with a religious party popular among poor voters. The current configuration of forces suggests that arguments about Islam could play a pivotal role in Indonesian politics for years to come. ■

Taiwanese politics

A convenient untruth

TAIPEI

America's affirmation of the one-China policy brings relief to both Chinas

THE idea that China and Taiwan might be separate countries, rather than estranged parts of "one China", is anathema in Beijing. So on February 9th, when Donald Trump told his Chinese counterpart, Xi Jinping, that America would respect the one-China policy after all (having previously questioned this polite fiction), Chinese officials were profoundly relieved. So, oddly, was Taiwan's government, which thought that questioning the policy had been bad for Taiwan and scrapping it would have been worse.

That is remarkable. After all, Taiwan's ruling Democratic Progressive Party rejects the one-China policy and says the island is already independent. Tsai Ing-wen, Taiwan's president, cannot even bring herself to utter the words "1992 consensus"—the name for a deal between China and the Kuomintang party (KMT), now the island's opposition, which affirmed the notion of one China but said the two sides had different interpretations of it. So why was her government pleased?

Since coming to office last year, Ms Tsai has presented herself as cautious, responsible and predictable—as different as possible from the previous DPP president, the irrepressible Chen Shui-bian, whose constant efforts to highlight Taiwan's de facto independence infuriated both China and America. In a speech in October that Ms Tsai hoped would reassure China, she promised she would "of course not revert to the old path of confrontation".

Mr Trump's stand-off with Mr Xi could have imperilled that approach. There was an outside chance, debated with paranoia in Taipei, that America's president might

strike a grand bargain with China, selling Taiwan down the river in exchange for big concessions on trade and security. This is highly unlikely, given that America's defence commitments to the island are enshrined in an act of Congress which could not be undone without legislative approval. Still, there are serious concerns that fall short of that dire possibility. If the stand-off with China turned into a trade war, Taiwan would suffer badly; its economy is inextricably linked to the mainland.

Putting the one-China policy up for negotiation would also have cut across Ms Tsai's desired timetable for dealing with Mr Xi. Towards the end of the year China's communist rulers are to hold a party congress—the biggest event of the Chinese political calendar. It seems unlikely that Mr Xi, who is trying to consolidate his authority, would do anything before the congress that might look to rivals like weakness on Taiwan. After the event, however, he might have room for manoeuvre.

Or so Ms Tsai hopes. She and her advisers are considering new ways of describing Taiwan's relations with the mainland which might replace or add to the 1992 formula. She recently told a group of Taiwanese business people that the time to discuss such a formulation would be in the second half of the year—though, even then, the chance that Mr Xi will show flexibility on the one-China idea seems remote.

At least Ms Tsai will gain some time, which she needs to deal with her priority, the economy. It grew by only 0.7% in 2015 and 1.4% last year. Salaries have stagnated for two decades, youth unemployment is up and Taiwan's state-run pension funds all face bankruptcy. After months of deliberation, the government is ready to put its pension-reform plan to the Legislative Yuan, Taiwan's parliament. This will inevitably involve painful choices and probably make Ms Tsai even more unpopular (her poll ratings are dismal).

Mr Trump's phone call with Mr Xi may help. Her party contains a significant minority of fundamentalists, known as ▶▶



▶ “deep greens”, who want faster strides towards formal independence. They argue that, with Mr Trump in the White House, Taiwan has a historic chance to advance its case for sovereignty. “She hasn’t shown she can seize the opportunity,” grumbled a deep-green politician, Parris Chang, before Mr Trump’s call.

Mr Trump’s change of heart over confronting China seems to weaken the deep-green argument that American politics has become exceptionally friendly to their position. This does not mean they will stop criticising Ms Tsai. They are unhappy about her economic management, the presence in her government of officials from past KMT administrations and her unwillingness to invite to Taiwan some of China’s foremost bugbears, such as the Da-

lai Lama and Rebiya Kadeer, the head of the World Uighur Congress (who this week turned down a private invitation to visit the island). But Mr Trump’s volte-face reduces the pressure they can exert on Ms Tsai to change course on China.

In almost any other circumstance, the president would be in deep trouble. Fortunately for her, the KMT is in an even bigger mess. It has not recovered from heavy defeat in last year’s general election and its new leader, Hung Hsiu-chu, is unelectable because she is too friendly to China. Mr Trump’s phone call may bolster the KMT’s argument that the government will have to accept the idea of one China eventually. But for the moment most Taiwanese, like the government itself, are more interested in the economy. ■

Japan’s self-defence forces

Barmy army

TOKYO

The government tries to free its soldiers from pacifist shackles

MASAKI TOMIYAMA’S fight seems quixotic. He was happy for his son to join one of the world’s biggest, best-equipped armies, but cannot abide the idea that he might have to do any fighting. “I was very angry when I heard my son was being trained to kill people,” says Mr Tomiyama—so angry, in fact, that he decided to sue the Japanese government for violating the country’s pacifist constitution. “I will never allow him to go to war—that’s not why he signed up.”

Japan’s constitution, cobbled together by the Americans in a few hectic days in 1946, prohibits the maintenance of land, sea or air forces. But at the height of the Cold War it seemed otherworldly for a rich ally of the West, with unresolved territorial disputes with all its neighbours, to have no armed forces at all, so in 1954 the government set up the “Self Defence Forces”.

The SDF was to exist “to protect the peace and independence of Japan”. But it was controversial all the same. For decades the biggest opposition party wanted it abolished. Such was the controversy, recalls Noboru Yamaguchi, a former SDF lieutenant-general, that service members slipped into civilian clothes before leaving barracks to avoid abuse from the public.

The SDF remains one of the world’s odder armies. It has never fired a shot in battle. Its main role, for many Japanese, is disaster relief. Yet it has a larger navy than France and Britain combined, including four huge “helicopter carriers”.

Hawkish members of the ruling Liberal Democratic Party (LDP) have long wanted



Handy in a conflict but no use in a fight

to make the SDF more like a normal army. In 2015 the government passed several security bills “reinterpreting” the constitution to allow the SDF to engage in what Shinzo Abe, the prime minister, called “proactive pacifism”—participating in peacekeeping missions and the like. The move triggered protests and bitter parliamentary wrangling. Mr Abe was acting out of nostalgia for the time when Japan was a great power, critics said. They predicted that the legislation would ensnare Japan in foreign wars and trigger a stampede from the SDF’s ranks.

Seventeen months on, the force has ac-

tually swelled slightly, to 227,000 personnel, but there has been a sharp decline in the proportion of those training to become officers at the National Defence Academy of Japan who actually end up joining the SDF. Demography is not working in the SDF’s favour: the population of 18-year-olds has shrunk by a million over the past two decades, making recruitment difficult. The issue, says Alessio Patalano of King’s College London, is not just the number of would-be soldiers, but the quality.

The defence ministry has responded with a lavish and sometimes creative promotional drive, doubling its public-relations budget and enlisting the help of cartoon characters, pop stars and schools. Children at one secondary school even found the number of the local SDF recruitment office printed on their toilet paper. Much of the drive explicitly targets a neglected audience: women. Only 6% of the SDF’s employees are women; it wants to raise that to 9% by 2030.

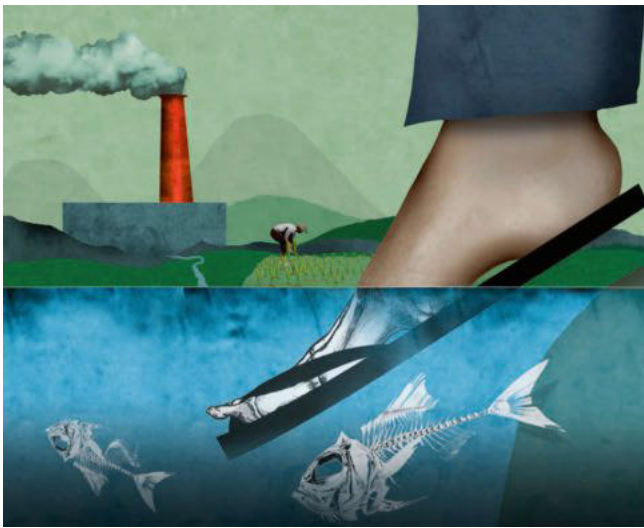
Demands for a more muscular SDF will grow. China’s defence budget has increased 44-fold in three decades, points out Yoshitaka Shindo, an LDP hawk. A new paper by the Institute for International Policy Studies, a think-tank considered close to the LDP, says Japan could be “profoundly affected” by Donald Trump’s “America first” policy. It believes Japan should develop greater capabilities of its own, including cruise missiles. “We must respond to America first-ism with Japan first-ism,” says Masato Inui, executive editor of the *Sankei Shimbun*, a right-wing newspaper.

But aversion to anything that smacks of militarism runs deep. Last year 350 SDF personnel were dispatched to South Sudan as part of a UN peacekeeping force. The troops are only there to repair infrastructure and are supposed to be withdrawn if there is fighting between local militias (so far, the government says, there has only been “conflict”, which is apparently quite different). But, for the first time, the SDF has been authorised to use weapons to defend civilians and UN staff. Opponents of the policy, including Japan’s most widely circulated liberal newspaper, the *Asahi Shimbun*, are campaigning to have the troops withdrawn. “We worry about troops who get injured,” fretted a recent editorial. Mr Abe has suggested that he will resign if any Japanese soldiers are killed.

Young people in the SDF joined to help the victims of earthquakes and tsunamis, says Norikazu Doro, a former service member. “They had no idea they were joining an army that could one day go to war.” Mr Tomiyama is one of several parents who have taken the government to court. He says his son signed up to help and defend his country, not fight other nations’ battles. “The principle was that only if we were attacked would we attack,” he says. “That principle has been voided.” ■

Banyan | Red v green

The Communist Party's inability to control pollution in Vietnam is corroding its authority



FISHING boats in Dong Hoi, a tranquil provincial capital on the central coast of Vietnam, are decorated with bits of cactus. These prickly charms are said to protect seafarers from storms and other perils, but they did not ward off the misfortune that struck the town last spring. In April the tides spewed thousands of dead fish onto Dong Hoi's beaches. Authorities dithered for months before naming the culprit: a new steel mill up the coast which had flushed its pipes with toxic bilge.

Nearly a year later, Dong Hoi—like all the settlements on a 125-mile stretch of affected coastline—is still tallying the cost of that calamity. Worst affected are its fishermen, whose red and blue skiffs cluster serenely on the town's wide river. Some locals refuse to eat their catch, for fear of lingering toxins; others pledge to eat only fish caught far out to sea, or at depths thought to have escaped the poison. Freezers in many seafood restaurants are now stocked with chicken and pork.

The disaster has sapped tourism, too. The town was flattened during the war with America (except for a charred church facade, now preserved as a memorial), but has profited from gargantuan caves discovered on its doorstep. These include Son Doong, said to be the world's largest, which only opened to visitors in 2013. But last summer hordes of people cancelled their holidays, fearful of splaying out on tainted sand. Half-built hotels and condos dot the outskirts of town, left orphaned by twitchy investors.

Pollution mars many of Vietnam's stunning landscapes. Dam-building, well-digging and intensive farming are corroding the Mekong Delta, where roughly half the country's rice is grown. Each year its soil becomes saltier as seawater washes up its weakening streams. Pungent smog smothers Hanoi, the capital. By some counts nearly two-thirds of Vietnam's industrial wastewater flows into lakes and rivers. In 2015 the authorities identified a score of villages with unusually high cancer rates, perhaps the result of water supplies laced with lead.

A category of environmental trouble not entirely of Vietnam's making will soon add to this list. With 2,000 miles of coastline, Vietnam is especially vulnerable to climate change. Some estimates suggest that one-fifth of Ho Chi Minh City, its swiftly expanding southern metropolis, could be underwater by the end of the century. Harsher weather and flooding could batter settle-

ments up and down the long seaboard.

Such worries are increasingly seeping into Vietnam's politics, posing challenges to the repressive rule of the Communist Party of Vietnam (CPV). A government report says that at least 200,000 people were directly affected by last year's disaster. Some of them have dared to protest at the mill responsible—owned by Formosa, a Taiwanese company—or in front of a local courthouse. They say that the \$500m the firm has coughed up in compensation is paltry, and demand the right to sue. Even more striking is the rage among Vietnamese who have not suffered from the poisoning themselves. Shortly after the disaster, a spokesperson for Formosa implied that industry and fishing were incompatible. Demonstrators in Hanoi and Ho Chi Minh City retorted: "I choose fish."

Nationalism amplifies anger about the environment. In 2014 Formosa's steel mill was set ablaze by rioters protesting against China's decision to move an oil rig into contested waters not far from Vietnam's coast (never mind that Formosa is Taiwanese). Most Vietnamese think their leaders are soft on China, the country's biggest trading partner but also an old enemy and rival claimant to several islets in the South China Sea. That the party has allowed a (sort of) Chinese firm to poison the coast is particularly galling.

All this is frightening to the CPV, which saw how environmental movements in Eastern Europe buffeted communists there, and which has dealt thuggishly with leaders of the protests. Labelling civil-rights campaigners as stooges for foreign governments is trickier when the party itself is accused of protecting polluters from abroad. In search of new friends to help reduce its reliance on trade with China, the cadres in Hanoi also fret about Vietnam's reputation. The CPV wants foreigners to see the country as a reliable partner on global issues such as climate change, not as a throwback that reveres a dead leader in a glass box.

So Vietnam's lawmakers are becoming greener. The country has fairly comprehensive green regulations, reckons Stephan Ortman, author of a new book on the subject—stricter than those scribbled by China's rulers, and produced at a faster clip. It has pledged to cull carbon from its economy (though how this squares with plans to build dozens of coal-fired power stations is anybody's guess). In November the government hosted a big pow-wow on wildlife conservation, obliterating tonnes of confiscated ivory in a satisfying fireball.

A smog of confusion

Yet there is more talk than action, and the government's shallow coffers are only partly to blame. Economic growth—which in the absence of meaningful elections is the party's only claim to legitimacy—trumps everything else. Powerful officials in the provinces ignore rules made in Hanoi, and powerful state-owned firms often seem untouchable. A justice system that deals swiftly and ruthlessly with dissidents fails dismally at enforcing quotidian regulation. Whereas smog-fighters in Beijing have begun closing factories and restricting car usage, bigwigs in Hanoi still struggle to prevent scooter-riders from parking on the pavements. Smouldering ire over pollution will make it harder for the party to cope with political or economic shocks.

Dong Hoi's prospects, meanwhile, hinge on whether the tourists return this summer. The authorities say that the sea is safe for swimming again, but not everyone believes them. A fisherman says he has been back at work for a while, but would not feed his catch to small children for another five or ten years. ■

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Intellectual debate

An illiberal dose

BEIJING

Once tolerated, avenues for debate about reform are now being closed

IT HARDLY seemed a threatening scene when, on a Friday afternoon in February, dozens of finance wonks gathered in Beijing for a three-hour symposium on China's exchange-rate mechanism. With a slide show featuring graphs and formulas, the main speaker talked about the arcana of the yuan's adoption last year as one of the IMF's reserve currencies (a development that Chinese reformists hope will encourage the government to let the yuan float freely). Other participants sipped their green tea, jotted down notes and chipped in with their views. The host, the Unirule Institute of Economics, often holds such events. Typically, it posts summaries of speakers' views online. Not this time, however. The website is no more.

It was shut down by the city government in late January, as was another site run by Unirule, as well as all of the institute's social-media accounts and those of its leading researchers. Their closure was the latest blow to the country's moderate liberals, who for many years have continued to enjoy at least some freedom to debate reforms, even while the authorities have been busy rounding up more radical critics of the regime.

The onslaught against liberal forums began in July when, after a quarter-century of cheerleading for reform, including better implementation of the constitution's guarantees of protection for human rights, a monthly magazine called *Yanhuang*

Chunqiu was taken over by hardliners. The magazine's founding publisher, Du Daozheng, said the purge reminded him of the Cultural Revolution, when radical Maoists seized control of a newspaper for which he then worked, and berated him as a "counter-revolutionary". In October a website called Consensus Net, much loved among liberals, was closed. It had been publishing articles about economic, social and political reform since its founding in 2009. With the termination of Unirule's online accounts, moderate reformists have little space left for open debate.

The liberal threat

China's president, Xi Jinping, professes himself to be in favour of market-oriented reform and upholding constitutional rights, and his late father supported *Yanhuang Chunqiu*; yet he is nervous of liberal views. Unirule has been one of the country's most prominent independent think-tanks since it was founded in 1993. David Kelly of China Policy, a Beijing-based consultancy, says the institute "cannot be said to be unorthodox, subversive or dissident in any obvious way". He notes that pro-market reform measures that were proposed by Mr Xi in 2013 echoed those suggested by Unirule years earlier.

But these are tense political times in Beijing, as the Communist Party prepares for a five-yearly congress in the autumn and a sweeping reshuffle of its leadership

(not including Mr Xi's positions) immediately after it. Mr Xi does not want anyone to embarrass him amid the political horse-trading of the months ahead. Websites run by diehard Maoists, dripping with criticism of free markets, are still allowed to operate. But Maoists, at least, can be counted on to support the party. Mr Xi seems to fear that moderate liberals may rattle it. Unirule's co-founder, Mao Yushi, has a habit of doing so. A few days before the authorities pulled the plug on his institute's accounts he had joined dozens of intellectuals in calling on China's chief justice, Zhou Qiang, to step down. Mr Zhou had angered them by denouncing the "erroneous influence" of calls for an independent judiciary. Mr Mao's views matter: before it was disabled, his account on Weibo, a Twitter-like service, had 2.7m followers.

Some are putting a positive spin on these events. Dai Qing, a former journalist at a national newspaper, says that, although liberals like her are "very worried", those clamping down on the reformist forums may not disagree with the views expressed on them. Liberal-leaning leaders in China sometimes try to protect themselves from hardline onslaught by looking tough themselves. Mr Xi, a diminishing band of optimists believe, could be playing such a game. "There's a saying in China that you put on the left blinker when you want to turn right and the right blinker when you want to turn left," says Ms Dai. "So no one can guess what is really going on."

Staff at Unirule are puzzled. Sheng Hong, another co-founder of the institute, says the authorities have not even bothered to notify Unirule of their action, let alone explain it. Official media said that Unirule's online accounts were among several that had been closed for a variety of infractions, ranging from the provision of unauthorised news and information ►►

▶ services to the broadcast of pornography. They did not specify which of the websites had broken which rule, but Unirule was certainly not guilty of the latter: the curves on its website were of the economic rather than the bodily sort.

Whether the pressure on liberals will be eased after the party congress will depend largely on how secure Mr Xi feels. His record so far suggests he is prone to anxiety. Since 2015 police have rounded up and harassed hundreds of independent lawyers. A new law on the management of foreign NGOs came into effect in January aimed at tightening government control over them. “Maybe they hate us because we tell the truth,” laments Unirule’s Mr Sheng. “But we should do this in a great nation. If we don’t, China will have no future.” There is scant evidence that Mr Xi agrees. ■

The stockmarket

Hunting crocodiles

SHANGHAI

The government steps up its battle against market manipulators

THE Chinese stockmarket is not for the faint of heart. Over the past decade punters have endured two big bubbles and two big crashes—the latest in 2015. But those still smarting from their losses can at least be thankful that they did not suffer a worse fate: making too much money. Last week the government declared that it would be remorseless in going after investors who manipulate the market for profit. We will catch these “giant crocodiles”, said Liu Shiyu, the chief securities regulator. They will not be allowed to “flay the skin and suck the blood” of retail investors, he added, belying his earlier reputation as a mild-mannered bureaucrat.

Normally it would be prudent to take such statements with a pinch of salt. China has often vowed to tackle insider trading, to little effect. But the tough talk about discipline this time seems to have more political weight. Looking at Xi Jinping’s first five years as president, the stockmarket crash in the summer of 2015 ranks as one of the biggest blots on his record. It was a transparent display of shoddy governance. Investors who got burned still nurse grievances against regulators. So Mr Xi, hardly a fan of markets at the best of times, has an extra incentive to go after miscreants.

A couple of big cases show he means business. One of the first major players arrested was Xu Xiang, a so-called “kamikaze” investor who reputedly pumped up stocks, lured in unsuspecting punters and then cashed out. On January 23rd he was found guilty of market manipulation. He

Trump toilets

Improperly squatting

BEIJING

The Trump brand wins a legal battle in China

CHINA has a history of hilariously inappropriate export brand-names, including Front Gate men’s underwear, Long March luggage and, guaranteed to raise a laugh, Great Leap Forward floor polish. But it has also stumbled on a brand that should surely open up vast business opportunities, at least among Democratic-voting households in America: Trump brand toilets (see picture).

The name has nothing to do with the 45th president. Shenzhen Trump Industries was founded in 2002. Its Chinese name, Chuang Pu, means “innovate everywhere”. It sounds similar to a name often used for Donald Trump: Chuan Pu. The firm makes toilets for “high-end spas, hotels [and] public institutions”, and uses the world’s first “continuous rewinding toilet sanitary cover device”. Its boss says that Trump toilets are used 100m times a year in China.

This great Chinese success story is now under threat. It is one of many Chinese products unrelated to the American president that use the word Trump. In 2006 Mr Trump applied in China for ownership of it as a trademark in construction services. Alan Garten, the chief legal officer of his company, the Trump Organisation, told the *Washington Post* that “someone was improperly squatting on” his firm’s rights. This week, after

years of dispute, and, by amazing coincidence, just after Mr Trump promised to honour the “one-China policy” (see page 24), a Chinese court agreed that in the construction business, Trump belongs to the Trump Organisation. The legal implications for Trump toilets are not known.



Not the throne he had in mind

was sentenced to five-and-a-half years in jail and fined 1.1bn yuan (\$1.6bn), a record in China for economic crimes.

There are also indications that the disappearance of an even bigger tycoon, Xiao Jianhua, is partly related to the stockmarket crash. Mr Xiao, the head of a sprawling investment company called Tomorrow Group, is one of China’s wealthiest men, worth at least \$6bn. At the end of January he was abducted from his hotel in Hong Kong. Chinese agents reportedly removed him in a wheelchair with a sheet over his head and escorted him on a boat across the border into mainland China.

Mr Xiao’s case is widely thought to involve murky politics: he made his fortune through ties to Chinese leaders. But *Caixin*, a Chinese magazine, reported on February 11th that Mr Xiao had controlled *Securities Daily*, a state-backed newspaper, and used it to influence coverage of his listed companies. If Mr Xi does want to neutralise Mr Xiao for political reasons (he may know too much about the financial dealings of the elite), linking him to stockmarket she-nigans is a safe way to bring him down.

And it has the added benefit of spooking other would-be manipulators.

Nevertheless, the details of Mr Xiao’s case, riveting though they are, are unlikely to have much impact on the market. The rarefied air of elite politics does not figure in the strategy of most investors. What does matter is whether the clean-up of the market affects traders at brokers and hedge funds around the country.

There are tentative signs that this is indeed happening. In 2016 the securities regulator levied 4.3bn yuan in fines and barred 38 individuals from the market, both record highs. “They are getting rid of the bad guys,” says one fund manager.

For the time being this seems to be helping the market. Companies with solid fundamentals have outperformed speculative stocks since late 2015. Chen Jiahe, chief strategist with Cinda Securities, a broker, says it is nothing short of spectacular to see this kind of trend—which is common in more mature countries—last so long in China. But it will take longer than that to drain such a swampy market. As the government itself says, crocodiles still lurk. ■



Turmoil in the administration

Errant Flynn

WASHINGTON, DC

The axing of an ill-chosen national security adviser will not fix the deep problems in Donald Trump's government

THE king, wrote Charles de Marillac, the French ambassador to the court of Henry VIII, was so fickle he rendered even his word “as softened wax [that] can be altered to any form”. He was so suspicious he did “not trust a single man”. Some of the dramatic twists of Donald Trump's month-old administration, including the removal on February 13th of Michael Flynn as national security adviser (NSA) after he allegedly made inappropriate comments to the Russian ambassador and fibbed about them, would have seemed familiar to de Marillac. They are not merely the teething troubles of an unusually messy administration, but seem rooted in Mr Trump's idiosyncratic management style.

Demanding Mr Flynn's resignation, due to an “erosion of that trust” which the president had formerly invested in the tough-talking former military-intelligence officer, was in fact one of Mr Trump's better decisions. Abrasive, hot-headed and highly partisan, Mr Flynn was ill-chosen for the job. Yet the fact that Mr Trump so recently hired him, and the circumstances of his firing, which have flooded out of the administration in leaked reports from unhappy officials, are not reassuring.

The job of NSA requires a cool head, a big brain, excellent managerial skills and an even temper: few have excelled at it. Mr Flynn had little high-level government experience aside from a stint running the Defence Intelligence Agency, which ended in

2014 when he was sacked for poor management. He was appointed by Mr Trump, for whom he was an early, raucous cheerleader, because the president mistrusted many of the likelier alternatives, admired Mr Flynn's tough-talking style and perhaps did not fully understand the requirements of the position. He sacked him, it seems, not because of his misdemeanour or because he was doing a bad job, which allegedly Mr Flynn was, but because he had become an embarrassment.

The relevant conversations between Mr Flynn and Ambassador Sergei Kislyak took place on December 29th, the day Barack Obama slapped sanctions on Russia in retaliation for its effort to rig the election in Mr Trump's favour. After reports of these exchanges were leaked to the press, Mr Flynn publicly denied having discussed the sanctions with Mr Kislyak. He reiterated his denial to Mike Pence, the vice-president, who then spoke up for him stoutly.

Yet a few days after Mr Trump took office he was informed by the then acting attorney-general, Sally Yates, that Mr Flynn had in fact discussed the sanctions with Mr Kislyak and might therefore be in breach of the Logan Act, which forbids private citizens from trying to conduct foreign policy. According to his spokesman, Mr Trump's response was to launch a careful review of the case against Mr Flynn before concluding, over two weeks later, that though he had broken no law, “the evolving and erod-

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ing level of trust as a result of this situation and a series of other questionable instances” had made his position untenable.

It seems likelier, on the basis of multiple leaked reports, that Mr Trump and his closest advisers, including Stephen Bannon, his chief strategist, reckoned that Mr Flynn could get away with it. A few days after Mrs Yates delivered her report, Mr Trump sacked her for refusing to support his immigration ban on seven mainly Muslim nationalities. He did not inform Mr Pence that he had been made a monkey of by Mr Flynn. He decided to axe his national security adviser only after the *Washington Post* revealed on February 13th, on the basis of yet more leaks, that the Justice Department considered that his lies had left Mr Flynn vulnerable to Russian blackmail.

Mr Flynn will not be missed. None of his mooted replacements, Keith Kellogg and David Petraeus, both retired generals, and Robert Harward, a retired admiral, looks especially promising; yet they would be better suited than he was. Mr Harward, said to have been offered the job, also has the advantage of having worked for James Mattis, the defence secretary, who is believed to have had a hand in the more conventional foreign-policy positions Mr Trump has recently started staking out.

Having dangled an idea of using relations with Taiwan as a bargaining-chip against China, on February 9th the president endorsed the one-China principle that has defined relations with China for four decades. Having questioned America's commitment to Japan's security, he reaffirmed it on February 10th during a visit by Shinzo Abe, Japan's prime minister. Similarly, on the international deal to contain Iran's nuclear programme, which he once swore to tear up but now seems to support, and on NATO, which he no longer calls obsolete, Mr Trump has swerved from ►►

► bomb-throwing to orthodoxy.

But such statements, while welcome, do not constitute a full-bodied foreign policy, and Mr Trump appears to have little grasp of the painstaking processes policy-making entails. His flurry of executive orders, many of them badly drafted fulfillments of campaign promises, is symptomatic of this. So is the vast power he has awarded to a few trusted aides, including Mr Bannon, who has taken a privileged seat in the National Security Council. So, too, is the fact that the transition, including the roll-out of thousands of Trump appointees, is falling behind schedule.

Making administration great again

Mr Trump has so far nominated 35 people to fill some 700 senior positions that require Senate confirmation. On February 15th one of them, Andrew Puzder, his chosen labour secretary, withdrew his nomination after it became clear he would struggle to get confirmed. This poor progress is making it even harder for Mr Mattis and his cabinet colleagues, including Rex Tillerson, the secretary of state, to push back against the turmoil emanating from the White House.

Plenty of talented Republican wonks are in theory available to them. But many are former critics of Mr Trump, which appears to have put them beyond the pale. Last week the president refused to let Mr Tillerson have his choice of deputy, Elliott Abrams, after being alerted to some harsh words Mr Abrams had written about him during the campaign. Given that over 150 leading Republican national-security experts put their names to letters containing even sharper criticisms, it is hard to imagine Mr Trump forming a competent administration unless he relents on this issue. The greenhorns, oddballs and second-raters who were prominent in his transition effort seem unlikely to produce much good policy, bolster Mr Mattis and his colleagues and bring the leaky bureaucracy to heel. The over-promoted Mr Flynn's struggles illustrated that.

There is still time for Mr Trump to salvage his administration. But this will involve him not only changing tack on issues, as he often has in the past, but expanding his view of the government and reforming his belligerent and highly personalised style of leadership. The qualities that made him a successful property developer are not translating well to running the government. But Mr Trump shows no sign of recognising this. He does not even appear to recognise the shambles his government is in. Appearing alongside Israel's prime minister, Binyamin Netanyahu, on February 15th (see page 41), he blamed Mr Flynn's fall on the journalists who had reported his misdemeanours: "He's been treated very, very unfairly by the media—as I call it, the fake media." ■

Labour markets

Forgotten men

An index of the fortunes of the white working-class

IN 1922 Donald Trump's father, Fred, left high school at 16 to work for a carpenter. He was a "very smart guy" who could "add five columns of numbers in his head". Construction came naturally to him, too. By 1971 he had amassed a multi-million-dollar fortune. Working-class success stories like Fred's are rare in America, and becoming rarer. The president wants to see more of them.

At his inauguration he declared that America's "forgotten men and women" will "be forgotten no longer". And he has vowed to bring back jobs to states that have been "hurt so badly" by globalisation. By America's forgotten people, he means above all white working-class men: three-quarters of white men who left school at 18 and voted in November did so for Mr Trump, the highest share of any demographic group.

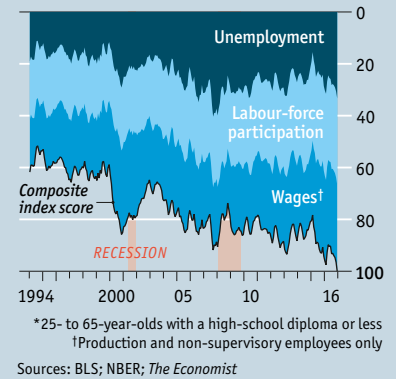
White men are also Mr Trump's most loyal supporters. While his approval ratings languish at 49% nationwide, among working-class white men they are at 69%, according to YouGov, a pollster. This group also forms a big chunk of the labour force: non-Hispanic white men aged 25 to 65 with a high-school diploma or less make up 23% of male workers.

Mr Trump has little of his father's precision with figures. A year ago he reckoned that the unemployment rate—rather than hovering around 5% as the official statistics showed—was "probably 28, 29, as high as 35" or even, perhaps, "42%". To help clarify things, *The Economist* has created a set of labour-market indicators to track the progress of America's forgotten men. Our index of white working-class males (wwcM) employs three measures of job performance.

First, the unemployment rate. This counts the number of jobless people who

The forgotten-men index

United States, gap between white working-class men* and all men, December 2016=100



have actively sought work in the past four weeks, as a percentage of the total labour force. At the end of 2016 the rate stood at 4.7%, but among wwcM it was 6.4%: a difference of 30% (see chart 1). Between 1994 and 2001 the average gap in unemployment rates between all men and wwcM was only 15%. Since the start of the Great Recession that average gap has swelled to 24%.

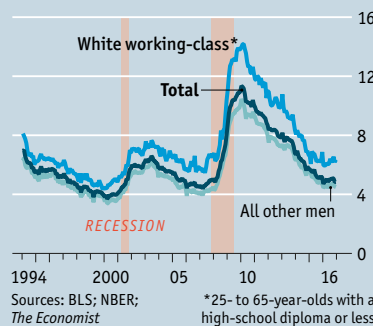
Second, because the unemployment rate doesn't count people who have given up looking for work, some argue that it underestimates the true extent of joblessness. So the second indicator is labour-force participation, which counts workers, employed or not, as a percentage of the working-age population. This has fallen steadily, from 87% in 1948 to 69% today. For wwcM it has declined to 59% (a proportionate gap of 15%, compared with an average of 10% between 1994 and 2001).

Finally, over the past 27 years, average hourly wages have risen by 2.9% a year before adjusting for inflation. Meanwhile the hourly earnings of wwcM (industries weighted by their share of wwcM employees) have increased by 2.8% a year. A small difference but, when compounded over 27 years, the gap in wage levels between all workers and wwcM has widened from an average of 3.7% in 1990-92 to 6.9% over the past two years.

Compiling these three indicators in an equally weighted index provides a month-to-month indicator of Mr Trump's performance in the wwcM labour market (see chart 2). The index has shown deterioration in recent years. Could Fred Trump's son make a difference?

White woe

United States, male unemployment rate, %



Black colleges

Welcome, amigos

NEW YORK

Latino students may help keep the doors open at historically black colleges

THE mascot at César E. Chávez High School in Houston, Texas, is the *lobo*, Spanish for wolf. Most of the pupils are Latino. The school is not the traditional pipeline for black colleges, yet last week Texas Southern University (TSU), a historically black university, visited the place to pitch the benefits of its institution. The university, which was founded in 1927 to educate black scholars when they had little access to higher education, has seen a steady increase in Latino enrolment. Over the past six years the share of Latinos at TSU has doubled, from 4% to 8%. Austin Lane, the university's president, expects that figure to double again inside ten years.

TSU is not alone. In 2013 the University of Pennsylvania's Centre for Minority Serving Institutions looked at the changing face of historically black colleges and universities (HBCUs). Although many are still majority-black, the report found that a quarter have at least a 20% non-black student population. Some of the growth is from white, Asian-American and international enrolment. The strongest growth is coming from Latinos, especially in places, such as Texas and Florida, where the Latino population is also surging. Some of this growth is organic. For instance, Paul Quinn College started a soccer programme, which appealed to Latino students, who now make up 20% of students. Others, like TSU, are actively recruiting in Latino communities. They visit Latino-majority high schools and Spanish-language churches, and use bilingual recruiting material. "We are in the business of teaching and learning," says Mr Lane, "but we are a business."

Non-black student enrolment in HBCUs is nothing new—St Philip's College admitted its first white students in 1955—but since the recent recession it has been economically necessary. HBCUs also face competition from colleges and universities whose doors were once closed to black students. The share of all black students who were enrolled at an HBCU fell from 18% in 1976 to 8% in 2014. Falling enrolment has left many institutions cash-strapped. Endowments tend to be small (black alumni do not always have spare money to donate), so most institutions rely on federal and state funding. Some of the 51 public colleges were also hit by state-funding cuts.

HBCUs were founded to educate former slaves and their descendants. They helped to create America's black middle class. More than a fifth of black pharma-

cists were educated at Florida A&M, an HBCU. A recent report by the Brookings Institution, a think-tank, found that HBCUs do a better job at enrolling students from low-income backgrounds than their traditional counterparts. HBCUs tend to have lower tuition fees and provide a nurturing campus. That appeals to Latinos, who are often the first in their families to attend college, says Marybeth Gasman, the author of the University of Pennsylvania report.

Even with the growing numbers of Latinos, many schools are still on shaky financial ground. During the presidential campaign Donald Trump said he would ensure HBCU funding. An executive order on HBCU funding is said to be in the works. The education secretary, Betsy DeVos, the most prestigious of the black colleges. A meeting

between Republican lawmakers and HBCU leaders is planned later this month.

Although some alumni worry that the influx of Latinos may dilute the HBCUs' primary purpose, to educate black students, administrators argue that the mission is intact. They are still educating the underserved. "We don't have the luxury of saying we only want black folks," says Jarrett Carter of *HBCU Digest*, an online publication. "We want everybody." Most institutions are walking the line of honouring the past and maintaining a haven for black culture, while also allowing Latino students to create their own fraternities and sororities. There have even been Latina homecoming queens. As one head of an HBCU puts it, "You don't have to be Catholic to go to Georgetown [a Jesuit university]. We can diverge without losing our identity." ■

Detroit's recovery

The boon of the huddled masses

DETROIT

Newcomers can ease the path to economic rebirth

"WE ARE proud of our Muslim community in Michigan," says Rick Snyder, the state's Republican governor, sitting in his office in the grandiose Cadillac Place, the former headquarters of General Motors. Ever since his first state-of-the-state address in 2011, Mr Snyder has emphasised the importance of welcoming people from across the world to this large midwestern state. Thanks to once-plentiful jobs in the car industry, greater Detroit has the largest Arab-American community in

America. Almost half the population of Dearborn, a suburb that is home to Ford Motor Company, is from the Middle East. Hamtramck, another Detroit suburb, is the first city in America with a majority-Muslim city council.

Mr Snyder and Mike Duggan, the mayor of Detroit, are making population growth a gauge of their efforts to revitalise a state that is slowly recovering from a "lost decade" and a city devastated by the largest municipal bankruptcy in American his-



A trainee entrepreneur

▶ tory. Between 2000 and 2010 Michigan lost nearly 800,000 jobs, income per head fell from America's 17th-highest to 39th, and residents fled. In the same period the population of Detroit, a city built for 2m, plunged to just over 700,000. By the start of the next decade the city's roads had fallen into disrepair; public schools were among the worst in the country; thousands of households had no running water and tens of thousands of building plots were derelict or vacant.

In his most recent state-of-the-state address last month, the governor set the goal of reaching 10m state residents again in the next three years. He proudly pointed out that, in the past six years, Michigan had gained 50,000 new people. "Immigrants account for all of that population growth," explains Steve Tobocman, head of Global Detroit, a non-profit organisation promoting immigration.

For Mayor Duggan, even a slowdown in his city's depopulation is good news; and he owes it entirely to immigrants. From 2010 to 2014, Detroit lost 36,000 residents who had been born in America. It gained 4,400 new immigrants—not enough to offset the population loss, but a significant increase in the share of immigrants in the city's population.

A drive round greater Detroit's vast web of roads and freeways shows that the growing immigrant population is making its mark. On Dearborn's Ford Road sits America's largest mosque, the Islamic Centre of America, with its golden dome and two slim minarets; it contains a school, library and conference centre. Also in Dearborn is the country's only Arab-American museum, which chronicles the experience of the new arrivals from the Middle East with displays such as the sewing machine an immigrant used to start a small sportswear factory. Decades ago other groups preceded the Arabs, congregating—and building businesses—in Mexicantown in south-western Detroit and Greektown in the city centre.

Three years ago Mr Snyder created the Michigan Office for New Americans, with the aim of attracting skilled and entrepreneurial immigrants. The statistics are encouraging. Immigrants create businesses at triple the rate of American-born residents. Between 2011 and 2015, 63% of adult immigrants to Michigan had a college degree. Immigrants still represent only 6% of the state's population, but 33% of high-tech firms created there between 1990 and 2005 have at least one immigrant founder. Many of them set up shop in newly trendy downtown Detroit.

Signs abound that Detroit has turned the corner, at least in the downtown and midtown neighbourhoods. Opposite Cadillac Place are the offices and workshop of Shinola, a trendy maker of expensive watches and bikes, which Tom Kartsotis

started with ten employees five years ago and now employs more than 350 in Detroit. In January the last of the city's 65,000 new streetlights was switched on. A light-rail line is being built, and the city has put 80 new buses on the roads. Some 10,800 blighted houses have been torn down since 2014; another 2,500 will be removed soon. The rate of payment of property taxes has increased from just 68% during the city's bankruptcy to 82%, in part thanks to a fairer assessment of the tax burden.

How do Michiganders feel about President Donald Trump's effort to ban travel-

ers from seven countries with predominantly Muslim populations? Mr Snyder says, diplomatically, that it opens a debate. But in several Michigan cities, especially Detroit, protests erupted. After hesitating, the chairman and chief executive of Ford released a statement saying they did not support it. But the ban, combined with newly stringent raids by Immigration and Customs Enforcement, the agency charged with deporting undocumented workers, is sowing fear among immigrants, says Mr Tobocman. Such fear is the last thing Detroit needs, as it tries to lure them in. ■

Legal immigration

Minding the door

LOS ANGELES

A new effort to narrow the route to permanent residency

DURING his presidential campaign, Donald Trump vowed to construct a wall along America's southern border with Mexico to curtail illegal immigration. He often gave one caveat: this "big, beautiful wall" would have a "big, beautiful door" for those entering the country lawfully. Now, though, fellow Republicans have begun arguing that the door for legal immigrants should be made smaller.

There are two main paths for immigrants to become legal permanent residents in America: work and family. A new bill called the Reforming American Immigration for Strong Employment (RAISE)

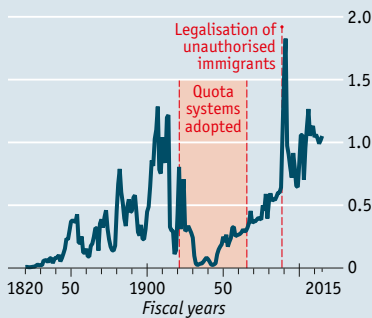
Act, proposed by two Republican senators, Tom Cotton of Arkansas and David Perdue of Georgia, would restrict the family route, which is sometimes referred to as "chain" migration. Unveiled on February 7th, the bill would allow legal permanent residents to sponsor their spouses or children under 18 for residency, but not more distant or adult relatives, as green-card holders can now. It would also cap the number of refugees offered residency at 50,000 a year and stamp out the diversity lottery, which distributes 50,000 visas a year to people from countries that have low rates of immigration to America. ▶



Proud to become an American

Remainers

United States, new legal permanent residents, m



Source: Migration Policy Institute

From 1990 to 2015 an average of 1m people became legal residents each year in America—up from an average of 532,000 between 1965 and 1990 (see chart). According to the Migration Policy Institute, during the past decade between 60% and 70% of lawful permanent immigration has been family-based. Messrs Cotton and Perdue estimate that the RAISE Act would reduce the number of legal immigrants by nearly 40% in its first year and 50% by its tenth year. Doing so, according to Mr Cotton, would promote higher wages for “all working Americans—whether your family came over here on the *Mayflower* or you just took the oath of citizenship.”

Roy Beck, the founder of NumbersUSA, a group that advocates reduced immigration, applauds the bill, which he says will allow the labour market to tighten. He says dry-wallers, roofers and other low-skilled workers frequently write to him complaining that they were edged out of work by immigrants willing to accept lower wages. Critics say there is no evidence that immigration harms native-born workers on the whole, and studies show that immigration has a positive effect on labour-market outcomes in the long term. To that Mr Cotton responds: “Only an intellectual could believe something so stupid. The laws of supply and demand have not been magically suspended.”

The notion of curtailing legal immigration has lurched in and out of mainstream political debate in America for the past century. It was popular in the 1920s, in the wake of an earlier surge in immigrant flows, and inspired the enactment of two restrictive laws: the Emergency Quota Act of 1921 and the Immigration Act of 1924, which together established a quota system based on national origins. Another effort to reduce legal immigration came in the 1990s, after three decades of elevated immigration. In 1995 Bill Clinton initially endorsed a bipartisan congressional commission’s suggestion to slash legal immigration by a third, but the push for a law that would have cut family-chain migration failed after Mr Clinton withdrew

Howard Johnson’s

How HoJo lost its mojo

LAKE GEORGE, NEW YORK

The last outpost of a once-great restaurant chain is for sale

“DOES HoJo still serve fried clams?” asked a Howard Johnson’s patron, using the nickname for the restaurant chain. He recently ate there for the first time in nearly 40 years. Back then, “HoJo” could be found on almost every highway and byway and felt as ubiquitous as McDonald’s or Starbucks are today. At its height in the 1970s, Howard Johnson’s had more than 1,000 restaurants and was the biggest food chain in America. Only the army fed more people. Now, only one is left. The last one standing is in Lake George, a summer tourist spot in New York’s Adirondacks.

Howard Deering Johnson, the chain’s founder, started his food empire in 1925 with an ice-cream shop outside Boston. He was an early pioneer of franchising. At one point in the 1960s, a new restaurant opened every nine days. Growth coincided with the rise of the car, the highway system, the middle class and family holidays. Each franchise had to adhere to the “Howard Johnson’s Bible”, which dictated everything from decor to the amount of tartare sauce; and each had to use food prepared by central commissar-

ies, which was delivered to the restaurants for final cooking. The large menu included 28 ice-cream flavours, tender sweet Ipswich fried clams and butter-grilled “frankforts”.

Mr Johnson took food quality seriously, spending 48% of his gross revenue on food (Chipotle, a present-day food chain, which prides itself on using fresh products, spends only 35%). In 1960 he hired chefs from Le Pavillon, then the finest restaurant in New York City. One, Jacques Pépin, turned down an offer to be President Kennedy’s White House chef. Food quality was part of the chain’s appeal, as were affordability and reliability. Before Howard Johnson’s, travellers found only greasy spoons and truck stops which were not family-friendly. A Howard Johnson’s meal was affordable glamour for the growing middle-class. The waitresses wore uniforms designed by Dior.

But its reputation slipped in the 1970s. Food quality diminished. The brand became synonymous with bland, says Paul Freedman, author of “Ten Restaurants that Changed America”. People began to joke that Howard Johnson’s ice-cream came in 28 flavours and its food in one. It had difficulty competing with fast-food chains, which imitated its business model while stripping it down (no real kitchens or wait staff).

In 1979 the Johnsons sold the company. It changed hands several times. The motel-lodge arm of the company still exists, now owned by Wyndham Hotels. The restaurant franchises formed their own network for a spell, but one by one they closed.

John LaRock leases and runs the last Howard Johnson’s restaurant. It still has its orange-tiled roof, and the weather vane with the old Simple Simon and pieman logo. Mr LaRock worked in the same kitchen in the 1970s and, though the property is for sale, he has no intention of closing. He hopes to buy it, and add a gift shop to sell HoJo paraphernalia: “People love that stuff.”



Last but not least

his support.

The RAISE Act is also unlikely to prevail; two prominent Republican senators, Lindsey Graham and John McCain, have expressed opposition to it, along with their Democratic colleagues. But even if the legislation flops, the ideas it promotes will have powerful advocates in Washington. Jeff Sessions, Mr Trump’s attorney-general, has long championed reduced immigra-

tion. Stephen Miller, who was once Mr Sessions’s communications director and now advises Mr Trump, seems to share his old boss’s attitudes. Mr Trump’s own rhetoric on legal immigration is ambivalent. He has both called for the “big, beautiful door” and, in a policy speech before the election, said he wants “to keep immigration levels measured by population share within historical norms.” ■

Lexington | NAFTA on notice

The view from a midwestern county that relies on free trade, but loves Donald Trump



FOR too long American workers have been ignored, President Donald Trump declared on February 13th, as he promised to “tweak” trade relations with Canada and to transform an “extremely unfair” relationship with Mexico. Flanked by the Canadian prime minister, Justin Trudeau, Mr Trump made plain that he stands by a campaign pledge to rewrite the North American Free Trade Agreement (NAFTA), a 23-year-old pact underpinning trade between Canada, Mexico and the United States.

Demonising NAFTA helped Mr Trump to the presidency. But in reality millions of American jobs are supported by that pact. One of them belongs to Chris Gambrel, who builds vast diesel engines in Seymour, Indiana. It would be odd to think of Mr Gambrel, a skilled and brawny employee of Cummins, an engine-maker, as ignored or “forgotten”. He is proud of the “world-class” engines that he produces: 95-litre behemoths powerful enough to pull a cargo train. Three-quarters of them are exported to foreign customers for up to \$1m apiece.

Free-trade rules, notably those provided by NAFTA, helped persuade Mr Gambrel’s bosses to build the giant engines in Seymour, rather than at a Cummins plant in India which almost won the work. America offered lower shipping costs and less red tape when exporting the engines, and—vital—lower and fewer customs duties when components are imported from cost-effective suppliers around the world. Add on quick access to American engineers, and the Midwest was the most competitive site. Mr Gambrel’s job involves installing cylinder-heads made in Mexico, a task he carries out with a surgeon’s care.

Elsewhere at the Seymour plant, which employs 1,300 workers, whole assembly lines are kept profitable by supply chains that run to and from Mexico, a manager says; one of the lines “re-manufactures” 16-litre engines from parts stripped, cleaned and repaired at a Cummins plant in Ciudad Juárez. Experienced workers in Seymour can earn \$28 an hour or more. Cummins pays up to \$7,000 a year for employees to study for college degrees. The manager proudly notes that in ten years he can count hourly workers who left of their own accord “on one hand”.

Nor is the rest of Seymour really overlooked—certainly when compared with the bleakest bits of the midwestern rustbelt. In addition to Cummins, steady jobs are provided by Valeo and Ai-

sin, car-parts companies that come from France and Japan, respectively. With a jobless rate at 3.2%, the town enjoys what economists deem full employment. Its centre, while not exactly bustling, is home to popular businesses such as Larrison’s, a diner, the Bite the Bullet gun shop, and the clubhouses of fraternal orders including the Knights of Columbus and the Elks. Seymour is about 85% white, though its Hispanic population has more than doubled in a decade, as migrants from Guatemala and other countries filled low-paid jobs in industries like egg-processing.

From the outside, Seymour is navigating a globalised age reasonably well. Nonetheless it swooned before Mr Trump, and his dystopian talk of trade bringing “carnage” to America. In 2012 Jackson County, of which Seymour is part, gave the Republican presidential candidate, the stiffly patrician Mitt Romney, 62% of its votes. In 2016 the county swung hard to Mr Trump, giving the NAFTA-bashing populist 73%.

Mr Gambrel suggests that Seymour was ready to take a gamble: “People were tired, they wanted change.” Asked if he fears that Trumpian brinkmanship may imperil his job, the engine-maker shrugs. “Trade deals come and go. There probably is a price to pay,” he says. “But I’m far enough away that I’m insulated. And the press blows everything out of proportion.” As for the Mexican components that Mr Gambrel installs, he would like to see them made in America. At root he trusts Mr Trump: “The man’s a billionaire, he’s made some shrewd moves.”

Another Cummins worker, Lew Findley, concedes that cheaper Mexican components may save some American jobs. But still his hunch is that workers like him are safer under President Trump, who he feels shares his values on other questions, from guns (good) to abortion (bad). Seymour’s Republican mayor, Craig Luedeman, says that issues such as gun rights and immigration explain much of Mr Trump’s support. But unlike the Cummins workers, the mayor fears what a trade war could do to his city: “We’re not in a regional economy any more, we’re global.”

America First is a hard sell outside America

Tom Linebarger, the chairman and CEO of Cummins, has a similar message for his 55,000 worldwide employees, of whom more than 25,000 are in America. “Our jobs overwhelmingly exist because of trade,” says Mr Linebarger in an interview at his new offices in Indianapolis. Sales in 190 countries make the firm less vulnerable to local downturns than it once was, he argues. But the flipside of selling to so many countries is that a global company cannot simply manufacture in one place and export products from that hub, as some mercantilists would like America to do. In part, that is because local market conditions must be understood on the ground. But Mr Linebarger makes a subtler point: other countries worry about their own workers, too. “If your deal is, I am good with exports but not with imports, generally speaking most people won’t strike that deal with you.”

As a multinational CEO, Mr Linebarger knows both great power and the anxiety such power provokes. Every time he visits a Cummins facility somewhere in the world, whether in a developing or mature economy, employees “are all worried I am going to close their plant,” he relates. Defenders of an open global order are learning that two hard tasks must be tackled together: trade must be made to work, and workers must be convinced that they have a place in today’s economy. Towns like Seymour—luckier than many, yet still willing to risk everything on a trade-bashing president—are a living reminder of how much is at stake. ■



Also in this section

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Ecuador’s elections

After the whipping

QUITO **Under Rafael Correa living standards rose. But he governed with a heavy hand and leaves a lot of problems for his successor**

WHEN Rafael Correa first ran for Ecuador’s presidency in 2006, supporters at his rallies brandished belts in homage to their candidate, whose surname means “belt” or “strap”. “Dale correa,” or “give them a whipping,” the crowds roared. It was a demand to punish what they regarded as the corrupt elites who had governed Ecuador since the return of democracy in 1979. Mr Correa promised he would. He won that election and then two more. His presidency brought a rare spell of political stability. Living standards rose and public services improved. But few would say that he kept his promise to clean up government. This year’s national elections, which begin on February 19th, are shrill with accusations of corruption.

Mr Correa, who has a respectable approval rating of 42%, is not a candidate. He is counting on Lenin Moreno, a former vice-president, and his running mate, Jorge Glas, the current vice-president, to carry on his “citizens’ revolution”. Mr Moreno, who shares his alarming first name with 18,000 other Ecuadoreans, hopes to win in the first round by capturing the bulk of Mr Correa’s support and adding to it. To do that he must get more than half the votes or, failing that, at least 40% with a gap of ten percentage points over his nearest rival.

That may not happen. Although Mr Moreno is ahead in the polls, he has been hurt by revelations that he sought from Ecuador’s government a budget of \$1.6m a

year during his three-year stint as the UN’s special envoy for disability (he has used a wheelchair since he was mugged in 1998) plus \$3.9m in travel expenses while he was vice-president. If Mr Moreno falls short, a president from right of centre could bring a decade of *correísmo* to an end.

Whatever the outcome, Ecuador’s 16m people face greater uncertainty. The halving since 2014 of the price of oil, the country’s biggest export, has pushed the economy into recession and widened a hole in the budget (see chart). Alianza PAIS, the “movement” Mr Correa created, may retain its legislative majority in the elections, but probably as a weakened force. Ecuador’s next president will not be able to afford Mr Correa’s largesse and may not exer-

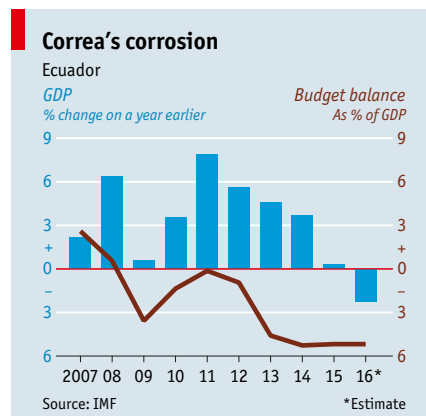
cise his unchecked power. Ecuadoreans will find themselves tightening belts rather than waving them.

By the standards of left-wing Latin American leaders, Mr Correa has not fared badly. Some \$300bn flowed into government accounts during his presidency from oil revenues, higher taxes and fresh borrowing. He used some of that to build “21st-century socialism”, which in practice meant splashing out on roads, schools, clinics and social housing. Social spending doubled as a share of GDP between 2006 and 2012; the minimum wage went up sharply. Mr Correa did not strangle growth and spur inflation with price controls, as Hugo Chávez and Nicolás Maduro did in Venezuela. Ecuador’s adoption of the dollar in 2000, after its currency collapsed, contained Mr Correa’s radicalism.

Between 2006 and 2011 Ecuador had the world’s most “inclusive” economic growth, according to ODI, a British think-tank; incomes of the poorest 40% of Ecuadoreans grew by eight times the national average. The poverty rate, which started falling in the early 2000s, came down further, from nearly 40% in 2006 to less than 23% in 2016.

But Mr Correa’s spree left the economy vulnerable. Government spending doubled to a peak of 44% of GDP in 2014. Public debt has trebled to more than 50% of GDP since the global financial crisis. Having defaulted on its debt, Ecuador pays close to double-digit rates to borrow, largely from Chinese lenders. Mr Correa is trying to replace lost oil revenue with foreign investment but the climate is forbidding. In the World Bank’s ranking of 190 countries by ease of doing business, Ecuador ranks 114th. The recession is beginning to hurt ordinary folk. Employment fell by 244,000 in 2016 and the poverty rate is edging higher.

Ecuadoreans paid a high price for mate- ▶▶



rial progress in the form of creeping authoritarianism and continued corruption. Campaigning in 2006 Mr Correa vowed to “depoliticise the courts”. In effect he seized control of them. A commission led by a former interior minister disciplines and often removes judges. Mr Correa made war on a critical press. He set up a regulator that harasses newspapers and radio stations by levying fines, often for such lapses as failing to cover a mayor’s speech.

His building programme produced backhanders and white elephants as well as useful infrastructure. New and rebuilt airports which failed to attract commercial

traffic have closed. Odebrecht, a Brazilian construction firm that bribed officials across Latin America, paid \$33.5m to Ecuadorean officials between 2007 and 2016, according to the United States Department of Justice. Mr Correa has said that his name, and that of Mr Glas, are likely to appear on the Justice Department’s list of officials bribed by Odebrecht, but insists that is part of an American plot to undermine him.

It is Mr Correa’s failures, not his successes, that are setting the tone for the elections. Voters are most worried about the recession and the rise in unemployment. Much of the heat in the campaign comes

from anger at Mr Moreno’s lavish spending and accusations of corruption levelled at Mr Glas. One alleges that he took kickbacks in connection with a hydroelectric-dam project. He denies wrongdoing.

Mr Moreno is promising voters a softer-edged *correísmo*. He entices them with budget-busting promises to treble a cash benefit for the poor to \$150 a month, raise pensions and build “housing for all”. If he fails to win in the first round, the anti-Correa vote, now split among seven candidates, may coalesce around the other survivor of that ballot. The leading contenders have promised to undo much of Mr Cor- ▶▶

Bello | A Peronist on the Potomac

Donald Trump through Latin American eyes

A PRESIDENT is swept into office after whipping up a wave of grievance and resentment. He claims to represent “the people” against internal exploiters and external threats. He purports to “refund” the nation, and damns those who preceded him. He governs through confrontation and polarisation. His language is aggressive—opponents are branded as enemies or traitors. He uses the media to cement his connection with the masses, while bridleing at critical journalism and at rebuffs to executive power. His policies focus on bringing short-term benefits to his political base—hang the long-term cost to the country’s economic stability.

Donald Trump? Yes, but these traits come straight from the manual of Latin American populist nationalism, a tradition that stretches from Argentina’s Juan Perón to Venezuela’s Hugo Chávez and beyond. Yes, Mr Trump is a billionaire capitalist whereas Chávez was an anti-capitalist army officer. But populism is not synonymous with the left: conservatives such as Peru’s Alberto Fujimori used its techniques, too. “Post-truth” politics and “alternative facts” have long been deployed in Latin America, from Mr Fujimori’s use of tabloid newspapers to smear opponents, to Chávez’s imaginary coups and Cristina Fernández de Kirchner’s fake inflation statistics in Argentina.

So when they contemplate Mr Trump’s first few weeks in the White House, many Latin American liberal democrats think they’ve seen this movie before. And they know it usually ends badly. Some of the continent’s own populists, by contrast, recognise Mr Trump as a kindred spirit. Nicolás Maduro, Chávez’s dictatorial successor, criticised a “hate campaign” against Mr Trump—though that was before the United States this week blacklisted Venezuela’s vice-presi-



dent as a drug kingpin (an allegation Mr Maduro called “baseless”). Guillermo Moreno, the former official entrusted by Ms Fernández with producing Argentina’s statistics, has identified “a Peronist” in Mr Trump, “who is trying to do what we did”.

It is not just Mr Trump’s assault on Mexico’s economy and national dignity, with his threats to tear up the North American Free Trade Agreement and to build a border wall, that Latin Americans have to deal with. The bigger question for the region is what Mr Trump represents in the battle of political ideas. The risk is that he may legitimise populist nationalism just when it was waning south of the border. That is especially so in Mexico, where Andrés Manuel López Obrador, who heads opinion polls for the 2018 presidential election, now talks of “the fatherland first”. Even Chile may not be immune: Alejandro Guillier, a former television presenter who boasts of a special bond with “the people”, has a chance in an election in November.

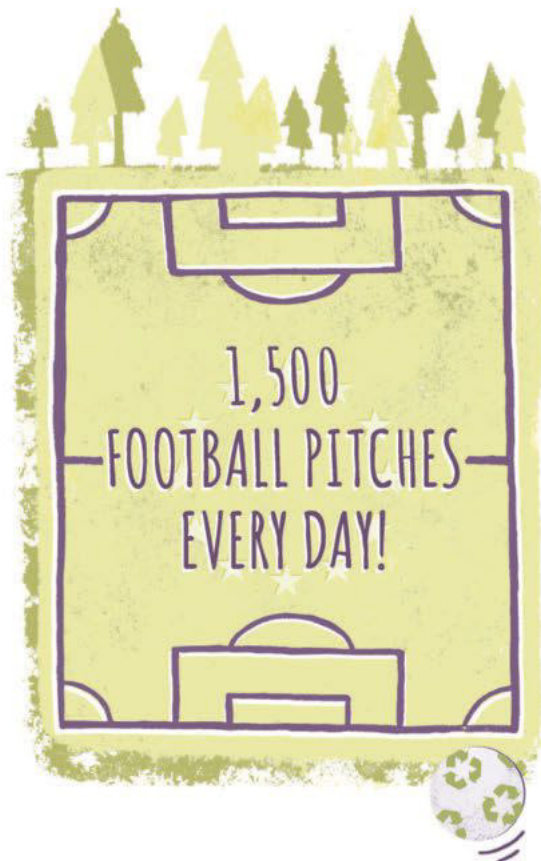
Mr Trump is helping to make life more difficult for those in Latin America who have argued, in the face of the region’s instinctive nationalism and anti-American-

ism, that its best interests are served by cooperation with the United States and a liberal world order. “We could all hang our hats on free trade, free markets and macroeconomic stability in part because the United States believed in it, both the Democrats and Republicans,” says Luis Alberto Moreno, the president of the Inter-American Development Bank. “Now there are protectionist forces in the world, and that resonates in the region.”

One response is for Latin America to seek other partners. Though interest in deeper ties with Europe (both the European Union and Brexit Britain) is reviving, China is the main hope. It is already a big trade partner and is investing in infrastructure in the region. But Latin America exports raw materials to China and imports its cheap manufactures. That does less for its economic development than does its more diversified trade with the United States, according to research by the World Bank.

The best response to Mr Trump would be for Latin American liberals to have the courage of their convictions. They should keep their economies open and carry out several tasks they have neglected. These include building more infrastructure and fostering more regional integration, which the populists undermined by turning it into a political slogan rather than a business reality.

Latin American experience teaches that populists are easily underestimated and can stay in power for a long time. But not forever. Populist regimes are often corrupt and spendthrift, and usually fail to make people better off. Whatever the example from the White House, Latin American history shows that populist nationalism is a recipe for national decline. That is the message liberals need to hammer home.



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rea's legacy. They agree on the need to restore judicial independence, strengthen human rights and curb the budget deficit.

The likeliest candidate to join Mr Moreno in the second round is Guillermo Lasso, a conservative banker from the coastal city of Guayaquil who was runner-up in the 2013 presidential election. Though his foes brand him an out-of-touch plutocrat, he sees himself as a challenger to old-style business oligarchs from his home town. He has promised to eliminate red tape and to cut taxes by \$3bn, which may clash with his plans to shrink the deficit.

His rivals for a second-round spot include Cynthia Viteri, the nominee of the centre-right Social Christian Party, which represents Guayaquil's elite. The anti-Correa left has united around Paco Moncayo, a former mayor of Quito.

Opposition parties failed to present a unified list in elections to the national assembly, increasing the chances that Alianza PAIS will retain control. That could make it harder for the next president to enact reforms, especially if it is not Mr Moreno. Mr Correa is leaving the scene, at least for now. His belt-brandishing style of politics may not. ■

NAFTA

Canada calls

OTTAWA

Justin Trudeau charms Donald Trump

GIVE Justin Trudeau credit for emotional intelligence. Paying his first visit to Washington after Donald Trump took office, on February 13th, the Canadian prime minister brought his host the perfect gift: a photograph of the president in his youth with Mr Trudeau's father, Pierre, a glamorous prime minister of the 1970s. The subtle caress of Mr Trump's vanity seemed to go down well. Mr Trudeau went home with Mr Trump's promise that Canada has little to fear from his plan to renegotiate the North American Free Trade Agreement (NAFTA), which gives Canada, Mexico and the United States preferential access to each other's markets.

Before the meeting, the Canadians were nervous. Mr Trump's repeated threats either to renegotiate NAFTA or to rip it up were aimed almost entirely at Mexico (which, unlike Canada, has a big trade surplus with the United States). Yet Canada has almost as much to lose if the United States rescinds the 23-year-old agreement or demands one-sided revisions. The value of Canada's trade worldwide is equivalent to 65% of its GDP; the United States buys three-quarters of Cana-



A good hombre, apparently

da's exports. American protectionism could trigger an economic crisis and political turmoil north of the border.

Canadian planning for the meeting went beyond combing the archives for a flattering photo. Mr Trudeau revamped his cabinet last month to take account of the new reality in Washington. Chrystia Freeland, a former journalist who has worked in the United States and knows many of the decision-makers, replaced the cerebral but brusque Stéphane Dion as foreign minister. Before the summit Mr Trudeau dispatched his foreign, finance and defence ministers to Washington.

Canadians do not enjoy watching their prime minister pay court to Mr Trump. Nearly 75% think he will be a bad president, according to a poll published last month. The New Democrats, an opposition party, urged the prime minister to castigate Mr Trump for his ban on refugees (some of whom have crossed into Canada to claim asylum). Mr Trudeau held his tongue, but preserved Canadian dignity by hinting at his disagreement with Mr Trump's policies.

This artfulness seems to be working. Mr Trump declared America's trading relations with Canada to be "outstanding" (while those with Mexico remain "extremely unfair"). Tweaks to NAFTA, he said, "will benefit both our countries". Knowing he prefers bilateral deals, some analysts think he may replace NAFTA with separate accords with Canada and Mexico.

The bonhomie could disappear when Mr Trump defines his policies more clearly. He wants a "buy American" programme, which could discriminate against Canadian exporters. A "border-adjustment tax" on imports, part of a proposed corporate-tax reform, could reduce Canada's GDP by 1%, reckons the C.D. Howe Institute, a think-tank. That would be poor thanks for Mr Trudeau's gift. ■

Venezuela

Miami vice

CARACAS

The blacklisting of a vice-president

THE statement by the United States Treasury Department was blunt. It alleges that Tarek El Aissami, Venezuela's vice-president, is a "prominent" drug trafficker, who amassed great wealth through his connections to gangs across Latin America, including Mexico's vicious Zetas. Among the now-frozen American assets linked to him are three lavish apartments in the Four Seasons complex in Miami and a Gulfstream jet. If the allegations are true, Mr El Aissami's carefully cultivated image as a true believer in the socialist ideology of Venezuela's government is just a cover.

As normally happens when any outsider accuses anyone in the Venezuelan regime of wrongdoing, the country's leaders have closed ranks. The foreign ministry accused the United States government of committing "an international crime". Mr El Aissami himself denounces the allegations as untrue, "miserable and vile".

But rumours of malfeasance have swirled around the dapper politician since he came to prominence under President Hugo Chávez in the early 2000s. He was interior minister, and then governor of the coastal Aragua state. Defectors accuse him of running his own intelligence agency to intimidate his enemies. They say proceeds from drug trafficking have smoothed his advance, which culminated in his appointment, at the age of 42, to the vice-presidency in January. Venezuela's current president, Nicolás Maduro, gave him sweeping decree powers to oversee ministries' spending and expropriate private firms.

Mr El Aissami is not the first Venezuelan official to be branded a drug trafficker. In August 2016 an American court indicted Néstor Reverol, a former head of the anti-narcotics agency, for taking money from drug gangs. The day after the indictment was made public, Mr Maduro made him interior minister. The army, which pledges support to Mr El Aissami, has been accused by human-rights groups of large-scale corruption.

American officials say that the sanctions against Mr El Aissami are the result of a "years-long investigation" and do not necessarily indicate a change of policy towards Venezuela under the new administration. Donald Trump called for the release of a prominent political prisoner on February 15th. The blacklisting of Mr El Aissami is unlikely to moderate the regime's ferocious crackdown on the opposition. But it hardly reflects well on the regime. ■



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Kenya (1): a dirty war

Food for the hyenas

MOMBASA

Suspected terrorists are disappearing and dying

BALBINA, a woman from Mombasa, Kenya's main coastal city, remembers fetching her neighbour Abdullah's body from a police station. "It wasn't so terrible," says Balbina (not her real name). Surprisingly, "there was not even any blood." The wound was hidden at the back of his head; his face was serene. He was killed by police, in what they claimed (but she does not believe) was a shoot-out. "Abdullah did wrong. He went to Somalia, maybe he killed innocent people." But he deserved justice, she says, not to be shot in the back of the head without a trial.

Such stories are easy to find on the Kenyan coast, where young men are often recruited to fight for al-Shabab ("the Youth"), a Somali jihadist group. Some go to fight in Somalia; some carry out terrorist attacks at home. In recent years the government has cracked down on anyone it suspects might have joined al-Shabab. In December Haki Africa, a human-rights group, published the names of 81 people, almost all young Muslim men, who it says were killed or "disappeared" by police since 2012. The real number is probably much higher, says Francis Auma, the group's co-ordinator, since many cases go unreported or leave few clues implicating the state.

The coast of Kenya has long felt different from the rest of the country. Under British rule a ten-mile littoral strip was nominally part of a protectorate administered

by the Sultan of Zanzibar, rather than part of the colony of Kenya. Unlike the rest of the mostly Christian country, the coast is largely Muslim, with a large ethnic Somali population to the north. And since independence from Britain in 1963, it has had a rebellious streak, built on anger about the unequal distribution of land and jobs, perceived persecution of Muslims, and dislike of rule by elites from Nairobi, the capital.

It is these resentments that help al-Shabab to recruit. Abdullah, says Balbina, "had no parents; he was lonely and jobless." That made him easy prey for recruiters, who stoked his anger while also flashing cash and promising him a better life in Somalia. Money is a big lure, says a local official. Some jihadists even pose as recruitment agents for jobs in the Gulf, she says. "You see a man in a good car, he takes three or four guys, promising jobs."

The joy of jihad

Many recruits are disappointed—Somalia is not the Islamic paradise they were told it was, and foreigners are used as cannon fodder. So they come back to Kenya, where they face an awful choice. They can join an amnesty programme and turn informer—thereby risking being killed by their erstwhile chums. Or they can refuse, and risk being "disappeared" by the police. Any young man who has been away from his village for a while, or who has been seen

with suspected al-Shabab sympathisers, is in danger. Some bodies have been found dumped in a game park; others were presumably eaten by hyenas before they could be found.

Some of the disappeared were doubtless guilty, but none had a chance to defend himself in court. And in some cases the police apparently grabbed the wrong man. Idris Mohamed, 26, was shot in Mombasa. The family told reporters that police officers had stripped him naked, handcuffed him and forced him to lie face down before shooting him. (The police deny this, saying he was killed by an unknown assailant.) Officers who brought his body to the mortuary filed paperwork saying he was Ismael Mohamed, a terrorism suspect and the victim's brother, who had not been seen for some months. "The facts strongly suggest a case of mistaken identity," concludes Haki Africa.

Such criticism irks the government. Mr Auma says that Haki Africa has been harassed by the authorities since it began publishing reports of extrajudicial killings; at one point, the group's bank accounts were frozen. Hassan Abdille of Muslims for Human Rights, another lobby group, says his staff have been spied on.

Apologists for the police note that the wave of jihadist attacks that hit the coast between 2011 and 2014 appears to have ebbed. But even if brutal tactics have curbed terrorism in the short term, they risk infuriating a generation of young Muslim men and storing up trouble for the future. "It's counterproductive, as it is pushing some people towards radicalism when they see their kin killed and no justice done," says Mr Auma.

Moreover, by killing those who return the police may be silencing an effective form of anti-jihadist propaganda. Left to ►►

▶ their own devices, those returning would surely tell other youngsters how awful it was going to Somalia to fight. Many of those who come back are said to have complained that they were never paid as promised. Others suffered abuse: “They went there having been promised four wives each,” says a community worker. “Instead they became wives.”

Police hit squads are operating in an already febrile political atmosphere. In August Kenya will hold local and national elections, and Mombasa will be among the most fiercely contested cities. A system of devolution introduced in 2013 means that its governor controls a bigger budget. The incumbent, Ali Hassan Joho, is popular among local Muslims, whom he promises to defend from grasping ruling-party politicians in Nairobi. He is close to Raila Odinga, Kenya’s main opposition leader, and is said to be financing Mr Odinga’s Orange Democratic Movement party.

Locals say that some six months before the vote, all the main parties are already recruiting youngsters into political gangs, known as “pressure groups” to intimidate opponents and their voters. They are paying voters to register and there could be widespread vote-buying on the day. Many say that Mr Joho’s supporters could turn violent if he looks likely to lose.



It would not be the first time that a Kenyan election turns bloody. After a flawed ballot in 2007 politicians stoked fighting that claimed some 1,300 lives. The whiff of that conflict hung heavily over the next vote in 2013, which nonetheless proceeded peacefully. But many in Kenya now fret that there may be a return to mayhem, particularly in Mombasa, where politicians are fighting for control of Kenya’s lucrative main port. With well-practised hit-squads already on the prowl, the risks of conflagration are escalating. ■

Kenya (2): cows, guns and politicians

I burned a farm in Africa

KIFUKU

Land invasions in Laikipia portend electoral strife

AT KIFUKU, a cattle ranch in Kenya, the dry-stone walls are reminiscent of England; by the farmhouse, a pair of boats sit on an artificial lake. The farm has, however, been anything but calm of late. Since September dozens of cattle-ranchers, some with assault rifles, have driven their cattle onto the farm’s 8,000 acres (3,238 hectares) of grass. Buildings have been wrecked, staff beaten up and a police officer shot and injured. “We’re all extremely tired and frustrated and short-fused [and] scared,” says Maria Dodds, the owner. By February 12th relief had arrived, in the form of an armoured car filled with policemen.

The invasion of Kifuku farm is one of a series that have taken place since 2013 across Laikipia County, a fertile plateau between Kenya’s central highlands and arid north (see map). Much of it is covered by private ranches and nature conservancies owned by white Kenyans such as Mrs Dodds and international investors. The attacks appear to have escalated in recent weeks. A tourist lodge was burned down

on the Suyian Ranch on January 29th; visitors had to be evacuated from the Mugie Conservancy earlier in the month after a staff member was shot dead. In all 11 people may have been killed in such clashes, according to Reuters, a news agency.

The armed incursions have drawn comparisons to the expulsion of white farmers in Zimbabwe. But the conflict in Laikipia, which has the second-highest density of wildlife in Kenya, is not black against white. John Wachira Mwai, a nephew of Mwai Kibaki, Kenya’s president until 2013, had to abandon his farm in July. He was shot by trespassing cattlemen and is still in a wheelchair. More than one smallholder has been murdered and hundreds have had their livestock stolen and their crops trampled. “The situation here is worsening day by day,” says Samuel Lopet Apolosi, a community activist who works across tribal lines in northern Laikipia. “We are facing intercommunity conflicts, cattle rustling and killing.”

One reason for the increased conflict is

drought on Kenya’s overgrazed northern plains. Herdsmen have driven hundreds of thousands of cattle south, cutting fences along the way to get at grass they think is rightfully theirs. An aerial survey in April 2016 by the Laikipia Wildlife Forum found 135,000 “visiting” cattle, about the same number as “resident” ones. The number of visitors may since have doubled, reckons Peter Hetz, who heads the forum.

But tensions between landowners and herdsmen, many of them Samburu, date from well before the current drought. Efforts have been made to ease them by, for instance, reaching grazing agreements that allow cattle herders to bring their livestock onto private land during dry spells. But disputes still abound. “The ranchers and the police are colluding to intimidate us,” says one Samburu elder, who admits to illegal grazing on Segera Ranch, but is unhappy that his cows were “arrested” and that he was fined the equivalent of two cows. (Segera says its fines are equivalent to the usual daily grazing rates.)

However, it is no coincidence that incursions in Laikipia have worsened since 2013, the year that Kenya’s devolved constitution came into effect. This established county governments, with the aim of giving each of Kenya’s many tribes a fair share of government revenues. An unintended consequence is that local groups now have more incentive to fight to control county governments (and their money) ahead of elections in August. Vote-hungry politicians are inciting their kin to grab land and even to displace rival communities.

In Laikipia the young men carrying out armed invasions are mainly from the Pokot and Samburu tribes. Mathew Lempurkel, the member of parliament for Laikipia North, blames the violence on the police, and says that herdsmen are justified in shooting back. “If the government becomes a threat, the people have to protect themselves,” he says. But others accuse Mr Lempurkel, a Samburu, of inflammatory rhetoric; for example, claiming on local radio there was no such thing as private land in the county. “Politicians are exploiting the drought,” says Richard Leakey, the chairman of Kenya Wildlife Service.

National politicians, from the deputy president to the interior secretary, have said private land should be respected and the violence must stop. The president, Uhuru Kenyatta, repeated the warning on a voter-registration drive in the region in January. But many of those affected in Laikipia suspect the government of ignoring the invasions to avoid jeopardising its vote. Mrs Dodds says she appreciates the efforts of the police who protect Kifuku. The farm will recover when the herders leave for new pastures, says her husband, Anthony Dodds. But he worries about the hundreds of smallholders on Kifuku’s southern borders: “They’re really on their knees.” ■

Israel and Palestine

Bibi consults a real-estate expert

WASHINGTON, DC

Donald Trump abandons the “two-state” formula for Israel

DURING eight years in which a glacial chill fell on relations between the administration of Barack Obama and a series of right-wing Israeli governments, American officials talked of Israel’s prime minister, Binyamin Netanyahu, as a political coward unwilling to stand up to zealots on his own side.

The contrast to that scorn was rather striking as Mr Netanyahu arrived at the White House on February 15th for his first official visit to a White House run by Donald Trump. True, Mr Trump urged Israel to show some restraint, telling his guest at a press conference to “hold back” on building Jewish settlements on territories occupied by Israel in 1967 “for a little bit”, pending peace talks that the new president said

should be widened to include Arab states. But such admonishments are tiny—and could easily have been scripted by aides to Mr Netanyahu. For the prime minister likes to cite American sensitivities to the expansion of settlements—and what he calls his unrivalled ability to navigate them—as a way to face down hardliners in his coalition who would have him disavow any prospects for Palestinian statehood, or annex bits of the West Bank.

In a subtle but important shift, the Republican ditched a long-standing, bipartisan American insistence that peace can be reached only through the establishment of a sovereign Palestinian state alongside the Jewish one. Mr Trump signalled that America would defer to local opinion, say-

ing: “So I’m looking at two-state and one-state, and I like the one that both parties like...I can live with either one.” That presidential statement all but ends the diplomatic fiction that all sides are committed to a two-state process, and puts the onus on Israel to decide what should happen to the occupied territories.

Mr Netanyahu has repeatedly said he is willing to negotiate over the establishment of a Palestinian state “without preconditions”. But in a hardening of tone he insisted on two long-held “prerequisites of peace”: Palestine would have to recognise Israel as a Jewish state and Israel would have to “retain the overriding security control over the entire area”.

The visiting Israeli leader had to offer some concessions. Mr Trump had campaigned on a promise to move the American embassy to Jerusalem from Tel Aviv. But since taking office the president has been warned by foreign allies that taking such a symbolic step in a city claimed by both peoples as their capital would risk a backlash, and even violence. In his White House press conference Mr Trump said he was looking at the embassy move “very, very strongly”.

On this visit Mr Netanyahu backed away, gingerly, from his previous demand that America tear up a deal brokered by the Obama administration and other world powers to curb Iran’s nuclear ambitions. Mr Trump calls the nuclear pact “one of the worst deals” he has seen. But foreign allies and members of Team Trump, such as the defence secretary, James Mattis, have told the president that the deal is the least bad option for slowing Iran’s nuclear programme, as long as America enforces its terms more strictly and is willing to sanction Iran for other infractions in such areas as ballistic missile technology. The Israeli leader contented himself with praising Mr Trump for taking a tougher line on Iranian ►►



Trump has Bibi’s back

Zimbabwe’s “bond notes”

The king of funny money

HARARE

Robert Mugabe hoped he could print his very own American dollars. He can’t

HOW much is an American dollar worth? The glib answer is exactly one buck. But that is far from the case if the dollar in question is one of Zimbabwe’s “bond notes”, the world’s newest currency that is not officially a currency.

Zimbabwe adopted the US dollar as its official currency after the spendthrift regime of President Robert Mugabe printed so many of its own notes that it caused hyperinflation in 2008. The economy briefly stabilised; but old habits die hard. Last year the government again spent far more money than it raised, much of it on imports, causing scarce greenbacks to flow out of the country.

By the end of the year there were so few dollars still circulating that banks were limiting withdrawals to \$50 a day, crippling the economy. The central bank decided to issue a new currency, called “bond notes”, pegged to the American dollar. Two months on, the new notes, nicknamed “bollars”, are rapidly losing their value. People have discovered that they are not, in fact, convertible into real dollars. So they cannot be used to pay for imports—a real problem in a country that does not make much. Shops accepting bond notes can use them to pay local wages and suppliers or deposit them in their local bank accounts (denominated

in US dollars). But if they want to pay for imports to restock their shelves, they still have to queue for real dollars.

So desperate are shops for hard currency that they are offering discounts of as much as 50% to customers who hand over greenbacks. Some petrol stations now have separate pumps where the price of fuel is lower for customers who pay with hard-currency cash instead of using a debit card. A number of shops in Harare have resorted to indicating two or three different prices for the same item—a US dollar cash price, a bond-note price and a third price if one pays by card.

Black marketeers have been quick to help out. Some are offering to convert bank balances into real dollars at premiums ranging from 5% to 30%.

The big supermarket chains are not allowed to offer cash discounts or discriminate against customers who use bond notes or electronic cards. Instead they have simply put up their prices. With inflation surging, the bond notes are proving to be exactly what many Zimbabweans feared they might be: the horribly resurrected zombie of their dead cousin, the Zimbabwe dollar, which burned itself out almost a decade ago. Unless the country changes tack, more economic misery looms.

▶ “aggression”.

Mr Netanyahu also faces the fact that Mr Trump’s priority in foreign policy is destroying the Sunni Muslim fanatics of Islamic State (IS)—a goal that matters less urgently to Israel than containing Iran, the largest power in the Shia Muslim world. Given that Iran is itself fighting IS in Syria and Iraq, the two goals could even be in conflict, notes Robert Satloff, the executive

director of the Washington Institute for Near East Policy, an American think-tank. He asks: “How do you destroy IS without empowering Iran?”

The Israeli prime minister fudged the distinction, denouncing both IS and Iran in the same attack on “militant Islam” and hailing Mr Trump’s “great courage” in tackling “radical Islamic terror”. Quite a change since his last White House visit. ■

Mr Tayeb insists that al-Azhar is “the pulpit of moderate, centrist and tolerant Islam”, but it is not monolithic. “People within al-Azhar are just as divided as the Egyptian society,” says Amr Ezzat of the Egyptian Initiative for Personal Rights, a pressure group. Some of its students and preachers are Salafists (purists); many are sympathetic to the Brotherhood. The government has little control over its personnel and Mr Tayeb tolerates the different factions. “He is not strict against religious extremism,” says Mr Ezzat.

Despite the differences within its own walls, al-Azhar has tried to shut down debate outside. It has filed lawsuits against several authors and artists under Egypt’s blasphemy laws. A recent victim is Islam Behery, who parsed sayings of the Prophet Muhammad and criticised al-Azhar on his television show, “With Islam”. The institution brought several suits against him, resulting in a one-year prison sentence (he was later pardoned by Mr Sisi). “The blasphemy law is used by al-Azhar as a sword,” says Ahmed al-Habib, who has reported on corruption at the institution—and who is also being sued by the clerics.

Were al-Azhar to embrace reform, some still doubt it would win over the Muslim masses. Its communication skills cannot match IS or the Brotherhood, which beam their message out on satellite television and social media. Al-Azhar has been trying to set up a TV station for years, to no avail.

Religious reform is anyway only a partial solution. Many analysts blame authoritarian rulers like Mr Sisi for causing the resentment, alienation and frustration that seem to fuel violent extremists. “You are asking al-Azhar to renew religious discourse while the state is not renewing its own discourse,” says Kamal Habib, a political analyst and former jihadist himself. “There is no mechanical relationship whereby you change religious discourse and therefore things will be better.” ■

Reforming Islam in Egypt

Sisi versus the sheikhs

CAIRO

Egypt’s clerics are resisting the president’s call to renew Islam

FEW Egyptians dare challenge Abdel-Fattah al-Sisi, their authoritarian president. But one institution has stood up to him. “You wear me out,” Mr Sisi reportedly told Ahmed al-Tayeb, the grand imam of Cairo’s al-Azhar University, last month.

It has been over two years since Mr Sisi, an observant Muslim, lamented that some of his co-religionists were becoming “a source of worry, fear, danger, murder and destruction to all the world”. He urged Egyptian clerics to push back against the jihadists of Islamic State (IS). Egypt itself was a victim, he said: angry Islamists have attacked the government and an affiliate of IS battles the army in Sinai. To combat such extremism, “a religious revolution” was needed, said Mr Sisi—and al-Azhar, the Sunni world’s oldest seat of learning, should take the lead.

But the clerics, led by Mr Tayeb, have largely resisted Mr Sisi’s appeal. Though al-Azhar bills itself as moderate, critics say that it has allowed hardliners to remain in senior positions and failed to reform its curriculums, which include centuries-old texts often cited by extremists. It has blocked efforts at social reform and tried to censor its critics. “Nothing has been done since the president called for renewing religious discourse,” said Helmi al-Namnam, the culture minister, last August.

For most of its 1,000-year history, al-Azhar has acted independently. Each year it trains thousands of preachers, while tens of thousands of students, foreign and local, study in its schools. But it has also delved into politics, often frustrating Egypt’s rulers. Gamel Abdel Nasser, Egypt’s president from 1956 to 1970, reined in the clerics by nationalising their endowments. He and his successors pushed al-Azhar to issue *fatwas* (religious edicts) justifying their policies. This hurt the institution’s credibility, but further enshrined it as the main arbiter of the faith in Egypt.

Mr Sisi has also used al-Azhar. When he

oust the Muslim Brotherhood from government in 2013, Mr Tayeb sat by his side. The new constitution, adopted in 2014, gave al-Azhar more autonomy. But since then Mr Sisi has tried to exert control over religious matters. He has closed mosques and banned preachers who are not registered. In 2015 the authorities began to standardise Friday sermons, a move designed to undercut radicalism—and to promote the president’s policies. (His expansion of the Suez Canal, for example, was called a “gift from God”.)

Al-Azhar has pushed back. It says its preachers can deliver their own sermons. Some clerics have publicly opposed his tough stance against female genital mutilation, though officially al-Azhar agrees with him on this. After the president called for an end to verbal divorce—a man must simply say “*talaq*” (divorce) three times—a council of scholars from al-Azhar deemed the practice perfectly Islamic. “Society needs to adapt to the rules of Islam, not the other way round,” said one professor.



Islam’s ivory tower



Greece's endless woes

Enter the chorus, with cabbages

ATHENS AND BRUSSELS

Greece has become a bystander to its own tragedy

IF HISTORY repeats itself first as tragedy and then as farce, it continues thereafter as endless iterations of Greek debt dramas. The script is wearily familiar. Greece's European creditors are trying to close the second review of its third bail-out, which was signed in August 2015. That would enable them to lend Greece the funds it needs to meet €6.3bn (\$6.7bn) of bond repayments due in July. But talks have run aground ahead of a meeting of euro-zone finance ministers in Brussels on February 20th. Bond yields have spiked, German ministers are issuing barbed comments, and dust is being blown off the Grexit files.

The review covers everything from health care to military wages. But thanks to pressure from the IMF—which has not yet joined the bail-out, as it did the previous two—Greece faces more pressing demands: to pass tax and pension reforms worth 2.5% of GDP, to kick in after the bail-out expires. Alexis Tsipras's hard-left Syriza government will struggle to get these measures through parliament, but the alternative is to call elections that Syriza would probably lose to New Democracy, a centre-right party. Thousands of farmers wielding their produce took to the streets in Athens in outrage at more austerity (see picture). Unions are pondering further protests.

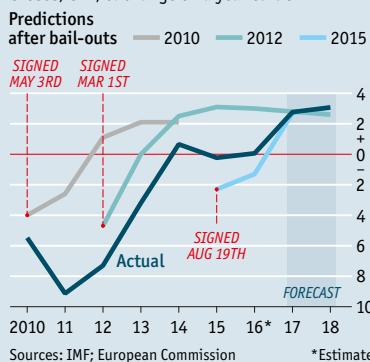
Greece has become a bystander to its own tragedy. The conditions attached to the bail-outs drastically reduce the government's control over economic policy. For many Greeks, this makes politics itself

pointless: 17% do not know a party they support (or will not say), while 15% will not vote at all. What sets today's drama apart is the dispute among Greece's creditors. These date back to the complex architecture of euro-zone bail-outs, jerry-built in haste in 2010. But today the debate is more public, and potentially more serious.

The biggest difference is between the IMF and the Europeans. Burned by experience, the fund is jealously guarding its credibility. Having seen Greece consistently fail to meet previous bail-out targets (see chart), it thinks the European Commission's forecasts are too rosy, and that, without relief, Greece's debt will balloon after 2030, as cheap euro-zone loans are replaced by private finance. It has two condi-

When the oracle goes awry

Greece, GDP, % change on a year earlier



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tions for joining the bail-out: stricter (and pre-legislated) reforms from Greece, and a credible promise from euro-zone governments to relieve Greece's debt burden when the bail-out expires, via guarantees of long-term cheap finance.

European governments do not believe that Greece needs debt relief. But they insist on IMF participation in the bail-out because they do not trust the commission to oversee the Greeks. The Germans and Dutch will not approve further disbursements without the fund. That gives the IMF an effective veto. But it has its own problems. Its board, which must approve participation, is split; shareholders from non-European countries do not see why they should stump up again. Most IMF staff are sick of Greece. "If the fund agrees to something on the basis of a hazy promise of future debt relief...then all this fancy talk about standing up to the Germans at the board would once again be an empty show," says Ashoka Mody, a former IMF official now at Princeton University.

Greece's fiscal path is a particular point of contention. The IMF believes that the country cannot sustain the primary-surplus (ie, before interest) target of 3.5% of GDP demanded in the bail-out by 2018, and that the austerity such goals imply will delay the recovery. The Europeans insist Greece is on track: last year's surplus target of 0.5% will be exceeded, and the commission forecasts growth of 2.7% this year. Relations have become poisonous; one European official says the IMF is deploying "Trump University statistics".

Some formula will probably be found to allow to Greece to avoid default, though not in time for Monday's meeting. But that will do little to alleviate Greece's misery. GDP has shrunk by over one quarter since 2008, and the recovery has been dismal by historical standards. Nearly a quarter of the workforce is jobless, and over a third of

▶ children are poor or nearly poor. Young, ambitious Greeks have been forced abroad. Banks are clogged with non-performing loans, and tax-collection rates have actually fallen. Like its predecessors, Syriza has learned the art of complying with bail-out targets without owning them. The current delays will hurt the economy and make it harder for Greece to return to the markets next summer. A fourth bail-out looms.

Locked inside the euro, unable to devalue, and confronted with German fears over a “transfer union”, Greece has been forced down the road of internal devaluation and austerity. The government has

met current expenditures (bar interest payments on debt) from revenues since 2014; today’s arguments are largely about shuffling money from one public creditor to another. Even if the July deadline is met, further cliff-edges lie ahead, meaning more summitry and more market jitters. Northern Europeans will grow more, not less, hostile to debt forgiveness, even if it comes in disguise. The deadlock this time may not be as serious as in 2015, when Greece came close to ejection from the euro. Yet it shows the problem of a bail-out architecture that is unfit for purpose but from which neither creditors nor Greeks can work out how to extricate themselves. ■

Donald Trump and NATO

Pay up

In James Mattis NATO has a friend, but he came to Brussels with a warning

DURING his first month in office Donald Trump has often left allies concerned and confused. So when James Mattis, America’s new defence secretary, visited NATO’s headquarters in Brussels this week, he strove to calm anxious colleagues. Attending his first meeting of NATO defence ministers, Mr Mattis said that the administration strongly supports the alliance, which remains the “fundamental bedrock for the United States and the trans-Atlantic community”. (Previously, Mr Trump had described NATO as “obsolete” and not doing enough to fight Islamic terrorism.)

But Mr Mattis also stressed that the president is serious when he demands that other NATO members must spend more on defence. Otherwise, he warned, America might “moderate its commitment to the alliance”. This is hardly a new refrain from an American president. However, Mr Trump’s uniquely sceptical view of alliances raises the risk of ignoring it.

Mr Mattis did not go quite as far as his boss did, while a candidate, in arguing that America might honour its Article 5 commitment to collective defence only if the ally in need had paid its dues. But irresponsible as that pronouncement was, it has had some effect. Jens Stoltenberg, NATO’s secretary-general and formerly Norway’s prime minister, never misses the opportunity to call for increased spending. In two telephone calls with Mr Trump, he has told the president that he backs his demands.

What those are in practice is still not clear. But as Mr Mattis reiterated, a more determined push by some NATO members to meet their obligation to spend at least 2% of GDP on defence would be a start. Some progress has been made since a summit in 2014 when all members agreed to hit that target by 2024. The context was fear of Russia, which had startled Europeans with its annexation of Crimea, covert invasion of eastern Ukraine and increasingly threatening posture along NATO’s borders. Mr Stoltenberg revealed this week that military spending by European members increased by 3.8% in real terms last year, equivalent to about \$10bn—a bit more than the defence budget of the Netherlands. However, only four members other than America currently spend as much as 2%: Britain, Poland, Estonia and Greece.

To give NATO the boost it needs, more big countries will also need to cough up. Germany is one of the worst laggards. De ▶▶

Moldova’s economy

A do-over in Moldova

CHISINAU

How Europe’s poorest country survived a giant bank robbery

MOLDOVA is a country of ignominious records. It is by far Europe’s poorest place. Among countries that bother to count foreign tourists, only Tuvalu welcomes fewer. To these dubious achievements, this little Romanian-speaking former Soviet republic added a new one in 2014. A leaked report revealed that up to \$1bn, equivalent to more than an eighth of the country’s GDP, had been stolen from three banks. Relative to the size of its economy, that may be the biggest bank fraud of all time. What happened next, however, was surprising.

Following the theft economists had feared the worst, especially since two of Moldova’s biggest trading partners, Ukraine and Russia, were mired in financial crises of their own. Yet since then the country has coped remarkably well. GDP shrank by a mere 0.5% in 2015 (whereas Russia’s fell by 4% and Ukraine’s tanked by 10%). Last year Moldova grew by 2%, fast by European standards.

Some credit must go to the government, which swiftly offered a blanket guarantee of deposits. The state in effect issued debt to cover every deposit in banks that failed. Moldova’s government finances look a little shakier as a result. But neither households nor companies have lost money directly. The government’s intervention has thus propped up consumption and investment. The tills at MallDova, a shopping mall in the capital, are still ringing.

The odd structure of the Moldovan economy also helped. It is heavily agricultural: about a third of workers are farmers. Most are smallholders. Few borrow much from banks, so few have noticed that credit has grown tighter. Good weather played a part: following dry conditions in 2015 cereal production



At least the wine is safe

rose by a third last year. A free-trade agreement with the EU in 2014 provides a ready market for Moldovan commodities, including its delicious wine.

Money sent back by Moldovan emigrants may have also softened the blow. Moldova is about twice as dependent on remittances as the Philippines, which is saying something. Though the flow has slowed, the weakness of the Moldovan leu ensures that expats sending money from the EU get a good deal.

Problems remain. Even the poshest areas of Chisinau have pockmarked roads and poor lighting. Corruption is rampant (though the IMF is helping the government to fight it), 15% of Moldovans are poor and higher government debt means fiscal policy will be tight. But for a place that usually makes the news for the wrong reasons, a glimmer of hope is about as good as it gets.

spite promises by Angela Merkel, the chancellor, to raise spending, the defence budget is a measly 1.2% of GDP. If it were to hit 2% by 2020, the budget would have to grow by about \$22bn more than is currently planned. Germany's defence minister, Ursula von der Leyen, has described the call for more spending as "a fair demand". But other more fiscally-strapped countries, such as Italy and Spain, would struggle to satisfy NATO while observing restrictive European Union budget rules.

No new commitments were made this week, but Mr Mattis has put NATO on notice to come up with something more substantial than the pledge made in 2014. They have an added incentive to do so. When the alliance meets for its next summit in Brussels, likely to be on May 25th, Mr Trump will be there in person. ■

Russian politics

Barred from the ballot

MOSCOW

How to run for president when your campaign has been ruled illegal

WITH little more than a year remaining before Russia's next presidential elections, Aleksei Navalny, the country's leading opposition politician, is hitting the campaign trail. Over the coming weeks he will embark on a tour from Siberia to the Black Sea, opening offices and recruiting volunteers. The fact that a Russian court recently ruled him ineligible to run has done little to change his plans. "Dance as if no one can see you, campaign as if you're already on the ballot," Mr Navalny quips.

The court's decision is far from the final twirl in Mr Navalny's ongoing foxtrot with the Kremlin. Even if he is barred from running for office, he cannot be written entirely out of Russian politics; his place within it does not depend on electoral success, but on support from young, urban Russians disenchanted with the rule of the current president, Vladimir Putin. And Mr Putin could let Mr Navalny run without fear that he might actually win. Letting him do so might provide useful window-dressing, making Mr Putin's inevitable victory seem less dodgy. (Although Mr Putin has yet to declare his intention to run in 2018, few have any doubts that he will.) "It's all part of the process of the struggle for power," Mr Navalny says.

The courtroom is a regular setting for that struggle. In 2013, ahead of Moscow's mayoral elections, Mr Navalny was found guilty of trumped-up embezzlement charges linked to a lumber company in the city of Kirov. Since then he has been embroiled in a string of similarly absurd cases. Mr Na-

valny successfully appealed his Kirov conviction at the European Court of Human Rights, and last year Russia's supreme court agreed to hear the case again. But this month the Kirov court reaffirmed the decision of 2013 with a verdict repeating, almost word for word, the original ruling. It leaves Mr Navalny ineligible, for now, to take part in elections.

Mr Navalny hopes to whip up enough grassroots support to force the authorities to allow him to run. A precedent exists: after his conviction in 2013, thousands of supporters took to the streets of Moscow. The court unexpectedly freed him pending an appeal, allowing him to take part in the mayoral elections, where he won more than 27% of the vote despite being nearly invisible on Russian television. He says some 25,000 people have already offered to volunteer for his presidential bid; when he opened his office in St Petersburg earlier this month, hundreds lined up on the icy streets. The campaign has been soliciting donations online, even accepting the online currency Bitcoin, "like drug dealers", Mr Navalny jokes.

Some see slight parallels with Boris Yeltsin's rise to power. In 1987 Yeltsin resigned one of the top positions in the Communist Party and publicly attacked Mikhail Gorbachev, the Soviet leader, for dragging his feet on reforms. Despite being blacklisted by the media, Yeltsin gained popular support.

Nonetheless, Mr Navalny is sombre about his prospects. Mr Putin is still popular. Russian state television rarely speaks of Mr Navalny and, when it does, only to discredit him. Only a third of Russians recognise him; most know him from his criminal charges. The opposition is divided and dishevelled. During last year's parliamentary campaign, when Mr Navalny stumped for the opposition party RPR-Parнас, he spoke of sneaking into parliament and building a coalition. Now, he acknowledges that "power is unlikely to change in Russia as a result of elections." ■



Aleksei Navalny: poster boy

Italian politics

The gambler

ROME

How to get ahead in Italy: quit

MATTEO RENZI, Italy's former prime minister, has never been one to shrink from a bet. On February 19th he is set to stake all his remaining chips by resigning as leader of the governing Democratic Party (PD). It will be the second time in three months he has quit a top job, having resigned as prime minister in December after losing a referendum on constitutional reform. But this time he is hoping that, in the ensuing contest, he will be victorious. Why should he need, or want, re-election?

Since he was elected party leader in 2013, Mr Renzi has faced dogged opposition from inside the PD. His adversaries include left-wingers who dislike his business-friendly policies and members of the party's old guard. The latest disagreement is over the timing of the next election. Neither side can enforce a date: it depends on the president, Sergio Mattarella, who has refused to dissolve parliament until Italy has new electoral rules that apply compatibly to both houses. Provided a new electoral law can be agreed, Mr Renzi wants a vote soon afterwards so he can win back the premiership as the PD's candidate; his critics want to delay so that he gradually ceases to be the obvious choice. A leadership contest, involving primary elections, would put the issue beyond doubt. By resigning, Mr Renzi can make that contest unavoidable.

Just as he has made a lot of enemies in his own party, Mr Renzi has plenty of critics among the voters who can take part in the primaries. The economy remained at a virtual standstill on his watch. A big gap opened up between his bombastic promises and the relatively modest reforms his government managed to introduce. Yet he nevertheless remains Italy's most trusted party leader (although that is a low bar). As such, he is unlikely to lose.

The greater risk is that, in imposing his will, Mr Renzi will turn the fracture in the PD into a much wider split. His uncompromising use of his tactical genius has cost him dearly before: in 2015, he outwitted the centre-right leader, Silvio Berlusconi, to get Mr Mattarella elected president. The result was that an irate and humiliated Mr Berlusconi withdrew from a pact to support Mr Renzi's constitutional reforms in parliament. Without broad parliamentary support, Mr Renzi had to call the referendum that eventually led to his departure from office.

Turkish-Russian relations

Getting into bed with the bear

ISTANBUL

Turkey sees Russia as an indispensable partner. Russia views it as one of NATO's weakest links

AT ISTANBUL'S naval museum, around the corner from President Recep Tayyip Erdogan's residence, reminders of one of Europe's biggest geopolitical rivalries are everywhere. A bust commemorates Hasan Pasha of Algiers, a commander in a battle in which the Russian fleet burned the Ottoman one to a crisp. The remnants of the *Mahmudiye*, a galleon that led the siege of Sevastopol during the Crimean War, overlook rows of gilded boats used by the sultans. Such flare-ups are not just things of the distant past. In 2015 Turkish pilots shot down a Russian warplane, and the two powers appeared on the brink of another war. It would have been their 18th.

Instead, the two countries resorted only to insults and sanctions. Since then tensions have ebbed: in June last year Mr Erdogan apologised for the incident. Two weeks later, Russia's president Vladimir Putin rushed to condemn a violent coup attempt against Turkey's government. The two countries have subsequently signed a big gas pipeline deal, agreed to resume work on a nuclear plant in southern Turkey and pledged to increase bilateral trade by more than fivefold, to \$100bn a year.

Even more strikingly, as European and American diplomats watched from the sidelines, in December the pair brokered a ceasefire in battle-scorched Aleppo and agreed on a plan to stop the fighting in the rest of Syria the following month. At the height of their dispute, Mr Putin and Mr Erdogan were accusing each other of supporting the so-called Islamic State (IS). Today, the two autocrats are coordinating airstrikes against it in Syria.

The speed and the scale of the rapprochement between the two countries, which was unruffled even by the assassination of the Russian envoy to Ankara by a Turkish policeman in December, is startling. Yet the two strongmen have different and contradictory expectations. Whereas Mr Erdogan appears to see his relationship with Mr Putin as a way to extract concessions from his Western allies, Mr Putin wants to loosen what he sees as one of the weakest links inside NATO—Turkey. One of the two is likely to be disappointed.

Mr Erdogan decided to make friends with Mr Putin partly because having him as an enemy was so painful. After Turkey shot down that Russian plane in 2015, Mr Putin cut Turkey off from the Middle East. His fighter jets bombed Turkey's proxies inside Syria, including its ethnic cousins, the

Turkmen, with impunity. Russia's missile defences denied Turkey access to the airspace over Syria. Russian sanctions cost Turkey at least \$10bn in tourism and trade revenue.

Russia remains the stronger partner. Mr Erdogan's government has offered Rosatom, the Russian company building Turkey's first nuclear plant, sweeteners worth billions of dollars. It has endorsed Turkish Stream, a gas pipeline that would allow Russia to extend its grip over Turkey's and Europe's energy markets. (Turkey already depends on Russia for 55% of its natural gas imports.) Most importantly, Mr Erdogan has reversed course on Syria, abandoning his dream of ousting its blood-drenched president, Bashar al Assad.

In exchange, Russia has allowed Turkey's army to set up a buffer zone inside Syria. Turkey has seized the chance to push its back from its last border strongholds and stem the advance of American-allied Kurdish insurgents, known as the People's Protection Units (YPG). Mr Putin has been slow to reciprocate in other areas, however. Most of the sanctions Russia imposed on Turkish food products in 2015 remain in place. "It seems as if they're still rubbing our noses in it," says Cenk Baslamis, a veteran Russia observer.

Turkey is not about to trade in NATO membership for an alliance with Russia. But Turkey's reliability as a Western partner increasingly looks in doubt. Rumours abound that some of Mr Erdogan's associates inside the ruling Justice and Development (AK) party favour renegeing on some NATO commitments. The same goes

for the army. The sweeping purges that followed July's coup were ostensibly directed against followers of the Gulen movement, an Islamic sect suspected of leading the mutiny. But they have also claimed the careers of thousands of pro-Western officers, clearing the way for those more sympathetic to Russia.

Kerim Has of Moscow State University points to the growing influence inside the army of a group inspired by Dogu Perincek, an ultranationalist ideologue. Mr Perincek, who also heads a small political party, insists there is no room for any political divisions in the armed forces. But he rejoices that the purges have weakened Western influence. "A large share of America's power in the military and the police has been crushed," he gloats.

Authoritarian pillow talk

The anti-Western hysteria that swept through Turkey in the wake of the coup has dimmed slightly over the past couple of months, partly because of the hopes Mr Erdogan places in Donald Trump. Mr Erdogan and many in his government expect Mr Trump to extradite the presumed mastermind of July's coup, Fethullah Gulen, and to sever links with the Kurdish YPG, which the Obama administration considered an effective force against IS, but which Turkey considers a terrorist group. Mike Pompeo, the CIA's new chief, was in Ankara to discuss these issues on February 9th.

If Mr Trump disappoints, however, the relationship between Mr Putin and Mr Erdogan looks likely to get closer. Russia needs Turkey to speed up the political process in Syria by bringing anti-regime forces to the negotiating table. Turkey needs Russian tourists, gas supplies and help rebuilding ties with Mr Assad. But when another crisis strikes, Mr Putin will try to push the wedge between Turkey and NATO deeper. As a former Turkish president put it, "building relations with big states is like getting into bed with a bear." When that bear is Russia, it is best to stay wide awake. ■



Charlemagne | French lessons in *dégagisme*

The urge to elect an insurgent is helping two insiders



THE tumbrels are rolling again in France, and the crowd is restless. One by one, political leaders of the *ancien régime*, who had confidently been preparing to face each other at the presidential election this spring, have been carted off to the guillotine on a wave of revanchist fury. France is in the grip of what might be called “*dégagisme*”: a popular urge to hurl out any leader tainted by elected office, establishment politics or insider privilege. Less clear is which sort of outsider French voters want instead.

This impulse is by no means unique to France. Casualties of an anti-establishment rage are still nursing their wounds in America, Britain, Poland and other liberal democracies. But the list of French victims of this howl of anger is particularly star-studded. In recent months it has included a sitting Socialist president (François Hollande, who read the mood and declined to seek re-election), a former centre-right president (Nicolas Sarkozy, who lost his party’s primary) and two ex-prime ministers (Alain Juppé and Manuel Valls, both also dispatched in a primary).

The hostility seems indiscriminate. The French have cast aside the insipid and the showy, the sanguine and the sombre, old-timers on the left and the right. Other victims could yet fall. Another former prime minister, François Fillon, the centre-right candidate, is clinging on by a thread after it emerged that he employed his wife for years as his parliamentary assistant, despite little evidence that she did any work. A former beneficiary of this preference for the insurgent, the dour and tweedy Mr Fillon was the outsider in his party primary last November before sweeping to victory. Today he has fallen from presidential favourite to third place in the polls. It could yet be that a candidate from an established party—Mr Fillon or, at a stretch, Benoît Hamon, the fresh-faced Socialist nominee—pulls through in the end. But, for now, the upswell of *dégagisme* has instead lifted two political outsiders. One is Marine Le Pen, leader of the nationalist Front National (FN), who tops first-round voting intentions (though not polls for the run-off). The other is Emmanuel Macron, who is running as an independent, campaigning for votes on both the left and right under the “progressive” banner of *En Marche!* (On the Move!).

In most respects, each of these candidates is the antithesis of the other. Ms Le Pen calls herself a “patriot”, who wants to give “preference” to French nationals, escape the clutches of the Euro-

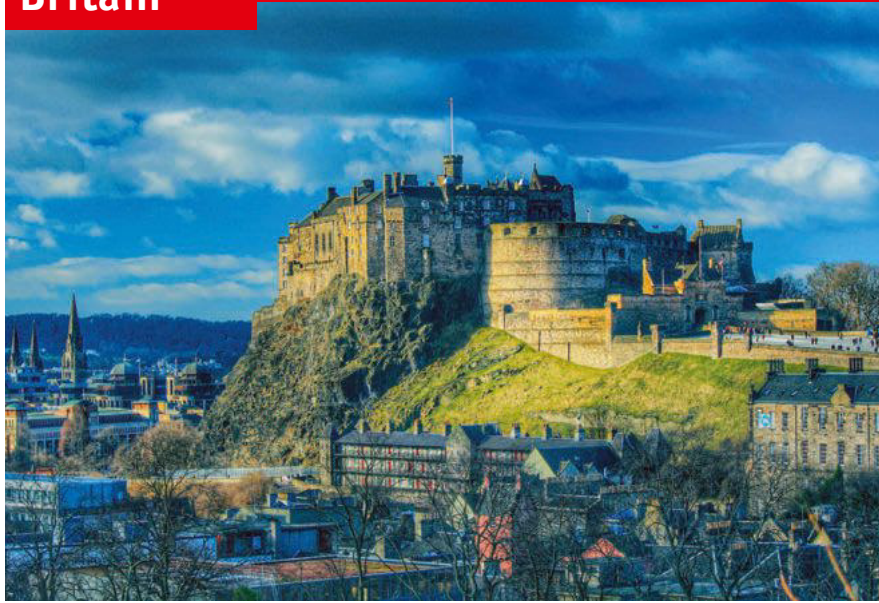
pean Union, withdraw France from the euro, raise protectionist tariffs, curb immigration and reinstate welfare privileges. Mr Macron, by contrast, is a zealous champion of the EU, favouring open borders, global trade, technical innovation and the adaptation of France’s welfare system to a less stable future job market. She is the favourite among blue-collar workers; he draws disproportionate support from university graduates. She has climbed to the top of the polls on the back of dire warnings of an immigrant invasion and Islamist infiltration; he has charmed his way to become the bookmakers’ favourite with a sharp mind and upbeat outlook. Their antipathy is unambiguous. Ms Le Pen calls him an “ultra-liberal” globalist, a sort of citizen of nowhere, who is “surfing on air”. Mr Macron says that she pretends to speak “for the people”, but in truth speaks only for her clan. To underline their rivalry, on a recent weekend the pair could even be found holding rallies in the same city, Lyon.

If the pair share a common feature, it is the perception that they are both outsiders: newcomers intent on breaking the grip that old-time parties of the left and right have held on executive power in France since the Fifth Republic was established in 1958, and on forcing a realignment of party politics. This is not a new idea, even in modern history. Pierre Poujade rallied shopkeepers and artisans against the elite in 1956, and won his party 52 deputies. The difference is that this time power is, possibly, within their grasp. A year ago the notion that either Ms Le Pen or Mr Macron stood a serious chance of winning the presidency belonged to the realm of fantasy. French codes and conventions favour candidates from established parties, with local networks and parliamentary weight, and a long history of electoral campaigning. Mr Hollande first stood for election in 1981, when Mr Macron was just three years old. His predecessor, Mr Sarkozy, was first elected in 1977, when Ms Le Pen was still in primary school. Ms Le Pen has never held executive office. Mr Macron has never run for election.

Sans-culottes? Hardly

Yet in reality Ms Le Pen and Mr Macron are decidedly odd outsiders. She is part of a political dynasty, founded by her father, Jean-Marie, who set up the FN in 1972. A European Parliament deputy, Ms Le Pen is accused by its watchdog of misuse of the public payroll. She claims to speak “in the name of the people”, her campaign slogan, yet was raised in a ridge-top mansion overlooking Paris, in one of the capital’s swankiest suburbs. Mr Macron, from a medical family, is a graduate of the Ecole Nationale d’Administration, the elite civil-service college. He worked as an investment banker, then adviser to Mr Hollande at the Elysée, before becoming his economy minister. Unconnected *ingénus* they are not.

Perhaps what Ms Le Pen and Mr Macron really represent, in their diametrically opposite way, is the nature of the political outsider in an age of disillusion. The authentic version (such as Germany’s Angela Merkel) is a rarity. Today’s successful insurgents need not lack fortune or connections (as Donald Trump demonstrates). They need not lack experience, either (Ms Le Pen has been an MEP since 2004). Rather, an insurgent must appear fresh, sound in touch with new fears and ordinary concerns, and break convention—whether to disturbing, or thrilling, effect. French mainstream-party candidates may yet resist the forces of *dégagisme*. If not, voters could face the stark choice between two untested, and wholly divergent, outsiders: Ms Le Pen’s nationalist, xenophobic version, and the liberal-minded, internationalist brand of the dynamic young Mr Macron. ■



Scotland's economy

Taking the low road

ABERDEEN AND EDINBURGH

Crises in its main industries have set Scotland on a poorer path than its neighbours

OVER the past seven months the British economy has beaten almost all forecasts. Since the Brexit vote last June, a recession has easily been avoided and job growth remains decent. In one part of the country, however, things look very different. In the year to September Scotland's GDP grew by 0.7%, while that of the rest of the country grew by 2.4% (see chart). Employment there is falling and wages growing much more slowly than elsewhere.

Scotland's weak performance is linked to problems in its two most important industries: energy and finance. Those two businesses' exports have together accounted for up to a third of Scotland's GDP in the past. Now both are in trouble.

The bad news begins in the North Sea. The drop in the price of Brent crude from \$110 a barrel in 2014 to \$55 today has hit the oilmen hard. Tax revenues from oil and gas are shared across Britain, so Scotland has not felt much of a fiscal impact. But of the 100,000 or so British oil-and-gas jobs lost since 2014, perhaps a third were in Scotland. Those gigs paid well—at the height of the boom, relatively unskilled folk could command six-figure salaries—so their loss takes a big bite out of consumer spending.

The effects are plain to see. In Aberdeen, Europe's oil capital, hoteliers used to charge almost whatever they liked. No more: the average price of a room has dropped by a third since late 2014. House prices in the city are falling faster than they are anywhere else in Britain. On Union

Street, the main shopping drag, vacancies have risen; a nearby steak-and-lobster restaurant, where a wagyu ribeye would set punters back £40 (\$50), closed last year.

Few people expect to see a return to the days of steak and lobster. With ageing fields and pricey labour, the North Sea is one of the world's most expensive regions from which to extract oil. At today's prices, production is barely profitable. With many fields nearly exhausted, big firms are looking elsewhere. In January Royal Dutch Shell and BP both said they would sell some of their North Sea interests.

The troubles in the oil industry are well known. Less noticed is that Scottish financial services are also having a tough time. Wander around the handsome Georgian squares of Edinburgh's financial district,

and nothing looks amiss. Yet since 2014 employment in the industry has dropped by over a tenth (while rising slightly in London). Average pay has declined by 5% in the past year.

Scottish finance is struggling for two reasons. First, argues Owen Kelly of Edinburgh Napier University, it disproportionately comprises mid-range work, such as customer service. Those jobs are vulnerable to automation, which is proceeding apace across the financial-services industry. In March the Royal Bank of Scotland began cutting more than 500 jobs as part of a plan to automate investment advice. Official data suggest that, in just two years, 20% of Scotland's administrative jobs in financial services have disappeared.

Second, speculation about another independence referendum is hurting the industry. Since the Brexit vote, in which a majority of Scots chose to Remain, the ruling Scottish National Party has accelerated plans for what it calls "indyref2". Last month a consultation closed on a draft bill for a fresh ballot. Polls suggest that support for independence is not far off 50% (and nationalists point out that in the ultimately unsuccessful campaign of 2014 they substantially outperformed early polls).

This concerns Scottish financial firms much more than Brexit does. The vast bulk of their business takes place in the rest of Britain, not Scotland, points out Graham Campbell of Saracen Fund Managers, based in Edinburgh. Independence might lead to trade barriers at the English border, or different regulations between the two countries, especially if Scotland sought to rejoin the EU, as its government has implied it would. Some firms are making contingency plans. Murray Asset Management, another Edinburgh firm, recently moved its registered office to London.

The jitters seem to be more widely felt. Formation of startups in all industries has

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49 A return to the Gulf

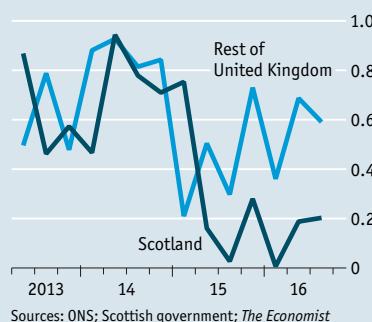
50 Bagehot: Harriet Harman's unfinished business

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I'll be in recession afore ye

GDP, % increase on previous quarter



fallen sharply since 2013, suggest data from BankSearch, a consultancy. Foreign investors have also taken heed: the number of foreign direct investment projects has dropped by a tenth in two years, while jumping in the rest of the country. Reduced investment will hit productivity growth and hence pay.

Scotland's changing fiscal architecture could compound these problems. Last April the Scottish government assumed partial control over income tax. Soon it will take almost complete control, and will also get its hands on half of value-added tax (VAT) receipts, among other things. Our calculations suggest that it will thus be responsible for collecting tax equivalent to a third of all public spending in Scotland (the remaining two-thirds will continue to come from Westminster). This has advantages: the freedom to raise or lower taxes

will allow the Scottish government to respond more nimbly to local circumstances, and if Scotland booms it will enjoy higher tax receipts. But during downturns its tax take will fall. Scottish public finances have never been more vulnerable.

Which makes the present difficulties all the more serious. Regulations place strict limits on how much the Scottish government can borrow, so if tax receipts are weak it has to economise. In its draft budget for 2017-18 it has already cut local-authority spending, points out Ronald MacDonald of Glasgow University. The fiscal pressure will intensify if employment falls further, cutting into the income-tax take. Consumer spending is also looking shaky, which will trim VAT receipts. While the overall British economy will surely slow as Brexit gets under way, Scotland is in for a very tight squeeze. ■

British forces will redeploy to Oman after they pull out of Germany in 2019. Merchants offering everything from weapons to sand for golf bunkers have made the Gulf Britain's largest export market after the EU and America. London fund managers play on jitters over Gulf stability to attract locals' wealth. Such landmarks as the Shard, the Olympic Village and Harrods—all Qatari-owned—are testaments to their success. Even City Hall, the seat of London's mayor, belongs to Kuwait.

Britain's pretensions can seem overblown. Behind the hype, the Juffair base amounts to little more than a pier inside the sprawling base of America's Fifth Fleet. Britain's flotilla of seven warships in the Gulf looks puny next to America's 40, complete with nuclear-powered aircraft carriers with decks the area of three football pitches. On his last visit to Bahrain as defence secretary, Ash Carter seemed to scoff at suggestions that Britain might replace a wary America. "There aren't any good alternatives," he said.

That said, potentates who bridled at the restrictions the Obama administration placed on arms exports find Britain's government less picky. It licenses arms exports to all Gulf regimes and supports their forces of law and order (in 2015 a stink about a contract between Britain's justice ministry and the Saudi prison service led to the deal's cancellation). BAE Systems, an arms manufacturer, is one of Saudi Arabia's largest private-sector employers. Activists have gone to court in Britain to challenge the legality of over £3.3bn (\$4.1bn) of arms sales to Saudi Arabia since the onset of its Yemen war in March 2015.

With Iran across the water, many Gulf leaders seem happy to pay for British protection. Indeed, many trained at Britain's military college, Sandhurst, before Britain backed their succession. Oman's sultan, Qaboos bin Said al-Said, served with the Scottish Rifles in Germany.

But Britain also risks making enemies. Oman-watchers in London fear for their relationship (and the defence contracts) when the ailing sultan dies. "Money ploughed into arms deals should be spent internally. The security challenges the Gulf faces are internal, not external," says an Omani official. Britain's role as protector of Bahrain's king infuriates the island's suppressed Shias. "Of all the main Western embassies, only Britain keeps its distance," says a Shia elder. Abu Taqi, the father of a stone-thrower who was shot dead, curses Britain for befriending Bahrain's rulers.

As tensions with America rise, Iran's ayatollahs, too, see Britain as a potential weak spot. "In the event of a war in the Gulf, the [Juffair] base will definitely be a target for Iran," says an ayatollah close to senior officers of Iran's Revolutionary Guard Corps. Britain is sailing into rather warm waters. ■



Britain in the Gulf

Back to the desert

JUFFAIR NAVAL BASE

The post-Brexit search for strategic partners arrives in the Middle East

THE scenario for naval exercises carried out off the Iranian coast earlier this month was thinly disguised. "Redland and Grunland are regional rivals," read the brief, code apparently for Saudi Arabia and Iran. "Relations have recently degraded with aggressive rhetoric coming from both sides." Leading the way through the Strait of Hormuz was *HMS Ocean*, the Royal Navy's flagship until its two new aircraft carriers enter service. American and French warships sailed close behind.

Forty-five years after a withdrawal that the foreign secretary, Boris Johnson, describes as mistaken, Britain is back in the

Gulf. The union flag flutters over the new Juffair naval base in Bahrain. More military installations are sprouting in Dubai and Oman. Bahrain's rulers have covered their island in posters lauding "200 years of friendship and peace" with Britain. So copious are Gulf investments in London that Britain's capital is the "eighth emirate", says Mr Johnson.

Brexit has given added impetus to Britain's renewed interest in the region. Just as it ended colonial rule of the Gulf on the eve of its accession in 1973 to the European Economic Community, so now Britain is wooing old partners with a succession of visits.

Bagehot | Harman's unfinished business

Modernising Britain, and its politics, is slow and thankless work



BRITISH politics, it is widely noted, now revolves around two axes: left v right and open v closed. But a third one predates both. In the English civil war the Roundheads (parliamentarian and prim) defeated the Cavaliers (royalist and flamboyant), then lost the peace. The taxonomy lives on not as ideology but as two demeanours. Westminster's Roundheads are sober, earnest and severe: think Margaret Thatcher, Gordon Brown and Theresa May. Its Cavaliers tend to be swaggering, arch and clubbable: David Cameron, Nigel Farage and to a lesser extent Tony Blair. The Cavaliers tend to have the most fun and get the best press. It is no coincidence that the supreme Cavalier of Britain's recent political past was also its supreme diarist: Alan Clark. "I only can properly enjoy carol services if I am having an illicit affair with someone in the congregation," he once wrote.

Harriet Harman, Labour's former deputy leader, is as roundly Roundhead as Mr Clark was confidently Cavalier. Her new autobiography, "A Woman's Work", is as serious as his books are riotous. Reading it, Bagehot was reminded of Oscar Wilde's maxim that "the trouble with socialism is that it takes too many evenings". The same, it seems, is true of the feminism to which Ms Harman has dedicated her career—first as an activist lawyer, then as a backbench MP, later as a minister. Over 400 pages she documents four decades of brow-furrowing evenings: procedural meetings, resolutions, commissions. Her very language bears the dusty whiff of the committee room: "Taking the fight to the Tories is undoubtedly an important role for Labour in opposition"; "Frank was...not respected by the welfare stakeholders". "Ever ready to solve rather than cause problems, I..." begins one sentence, without irony (using humour would "deepen the problem of me not being taken seriously"). This is a book on a mission: to counterbalance what the author calls the "vanity projects" written by her male colleagues. It is not one for the beach.

Yet it is one to read. For it makes a fine case for the Roundhead tendency in politics. It charts how the achingly slow, often thankless and arduous work of modernising society routinely meets resistance where it should not: getting wages and health care recognised as women's issues, introducing measures to raise the proportion of women MPs, improving child care, increasing the pitifully low rate of prosecutions of domestic-violence perpetra-

tors. And at every step of the way, vast walls of opposition. When Ms Harman opposed all-male shortlists, she was informed that working-class women were not interested in politics. When she was made social-security secretary, her deputy told civil servants to bypass her and take big decisions to him. When she beat a mostly male field to become Labour's deputy leader she was not, unlike her male predecessor, made deputy prime minister. To the tabloids and the sort of Neanderthal MP who sees her as a menace she is "Harriet Harperson", "Harridan Harman", "bossy", "icy" and "shrill".

The best illustration of what hard, unglamorous and unpopular work it can be to advance changes that ought to come naturally is Ms Harman's account of how Westminster has evolved, and how it has not, since she first won her south London seat in 1982. Back then 97% of MPs were men; women were even outnumbered by MPs called John. She describes the dismal experience of late-night votes, when MPs waiting to speak would get progressively more drunk, then would give progressively longer speeches, then in the early hours would subject her rounding-up speech to "inebriated jeers". The book contains some jaw-dropping anecdotes. In 1983 an anonymous MP complained that Ms Harman had voted with a baby under her coat; she was embarrassed to tell the clerks it was just the residual weight from a recent pregnancy. When she argued for more family-friendly hours in Parliament she was accused of being a marriage breaker: apparently MPs' wives would not trust them "being out and about in London in the evenings". Desperately slowly, one tiny step at a time, Ms Harman and her comrades chipped away at this culture. Today, thanks to her efforts, there are 195 women MPs, Parliament's hours have been reformed and there is a crèche for children of MPs and other staff.

Yet depressingly much stays the same. Ms Harman's description of the press lobby and the legislature when she arrived—"a boys' club being reported on by a boys' club"—still holds. The House of Commons is more male (70%) than equivalent legislatures in Algeria, Belarus and Sudan. Recent studies of correspondents in Westminster put the proportion of women at around a quarter. The boozy, late-night, wood-panelled stuffiness of the place lives on, as recent news stories have shown. A survey of 73 women MPs by the BBC last month found that almost two-thirds had experienced sexist comments within Parliament (a male MP told one she should be "in the kitchen washing dishes"). In a debate on January 30th a troglodyte Tory woofed at a woman MP as she spoke. In a text-message exchange leaked to the newspapers last weekend David Davis, the Brexit secretary, denied having tried to kiss Diane Abbott, the shadow home secretary, in a Westminster bar: "I'm not blind," he chortled.

Thank you, Harriet Harperson

The sheer inertia slowing changes to all this, so easily underestimated by commentators, is why politics needs Roundheads. With their compromising bonhomie Cavaliers are useful consolidators, lubricators of relations between social groups, guardians of good humour and thus perspective. But leave politics to such types and it becomes a golf club bar. For it to work, they must be joined by the likes of Ms Harman: Roundheads willing to tread a stonier path. These politicians make enemies, call out bad consensuses and gradually, painfully reform the common sense of the age. "Today's heresy is tomorrow's orthodoxy," she writes in "A Woman's Work". How well her story illustrates this truth. ■



International divorce

Unhappily ever after

For the rising number of international and footloose families, breaking up can be tricky—and sometimes tragic

KATE BAGGOTT and her two children live in a tiny converted attic in a village near Frankfurt. Ms Baggott, who is Canadian, has a temporary residence permit and cannot work or receive benefits. The trio arrived in Germany in October, after a Canadian court order gave them a day's notice to get on the plane. Ms Baggott's ex-husband, a Canadian living in Germany, had revoked his permission for the children's move to Canada after they had been there nearly a year, alleging "parental child abduction". A German court has given Ms Baggott full custody, but she must stay until an appeal is over.

Such ordeals are becoming more common as the number of multi-national and footloose families grows. Across the European Union, for example, one in seven births is to a woman who is a foreign citizen. In London a whopping two-thirds of newborns in 2015 had at least one parent who was born abroad. In Denmark, Spain and Sweden more than a tenth of divorces end marriages in which at least one partner is a non-citizen.

The first question in a cross-border break-up is which country's laws apply. When lots of money is at stake there is an incentive to "forum shop". Some jurisdictions are friendlier to the richer partner. Germany and Sweden exclude assets owned before the marriage from any settlement. Ongoing financial support of one

partner by the other is rare in France and Texas—and ruled out in another American state, Georgia, if the spouse seeking support was adulterous.

Under English law, by contrast, family fortunes are generally split evenly, including anything owned before the marriage. Prenuptial agreements, especially if drawn up by a lawyer representing both spouses, are often ignored. The wife of a Russian oligarch or a Malaysian tycoon can file for divorce in London if she can persuade a judge that she has sufficient links to England. A judge, says David Hodson, a family lawyer in London, might be presented with a list of items supporting her claim, which may be as trivial as which sports team the husband roots for, or where the family poodle gets a trim.

Across the European Union, until recently the rule has been that the courts of the country in which divorce papers are filed first gets to hear the case. The result was that couples often rushed to file rather than attempting to fix marital problems. But in some countries that is changing: last year Estonia became the 17th EU country since 2010 to sign an agreement known as Rome III that specifies how to decide which country's law applies (usually the couple's most recent country of residence, unless they agree otherwise). Though the deal brings welcome clarity, it can mean that courts in one country have to apply

another country's unfamiliar laws. And one spouse may be tricked or bullied into agreeing to a divorce under the rules that best suit the other.

The bitterest battles, though, are about children, not money. Approaches to custody vary wildly from place to place. Getting children back if an ex-partner has taken them abroad can be impossible. And when a cross-border marriage ends, one partner's right to stay in the country where the couple lived may end, too, if it depended on the other's nationality or visa.

Treasures of the heart

Under the Hague Abduction Convention, a treaty signed by 95 countries, decisions about custody and relocation fall to courts in the child's country of "habitual residence". If one parent takes a child abroad without the other's consent or a court order, that counts as child abduction. The destination country must arrange the child's return.

But plenty of countries have not signed, including Egypt, India and Nigeria. They can be havens for abducting parents. Around 1,800 children are abducted from EU countries each year. More than 600 were taken from America in 2015; about 500 abductions to America are reported to the country's authorities each year.

Some countries, including Australia and New Zealand, often regard themselves ►

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▶ as a child's habitual residence from the moment the child arrives. The EU sets the threshold at three months. America differs from state to state: six months' residence is usually what counts. GlobalARRK, a British charity that helps parents like Ms Baggott, is campaigning for information on such rules to be included among the documents issued to families for their move abroad. It also lobbies for a standard threshold of one year for habitual residence and advises parents to sign a pre-move contract stating that the child can go home at any time. Though such contracts are not watertight, they would at least alert parents to the issue.

Britain is comparatively generous to foreign parents who seek a child's return: it provides help with legal advice and translation. But plenty of countries do little or nothing. Family judges in many places favour their compatriots, though they may dress up their decisions as being in the child's interests. Parents who can no longer pay their way through foreign courts may never see their children again.

Some parents do not realise they are committing a crime when they take the children abroad, says Alison Shalaby of Reunite, a British charity that supports families involved in cross-border custody disputes. Even the authorities may not know the law. Michael, whose former partner took their children from Britain to France in 2015, was told by police that no crime had been committed. After he arranged for Reunite to brief them, it took more than five months to get a French court order for the children's return.

Other countries are slower still, often because there are no designated judges familiar with international laws. Over a third of abductions from America to Brazil, for example, drag on for at least 18 months. When a case is eventually heard the children may be well settled, and the judge reluctant to order their return.

A renewed push is under way to cut the number of child abductions, and to resolve cases quickly. The EU is considering setting an 18-week deadline for the completion of all return proceedings and making the process cheaper by abolishing various court fees. And more countries are signing up to the Hague convention: Pakistan, where about 40 to 50 British children are taken each year, will sign next month. India, one of the main destinations for abducting parents, recently launched a public consultation on whether to sign up, too.

But the convention has a big flaw: it makes no mention of domestic violence. Many of the parents it classifies as abductors are women fleeing abusive partners. One eastern European woman who moved to Britain shortly before giving birth and fled her violent fiancé four months later, says she was turned away by women's shelters and denied benefits be-

cause she had lived in Britain for such a short time. For the past year she has lived on charity from friends. The police have taken her passport to stop her leaving Britain with the baby. Another European woman, living in New Zealand, says she fears being deported without her toddlers when her visa expires in a few months. She fled domestic abuse with the children and a bag of clothes in December, and has been moving from one friend's house to another ever since.

Child abduction is often a desperate parent's move of last resort, says GlobalARRK's founder, Roz Osborne. One parent, who has residence rights, may have been granted sole or joint custody, meaning the children cannot be taken abroad without permission. But the other parent may have entered on a spousal visa which lapses when the marriage ends. Even if permission to remain is granted, it may be without the right to work or receive state benefits. In such cases, the decision of a family court guaranteeing visiting rights or joint custody can be close to meaningless.

Britain's departure from the EU could

mean many more divorcing parents find themselves in this desperate state. Around 3.3m citizens of other EU countries live in Britain, and 1.2m Britons have moved in the opposite direction; so far it is unclear whether they will continue to have the right to stay put and work. And in America, says Jeremy Morley, a lawyer in New York who specialises in international family law, immigration issues are increasingly used as weapons in child-custody cases. Judges in family courts, he says, often pay little attention to immigration issues when ruling on custody, because they know few people are deported solely because their visas have expired. But under Donald Trump, that may change.

Many parents have no idea what they sign up for when they agree to follow a spouse abroad, says Ms Osborne. They may mistakenly believe that if things do not work out, they can simply bring the children back home. Ms Baggott's move to Germany was supposed to be a five-year adventure, the duration of her husband's work visa. Instead, she says, she has endured "a decade of hell". ■

Inter-faith marriage

Where Rashid and Juliet can't wed

JAKARTA

Many countries make it hard to marry someone from another religion

ARMANDHANI, an Indonesian journalist who is Muslim, broke up with his Catholic girlfriend of five years when he reached the heartbreaking conclusion that they would never be able to marry. Indonesian officials refuse to register inter-faith marriages because the law does not mention them. "My mother said: 'If you want to marry her she must convert to Islam,'" he says. "But I didn't want to make her betray her religion." He felt he could not change religion either. "If I converted to Catholicism I would become dead to other Muslims."

Indonesia is one of about two dozen countries with no provision for civil

marriage. Others include Israel, Jordan, Lebanon and almost all Arab states. Only unions conducted according to the rules of officially recognised religions can be registered. In Indonesia children of unregistered unions cannot get birth certificates, without which they struggle to receive health care or schooling.

Some couples of differing faiths, or none, go abroad for a civil ceremony. Each year about 3,000 couples from the Middle East get married in Cyprus, which brands itself the "island of love".

Campaigns to introduce civil marriage are afoot in many countries. But governments often fear angering politically powerful religious groups. In Lebanon marriages and other matters of family law, such as divorce and inheritance, are left to the religious courts of 18 Muslim, Christian and other sects. This allows politicians to sidestep the tricky task of crafting family laws that would be acceptable to leaders of all those faiths. In Indonesia, says Mr Dhani, both Muslim and Christian leaders fear that an inter-faith marriage would inevitably end up with one of the partners converting.

In many places, anyone who dares to wed across religious lines faces ostracism—and perhaps even violence. Getting rid of legal barriers would not remove all the risks. But it would help, a bit.





Electric cars

Volts wagons

The switch to battery-powered motoring means short-term pain but long-term gain for carmakers

THE high-pitched whirr of an electric car may not stir the soul like the bellow and growl of an internal combustion engine (ICE). But to compensate, electric motors give even the humblest cars explosive acceleration. Electric cars are similarly set for rapid forward thrust. Improving technology and tightening regulations on emissions from ICES is about to propel electric vehicles (EVs) from a niche to the mainstream. After more than a century of reliance on fossil fuels, however, the route from petrol power to volts will be a tough one for carmakers to navigate.

The change of gear is recent. One car in a hundred sold today is powered by electricity. The proportion of EVs on the world's roads is still well below 1%. Most forecasters had reckoned that by 2025 that would rise to around 4%. Those estimates are undergoing a big overhaul as carmakers announce huge expansions in their production of EVs. Morgan Stanley, a bank, now says that by 2025 EV sales will hit 7m a year and make up 7% of vehicles on the road. Exane BNP Paribas, another bank, reckons that it could be more like 11% (see chart on next page). But as carmakers plan for ever more battery power, even these figures could quickly seem too low.

Ford's boss is bolder still. In January Mark Fields announced that the "era of the electric vehicle is dawning", and he reckons that the number of models of EVs will exceed pure ICE-powered cars within 15

years. Ford has promised 13 new electrified cars in the next five years. Others are making bigger commitments. Volkswagen, the world's biggest carmaker, said last year that it would begin a product blitz in 2020 and launch 30 new battery-powered models by 2025, when EVs will account for up to a quarter of its sales. Daimler, a German rival, also recently set an ambitious target of up to a fifth of sales by the same date.

The surge has two explanations: the rising cost of complying with emissions regulations and the falling cost of batteries. Pure EVs, which send no carbon dioxide directly into the atmosphere, and hybrids, which produce far less than conventional engines, are a way to meet Europe's emissions targets—albeit an expensive one. But the gains from cheaper methods such as turbocharging smaller engines, stop-start technology and weight reductions will no longer be enough, since a tougher testing regime, to be introduced in the wake of VW's diesel-cheating scandal, will make those targets still harder to reach.

The hefty cost of preventing nitrogen oxide spewing from diesel engines, which emit far less carbon dioxide than the petrol equivalent, may see them disappear by 2025. Further development of ICES could be enough to meet the 2021 targets. Carmakers also need to be prepared to hit the next ones, says Andrew Bergbaum of AlixPartners, a consulting firm. These, yet to be finalised in the EU for carbon dioxide, may

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be as low as 68g/km by 2025 compared with 130g/km today.

Regulations are favourable outside Europe, too. In China more than 400,000 pure EVs were sold last year, making it the world's biggest market. The government, keen to clear the air of choking exhaust fumes, has plans for a quota that could insist that 8% of sales are EVs or hybrids by 2018. And even if Donald Trump relaxes American emissions standards, this will not hold back electrification. California, which accounts for one in eight cars sold in America, is allowed to set tougher environmental standards than the national ones. It, and seven of the other states that have adopted its emissions rules, have a target of 3.3m EVs on their roads by 2025.

Moving right along

Technology will have as much impact as politics. Vehicles that carmakers are forced to produce for the sake of the environment will become ones that buyers want for the sake of their wallets. EVs were once generally a second car for richer, environmentally minded drivers, prepared to pay a big premium for a vehicle with a battery that took an age to charge and had a limited range.

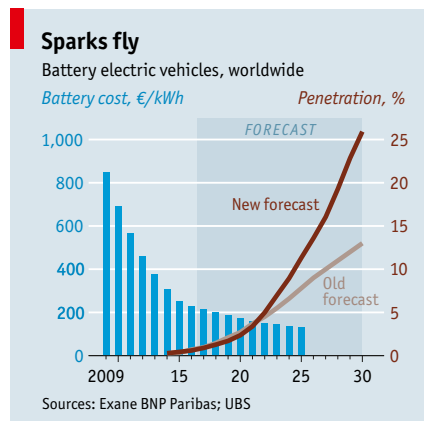
The falling cost of batteries will make the cost of owning and running an EV the same as that of a traditionally powered car in Europe by the early 2020s, even without the hefty government subsidies that many rich countries use to sweeten the deal (see next story). Better batteries should also conquer "range anxiety"—most pure EVs now run out of juice after around 100 miles (161km). If battery costs continue to tumble and performance improves at the current rate, the price of a car with a range of 300 miles could hit \$30,000 by the early 2020s, according to Exane BNP Paribas. Slicker ▶▶

▶ technology will also mean charging in minutes, not hours.

The lack of charging infrastructure still deters buyers, but signs of growth are encouraging. In most rich countries governments, carmakers and private companies are putting up the necessary cash. In America the number of charging points grew by more than a quarter to almost 40,000 in 2016. Even Shell and Total, are planning to put chargers on the forecourts of their petrol stations across Europe.

But EVs are not yet a profitable business for carmakers precisely because of their batteries. Chevrolet's Bolt, on sale late last year, costs under \$30,000 with subsidies and travels 238 miles between charges. But each sale will reportedly set General Motors back \$9,000. Tesla's rival, the Model 3, is set to go on sale later this year; the firm has yet to make an annual profit. Even Renault-Nissan, the world's biggest EV manufacturer, loses money on electric models.

Research and development also costs a fortune. Daimler says it will spend €10bn by 2025 on just ten battery-powered mod-



els. Restructuring is also expensive. For a century carmakers have built factories, employed workers and developed a supply chain around the ICE. In one scenario Morgan Stanley reckons that VW's entire car business could make a loss between 2025 and 2028 as it transforms itself.

Some carmakers are better placed than others for the transition. Profitable pre-

mium brands such as Daimler and BMW have the resources to invest and can be confident that their richer customers will be the first to switch to more expensive EVs. Mass-market carmakers have a trickier task, according to Patrick Hummel of UBS, a bank. Despite falling costs, a cheap EV for the mass market is still a distance away. The likes of Fiat Chrysler (whose chairman, John Elkann, sits on the board of *The Economist's* parent company) or PSA Group, which makes Peugeots and Citroëns, have barely begun changing. But these carmakers, already operating with wafer-thin profit margins, must still invest heavily in anticipation of that moment.

EVs may eventually make more money than ICE cars as battery costs fall further. They are competitive in other ways too: EVs are simpler mechanically, and require less equipment and fewer workers to assemble them. But carmakers first face a transition that will hit cashflow and profits. Getting ready for an electric race will be painful, but missing it altogether would be disastrous. ■

Electric cars in Norway

Northern light

OSLO

Sales of green vehicles are booming

TO JUDGE by the gleaming rows of Teslas, Nissan Leafs and other electric cars parked in the snow in central Oslo, Norwegians might already have given up on the internal combustion engine. Before long they probably will. Battery-powered cars and plug-in hybrids together accounted for 29% of all new car sales last year. The 100,000th battery-powered unit sold in December.

Norway first introduced tax perks to boost the electric car market in the 1990s. But sales only sparked in the past five years or so after slicker vehicles with better batteries appeared. Now the country's 5m citizens constitute the most developed national market for electric cars anywhere. Christina Bu, who heads the country's association for electric cars, expects 400,000 electric-only vehicles on the roads by 2020, and predicts 70% of new sales will be of zero-emission cars. As range increases and price falls, demand will rise faster.

Though less than 5% of the total fleet of cars in Norway are electric, the country's transport minister calls it "realistic" to expect an end to sales of new cars powered by fossil fuels by 2025. Fiscal incentives, not an outright ban, will bring this about. Eye-popping purchase taxes typically double the cost of a high-emission car, but these and other levies are waived for clean ones. Drivers of zero-

emission vehicles also skip costly road tolls, cross fjords by ferry for free, park without paying in cities and use bus lanes to whizz by other commuters.

The next step is to finish a part-built charging network. In Oslo seven in ten residents live in apartments and few can charge a car at home. Opportunities abound. Providers of fast-charging services such as Fortum, a Finnish power firm, are starting to sell electricity at a premium. Big stores, including IKEA, have installed recharging stations—for about Nkr1m (\$120,000) each—so customers can top up while shopping. The government says charge points will exist every 50km on main roads, and is subsidising firms that build and run them.

Countries without Norway's oil wealth will struggle to boost the market for electric vehicles similarly. Cheap electricity—Norway produces a surplus from hydropower—and expensive petrol and diesel skew running costs. Mr Solvik-Olsen guesses that last year alone his government missed out on as much as Nkr3bn in tax because of the incentives. Most Norwegians, eager to do more to cut local pollution from traffic in cities, and short of other ways to lower carbon emissions, reckon this is money well spent. In other markets it will be crucial that even cheaper and better cars appear to create an appealing market.

Old media

The Trump bump

Making America's august news groups great again

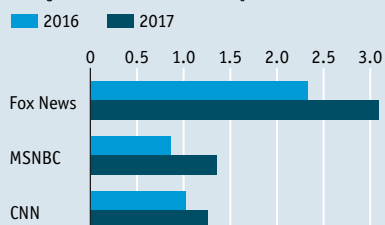
DONALD TRUMP calls it the "failing" *New York Times* in his tweets, but his presidency has breathed new life into the newspaper and other mainstream media outlets. The *New York Times*, the *Washington Post* and the *Wall Street Journal* have all received boosts in subscriptions and page views; cable news networks, such as CNN and the Fox News Channel, are getting huge increases in viewers at a time when most other channels are losing them; and even the long-suffering stocks of newspaper companies are rallying. Since the election shares in the *New York Times Co* have risen by 42%, outperforming even the mighty Goldman Sachs.

Why the boost? The unprecedented nature of political events has kept American eyeballs glued to pages and screens. The pace of change, especially since the election, compels Mr Trump's fans and foes alike to stay abreast of developments. Many do so using Twitter (see next story). But many others seem to want the kind of analysis that established groups provide. Mr Trump's bashing of certain outlets also may have encouraged some to subscribe or watch in defiance.

The Trump bump has been most pronounced at the *New York Times*. It managed to sign up more than half a million ▶▶

Reality TV

United States, daily prime-time viewers
Average of the first six-weeks of the year, m



Source: Nielsen

digital subscribers last year—including 276,000 in the fourth quarter alone, mostly after the election. It now has 3m subscribers in total, including about 1.7m digital-only subscriptions. By one measure traffic to its site is nearly a third higher than a year ago. A never-ending flow of big stories helps. “In the evening you put the non-Trump pages to bed so you can focus on the late-breaking Trump news,” says Mark Thompson, its chief executive.

The *Washington Post*, which has also produced juicy scoops in recent months, does not disclose subscriber numbers under the ownership of Jeff Bezos, Amazon’s chief executive. But speaking at a conference on February 14th in California, Marty Baron, its editor, said subscriptions are growing “at a very rapid rate right now”. The *Wall Street Journal*, owned by Rupert Murdoch, also saw a substantial boost in digital subscribers, to nearly 1.1m by the end of 2016, an increase of about 250,000 over a year earlier.

One way or another, people simply cannot get enough Trump. The three major cable news networks—Fox News Channel, MSNBC and CNN—have enjoyed the three biggest increases in viewership of all American cable channels in 2017, according to information from Nielsen, a research firm. Each network enjoyed an increase of 40% or more in the six weeks to February 12th (see chart). Fox News is the most-watched cable channel of them all, according to Nielsen data supplied by Moffett-Nathanson, a research firm. The network is averaging 3.1m viewers during prime time as of January 2nd; its softer approach to Mr Trump and his antics makes it a destination for his supporters.

The surge arrives at a challenging time for traditional media. In television, most cable channels are suffering declining viewership, which in turn puts pressure on advertising sales. The situation for newspapers is more dire. The market in North America has been in structural decline since the millennium, and lost \$30bn in advertising revenue, a drop of 60%, in the decade to 2015. Last year print ads, still far more lucrative than digital ads, continued to decline sharply at major newspapers. The *New York Times* experienced a 16%

drop in print advertising last year, and like virtually all American newspapers has gone through multiple rounds of staff reductions. The *Wall Street Journal* endured a 21% drop in advertising revenue in mid-2016, leading to yet more cost-cutting and voluntary redundancies.

The recent Trump-led media resurgence is ironic, for the decline of newspapers probably benefited Mr Trump. People have increasingly looked to free, less reliable sources of information on the internet, including social media such as Twitter and Facebook, where Mr Trump is in his element. He proved adept at campaigning amid a confusing mire of fact, fiction and demagoguery.

How long can the Trump bump last? In a call last month Mr Thompson told analysts that it will endure as long as the administration continues “to be creating news and controversy”. Judging as a former journalist himself, he said, he suspected that would take many months, and “possibly years”. Media moguls certainly hope so. ■

New media**#Twittertrouble****Is there life for technology firms beyond Wall Street?**

FOR months Twitter, the micro-blogging service, has received the kind of free attention of which most companies can only dream. Politicians, corporate bosses, activists and citizens turn to the platform to catch every tweet of America’s new president, who has become the service’s de facto spokesman. “The whole world is watching Twitter,” boasted Jack Dorsey (pictured), the company’s chief executive, as he presented its results on February 9th. He has little else to brag about.

But Donald Trump has not provided the kind of boost the struggling firm really needs. It reported slowing revenue growth and a loss of \$167m. User growth has been sluggish, too: it added just 2m users in that period. Facebook added 72m. The day of the results, shares in Twitter dropped by 12%. Because news outlets around the world already report on Mr Trump’s most sensational tweets, many do not feel compelled to join the platform to discover them. Others are put off by mobs of trolls and reams of misinformation.

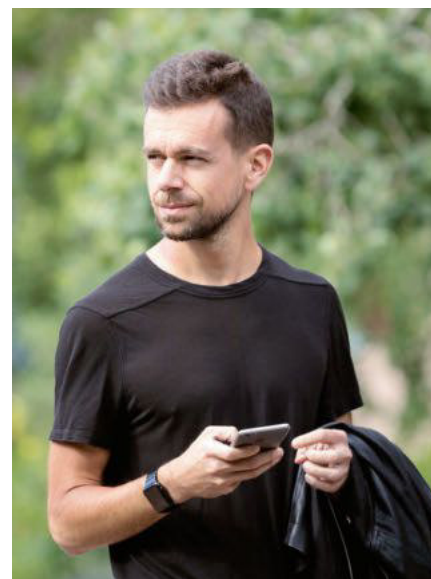
And not even Mr Trump could change the cold, hard truth about Twitter: that it can never be Facebook. True, it has become one of the most important services for public and political communication among its 319m monthly users. It played an

important role in the Arab spring and movements such as Black Lives Matter. But the platform’s freewheeling nature makes it hard to spin gold from. In fact, really trying to do so—by packing Twitter feeds with advertising, say—would drive away users.

Business as unusual

Twitter’s latest results are likely to encourage those who think it should never have become a publicly listed company, and want it to consider alternate models of ownership, such as a co-operative. They view Twitter as a kind of public utility—a “people’s platform”—the management of which should concern public interests rather more than commercial ones. If the company were co-operatively owned by users, it would be released from short-term pressure to please its investors and meet earnings targets.

Though some co-ops have shown themselves resilient, they are generally thought to be less dynamic—a shortcoming of democratic governance. Yet Sasha Costanza-Chock, an activist who teaches at the Massachusetts Institute of Technology, believes that Twitter users could also come up with features that would rescue it from its most toxic elements, such as harassment and hate speech. Others envision a futuristic co-op—or, inevitably, “co-op 2.0”—in which responsibility is split between idealistic entrepreneurs, who control product innovation, and users, who have the say on such matters as data protection. Even if such models could be made to work, Twitter is unlikely to become a co-op soon: its market capitalisation still exceeds \$12bn, an amount users can hardly dream of scraping together. Yet the debate about what to do with the service has stoked another, long-simmering discussion in the startup world: whether firms should always aim to go public. “We have ▶▶



Not watching Twitter

▶ become very myopic about what it means to be a corporation,” explains Albert Wenger, a partner at Union Square Ventures, a technology-investment firm. Armin Steuernagel, founder of Purpose Capital, a consultancy, says he sees more and more start-ups questioning whether they should opt for conventional ownership structures.

Options abound. Online, Etsy, Kickstarter and Wikipedia, among others, have pursued set-ups that allow them to keep their social benefit front-and-centre. But old media outlets can offer lessons too: many publications in Europe, including *The Economist*, have ownership structures that isolate them to some degree from commercial interests.

As for Twitter, it is likely to be snapped up once its value is low enough. Although the most likely buyer is another tech firm, surprises cannot be excluded. Users should start thinking like a traditional labour union, says Mr Wenger. If they stage a virtual walkout, they might have the bargaining power to change its governance structure. #Squadgoals. ■

Radio spectrum

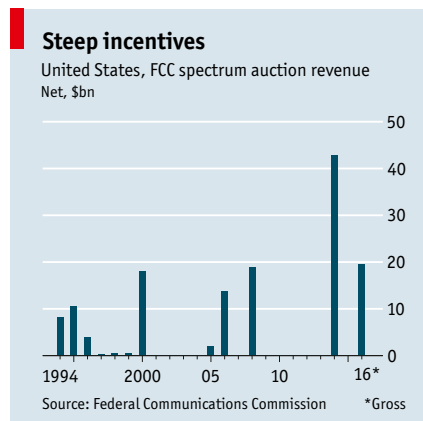
Inventive auction

Despite poor proceeds, America's latest spectrum sale is a model worth copying

MARKETS don't simply emerge, but are created by the state, argued Karl Polanyi, an economist, in “The Great Transformation”. This is certainly true for radio spectrum, an intangible natural resource, which governments now regularly sell in auctions. The most intricate ever organised came to an end in America on February 10th, bringing in \$19.6bn.

When America's Federal Communications Commission (FCC) started auctioning spectrum in 1994, it did so because lotteries and “beauty pageants” to allocate the scarce resource seemed otherworldly when billions were at stake. Two decades later the FCC again tried something new, because the established auction system, in turn, was no longer adequate. With most spectrum compatible with today's technology already allocated, the agency could only satisfy ever-growing demand from mobile carriers by convincing current holders of big slices, mostly broadcasters, to give up some of their licences.

The FCC's solution was to organise not one but two sets of sell-offs, collectively called an “incentive auction”. The first set finds out the prices at which broadcasters are willing to part with radio waves (hence “incentive”). The second determines how much mobile operators are willing to pay



for that spectrum. The rules are Byzantine and involve repackaging of spectrum into usable blocks, but broadly speaking the process comes to a close when the bidding price exceeds the selling price. If not, both sets of auctions are repeated, starting with fewer blocks of spectrum on offer alongside lower prices.

This time round it took the FCC four attempts to match supply and demand. In the first reverse auction last March, the agency obtained commitments from broadcasters to sell 126 megahertz of spectrum for \$86.4bn. In the end they gave up 84 megahertz for more than \$10bn, for which bidders paid \$19.6bn, with the difference going mostly to America's Treasury. Before wireless operators can start using their new spectrum, however, they will have to take part in a third auction, which will determine by the end of March the exact frequencies they get.

Compared with the FCC's previous auction in early 2015, which brought in \$41bn for 65 megahertz, the proceeds are disappointing. There is criticism of the complex process, which lasted a year and cost a remarkable \$207m. Yet such gripes seem unfair. It is the auction of 2015 that is an outlier; the results of the latest one are actually in line with earlier spectrum sell-offs (see chart). The real test will be whether regulators elsewhere will again copy the FCC's novel approach. Europe, for instance, could certainly do with this new type of auction: as in America, demand for spectrum outstrips supply and broadcasters are loth to give up their licences.

Another question is what type of system the FCC will introduce once all the available spectrum has been shuffled around. The incentive auction was a step towards a dynamic market, as it also earmarked some spectrum for shared unlicensed use (which will particularly please those who make and use wireless gadgets). Perhaps, one day, small slices will be traded as much online advertising is today, with virtual property being auctioned off in real time. Such a system would certainly qualify as being the most complex market ever created. ■

PSA and Opel

Driven together

A potential deal shows that size is important but not everything

AFTER sweeping past a significant milestone, drivers rarely slam their vehicles into reverse. Yet General Motors (GM), which last year joined Toyota and Volkswagen in an elite group that sells over 10m vehicles a year, may be on the brink of such a manoeuvre. On February 14th the American firm and PSA Group, which makes Peugeots and Citroëns, sprang a surprise by confirming that they were in talks that could lead to the French carmaker buying GM's European operation. GM's decision to downsize has many merits, but the advantages of getting bigger are much less clear-cut for its European counterpart.

The two carmakers say a deal for Opel (which carries the Vauxhall brand in Britain) is only a possibility. But GM's global might is not reflected at Opel, and it is probably keen to offload a carmaker that it has owned for nearly 90 years. Opel has done little other than disappoint in the recent past. Its 6% share of the European market puts it behind seven other brands and the business has lost money for years.

GM has considered offloading Opel before. In 2009, as it struggled in bankruptcy protection in the wake of the financial crisis, it talked to Magna, a car assembler, and Fiat about a sale. So parlous was Opel's state that the latter demanded money to take the business on and GM pulled out of negotiations. It also tried an alliance with PSA to control costs, even taking a 7% stake in the French firm in 2012, but the savings have disappointed and the shareholding was sold in 2013. GM may have finally decided that although it is unlikely to get a huge sum for Opel (which has big pension liabilities), the cash it invests in Europe might be better spent on its American and Chinese businesses, where returns are handsome, or on strengthening plans for electric cars and autonomous vehicles.

Selling while the European market is at a peak is sensible. Buying may not prove as wise. Although acquiring Opel would propel PSA to second place in Europe with 16% of the market, it would still lag behind VW's 24%. Taking out a competitor should bring more pricing power but this will be modest according to Exane BNP Paribas, a bank, and will benefit all of Europe's carmakers. But cost savings should at least help PSA spread the huge financial burden of electrification and developing self-driving across 4.2m cars rather than 3.1m.

Carlos Tavares, PSA's boss, restructured his company successfully, but the scope for ▶▶

▶ repeating that trick at Opel is limited. Cost-saving and efficiency drives at PSA, which came close to bankruptcy in 2013, have returned it to profitability. But PSA had leverage: it was in trouble and Europe's car market in a trough when it struck a deal with French unions. Labour bosses in Germany, home to over half Opel's employees, and Britain, where it has two plants, will not prove as pliant.

The routes PSA and GM have taken recently suggest a shift from the industry consensus that "bigger is better". The French carmaker has sacrificed sales for profitability; GM, in closing factories in Russia and Australia and withdrawing the Chevrolet brand from Europe, has done the same. For GM, selling Opel would fit with this strategy, but buying it would represent a screeching U-turn for PSA. ■

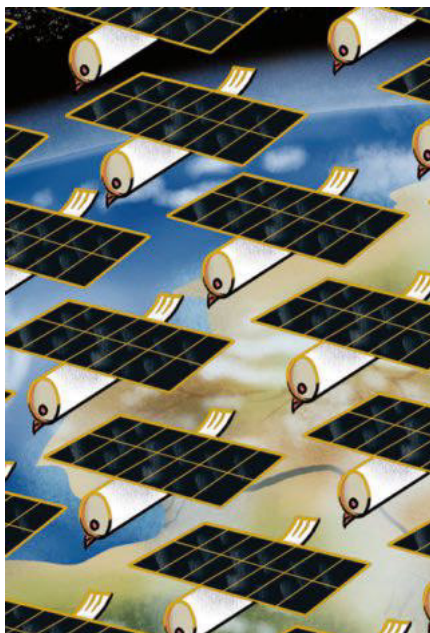
Space firms

Eyes on Earth

Planet's satellites offer customers a new world view every day

BUILT by the Indian Space Research Organisation, the Polar Satellite Launch Vehicle threw itself into the sky at 3,58am GMT on February 15th. It took with it a record-breaking 104 satellites—88 of which belonged to a single company, Planet, a remote sensing business based in San Francisco. Planet now has 149 satellites in orbit—enough for it to provide its customers with new moderately detailed images of all the Earth's land surface every single day.

The satellites Planet makes—it calls



them "doves"—measure 10cm by 10cm by 30cm. The first doves, launched five years ago, could send back pictures of just 3,000 square kilometres a day. But the satellites have followed a trajectory of improvement much closer to that seen in cell-phones—from which they get some of their components—than the established satellite industry. The latest doves can cover 2.5m square kilometres a day.

The expanded fleet of satellites will send over 3 terabytes of data a day to more than 30 receiver stations spread around the Earth. After processing to remove distortions and to locate each image, the data will be in the cloud and ready for the company's clients within hours.

Planet does not provide many details about its customers, but Will Marshall, the company's CEO, says that it has over 100. Some are spooks, historically the biggest consumers of satellite images. But though Planet has spoken of a big contract with the relevant American outfit, the National Geospatial-Intelligence Agency, Mr Marshall says the NSA is not his biggest customer. Other buyers include mapmakers, financial companies and multinationals—especially those in the energy sector with widespread assets.

Providing daily updated images of the whole surface of the Earth fulfils one of the goals Planet had at its founding in 2010, since when it has raised capital of \$183m. That does not mean it will stop launching doves; among other things, passing over the same place more than once a day increases the chances of a shot unobscured by cloud. But turning its unique product into an ever bigger earner is the priority.

A key to doing so is processing the images to answer pressing questions: what has changed since yesterday? Is that illegal logging? What does the number of containers in these ports suggest about trade balances? Planet will be providing more such analysis itself, but there are also third parties eager to play. SpaceKnow, a startup which focuses on turning satellite data into analysis the financial community will pay for, has just raised \$4m.

Satellites alone do not make a good business, as illustrated by the fate of an earlier startup, Terra Bella. Formerly known as Skybox, it made SkySat satellites and was bought by Google for \$500m in 2014 amid fanfare. But in recent weeks Google sold the firm to Planet in an equity deal which almost certainly gave Terra Bella a much lower valuation; at the same time, it became a big customer for Planet's data.

This is the second time Planet has snapped up satellites from a rival in trouble, and the deal could work out well. The resolution available from the doves, three to five metres, is a bit coarser than many consumers of satellite data are used to. The larger Terra Bella satellites can pick out features less than a metre across. Mr Marshall

Private aviation

Up, up and away

Flying for play, not work

AS SCHOOLS across Europe break for February half-term, it is not just the Alpine pistes that are congested: private-jet terminals across the continent are also full to bursting. The number of bookings for private aircraft to the Alps in the week ending February 19th is 40% higher than in the same period last year, says Adam Twidell of PrivateFly, a booking service. Although about half the bookings were made by firms, not all those on board will be working much. For executives are using corporate jets less for business, and rather more for their leisure.

Video-conferencing cuts the need for face-to-face meetings. Scheduled flights link more destinations directly than ever before. And corporate jets are hard to justify when squeezing costs elsewhere. At companies acquired by private-equity firms the number of private flights falls by a third within three years, according to research by Jesse Edgerton, now at J.P. Morgan, a bank.

But bosses are increasingly using executive jets for both work and play. The average value of this perk per executive in Fortune 100 firms has risen by about 10% since 2013, says Equilar, a research firm. Executives justify flying private on the grounds that they may need to get back to the office quickly in an emergency, and that confidential documents or company devices may be lost or stolen on a commercial flight. But when they enjoy that extra security, they are exposing themselves to another risk: private-plane crashes are a leading cause of death for CEOs, behind only heart attacks, cancer and strokes.

says Planet is interested in developing software whereby the new sharper-eyed satellites would automatically take pictures of places where the doves had spotted something change between one day and the next.

Planet is not the only company using small satellites to produce big data; the launch on February 15th also carried up eight ship-tracking satellites owned by Spire, just a couple of streets away from Planet. The companies hope that, as more and more customers come to see the value of an endlessly updated, easily searchable view of the world, insights from satellites will become ever more vital to the data-analysis market. The more normal their wares start to seem, the more spectacular their future may be. ■

Schumpeter | Myopium

Corporate short-termism is a frustratingly slippery idea



AS AMERICA'S economy has misfired over the past decade, several grand theories have emerged about what went wrong. Economists fret about secular stagnation, debt hangovers and whether demography explains sluggish growth. In American boardrooms, meanwhile, a widely held view is that a dangerous short-termism has taken hold. This theory contends that investors and executives have become myopic, leading firms to invest too little. Like many business ideas, short-termism fits the experience of some individual business people. But as a theory about how the economy works it is too nebulous to be much use.

People have always worried that financial markets cannot see beyond their noses. In 1936 John Maynard Keynes noted that the horizon for investors was "three months or a year hence", even though they were trading the securities of firms and governments that would probably last for decades. Since the crisis of 2008-10, worries about short-termism have risen again. Bosses fret that if they miss quarterly earnings forecasts they will be fired. Activist hedge funds seeking a quick buck are said to spook big corporations. The average share changes hands every 200 days for firms in the S&P 500 index. Terrified companies, the argument goes, no longer invest in their business and instead bribe their owners. For every dollar of operating cashflow S&P 500 companies make, excluding financial firms, they spend 44 cents on capital investment and 56 cents on buy-backs and dividends.

A new study by McKinsey drills deeper. The consultancy took about 600 firms and labelled some as short-termist if they exhibited five habits: investing relatively little, cutting costs to boost margins, initiating lots of buy-backs, booking sales before customers pay and hitting quarterly profit forecasts. The study concludes that 73% of firms are short-termist. The elite 27% of firms that are long-termist performed better, McKinsey reckons, seeing their profits increase by, on average, 36% more than short-term firms between 2001 and 2014. The methodology is robust, and controls for the fact that some industries grow faster.

Surely it is an open-and-shut case? Not really. The theory of short-termism suffers from three difficulties: it isn't an accurate description of what is happening across America's economy; it doesn't deal with the question of causality and, last, it is a distraction from the real difficulty.

Take accuracy first. There are plenty of signs that short-termism is not a problem. Those timorous chief executives serve longer than the average Roman emperor did: bosses departing in 2015 had an average of 11 years in office for S&P 500 firms, the highest figure for 13 years. Activist hedge funds own less than 1% of the stockmarket. The average share is traded many times because of a cohort of high-frequency computerised traders. But their churning masks the sharp rise of passive funds, which already own 13% of the market and which hold shares indefinitely.

Supposedly myopic markets often look far into the future. The bond market lends to the government for 30 years for an interest rate of just 3%. Equity investors place huge values on firms that won't make serious profits for years and years. Amazon is the world's fifth-most valuable firm, with a colossal \$400bn market capitalisation. About 75% of that value is justified by profits that are expected to be made a decade or more from now. It is probably the biggest bet in history on a company's long-term prospects.

Firms are not investing at weirdly low levels. Frightening figures on them starving themselves to splurge on buy-backs are misleading. Investment—capital spending plus research and development—is 9% of sales for S&P 500 firms, in line with the 25-year average (excluding financial companies). For the economy, private-sector capital spending, excluding housing, is at 12% of GDP, equal to the average since 1945. On both measures investment is not that far from the frothy levels seen in 2000, during the dotcom boom, the last time companies went wild. Buy-backs are so high because profits are abnormally high, which in turn may reflect the rising level of concentration in most industries. Were firms to try to invest all their surplus funds, they would need almost to double investment to a reckless 17% of sales. If Ford invested all its record cash flows, based on 2016 figures, it would double its plant in 30 months, an act of insanity in the car business.

What about the second flaw, causality? The McKinsey study makes clear that this is hard to demonstrate. Do short-term firms become weak or do weak firms rationally adopt strategies that might be judged short term? Almost all managers think that their firms have a right to grow, but in any industry it is natural that some firms stagnate or decline just as some of their rivals expand. Shrinking firms should reduce costs and return cash to investors.

Consider IBM. Its sales have sunk back to where they were in 1997. Over this period it has slashed costs and ramped up its margins, cut investment by half and halved its number of shares through buy-backs. By one account these were myopic choices that caused IBM's decline. By another they were tough decisions, made in response to Big Blue's retreat as a new generation of technology firms took over leadership of the industry. In the end, labelling IBM as long-term or short-term doesn't clarify much.

From here to eternity

The final flaw is that short-termism is a distraction. Many big firms wallow in lucrative stagnation. Profits are abnormally high even as the cost of capital is low. The theory of short-termism suggests that the solution is to prod incumbent firms to invest vast amounts and insulate their managers from investors. But there is another approach that gets to the root of the problem: incumbents' fat profits need to fall. Competition policy needs to weaken the entrenched position of established firms and help new entrants. That would make the economy more dynamic, boost wages and end the era of surplus profits that are put to no use. It's not a message many powerful CEOs are keen on. ■



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Brexit and financial centres

Picking up the pieces

PARIS

European cities hope to scoop business from London. The size of the prize is far from clear

“WHEN the vote took place,” says Valérie Pécresse, “it was an opportunity for us to promote Île de France”, the region around Paris of which she is the elected head. Two advertising campaigns were prepared, depending on the result of Britain’s referendum last June on leaving the European Union. The unused copy ran: “You made one good decision. Make another. Choose Paris region.”

Brexit has made Paris bolder. Once Britain leaves Europe’s single market, the many international banks and other firms that have made London their EU home will lose the “passports” that allow them to serve clients in the other 27 states. Possibly, mutual recognition by Britain and the EU of each other’s regulatory regimes will persist. But no one can rely on the transition to Brexit being smooth, rather than a feared “cliff edge”. Best to assume the worst.

Britain is expected to start the two-year process of withdrawal next month. Given the time needed to get approval from regulators, find offices and move (or hire) staff, financial firms have long been weighing their options. London will remain Europe’s leading centre, but other cities are keen to take what they can.

The Parisians are pushing hardest, pitching their city as London’s partner and peer. “I don’t see the relationship with London as a rivalry,” says Ms Pécresse. “The rivalry is not with London but with Dublin, Amsterdam, Luxembourg and Frankfurt.”

Especially, it seems, Frankfurt. Paris has more big local banks, more big companies and more international schools than its German rival. London apart, say the French team, it is Europe’s only “global city”. When, they smirk, did you last take your partner to Frankfurt for the weekend?

This month the Parisians were in London, briefing 80 executives from banks, asset managers, private-equity firms and fintech companies. They are keen to dispel France’s image as an interventionist, high-tax, work-shy place. The headline corporate-tax rate is 33.3% but due to fall to 28% by 2020. A scheme giving income-tax breaks to high earners who have lived outside France for at least five years will now apply for eight years after arrival or return, not five. The Socialists, who run the city itself, and Ms Pécresse’s Republicans are joined in a business-friendly “sacred union”, says Gérard Mestrallet, president of Paris Europlace, which promotes the financial centre. Ms Pécresse and others play down the risk that Marine Le Pen, of the far-right, Eurosceptic National Front will win the presidential election this spring.

More quietly, Hubertus Vâth of Frankfurt Main Finance (the counterpart of Paris Europlace) is “pretty confident” about his city’s ability to attract more bankers. To Mr Vâth, the big prize is the clearing of trades in euros, which London dominates but which both Frankfurt and Paris hope to snaffle. The European Central Bank once

tried to force clearing to move from London to inside the euro zone, but was thwarted in 2015 when EU judges ruled it lacked the necessary authority. After Brexit, it may try again.

Nicolas Mackel of Luxembourg for Finance, the grand duchy’s development agency, is relatively “laid back”. All are welcome, Mr Mackel says, but no taxes or regulations have been changed, nor applications fast-tracked. Business has been brisk anyway, because of the duchy’s expertise with fund managers. China’s big banks use Luxembourg as a continental hub.

After a slow start, the Dutch too are trying to gain from any “Brexodus”. The foreign-investment agency has expanded its (small) office in London. The Netherlands offers a high quality of life and almost everyone speaks English. But Amsterdam’s financial centre lacks the scale of Frankfurt or Paris, and is short of housing and schools. A cap of 20% of salaries on bankers’ bonuses is also off-putting, although the finance ministry says global banks may be exempt under certain conditions.

Dublin is keen to attract more asset managers. Irish central bankers are worried about whether they have the right expertise to regulate, say, complex trading. Some would be relieved if the hordes do not materialise. The city is already short of office space, housing, roads and international-school places.

The size of the prize is hard to gauge. Much depends on the post-Brexit agreement between Britain and the EU, and what regulators demand in capital and personnel. Banks may also shift some work out of Europe, to New York, or even Hong Kong or Singapore. Some services, warns a banker, may not be provided at all. Mr Vâth thinks that, with euro clearing, Frankfurt could see an extra 10,000 jobs or more. Arnaud de Bresson of Europlace esti- ▶▶

mates that Paris stands to gain 10,000 “direct” posts in finance and fintech, plus 10,000-20,000 in law, accountancy and so on. Europlace hasn’t tried to quantify the number tied to clearing.

Different institutions have their own priorities. HSBC, a big British bank, has already said that it expects to move around 1,000 jobs to Paris, where it already has a subsidiary; some other banks still sound wary of the place, despite the best efforts of the French. Switzerland’s UBS, which also says around 1,000 London jobs are at risk, set up shop in Frankfurt last year: that seems a natural base, although its bosses

have also mentioned Madrid. Fund managers not already in Dublin or Luxembourg are likely to head there. Lloyd’s of London, an insurance market, and Blackstone and Carlyle, two American private-equity giants, reportedly favour Luxembourg for their EU home.

The continental European financial centres all say they have acres of space for new arrivals. There should be more than enough, at least for now. “We’re not talking about banks moving lock, stock and barrel,” says Lee Elliott, head of commercial research at Knight Frank, a property consultancy. All banks have bases in all the main

centres and after the downsizing of recent years, they still have vacant space. James Maddock of Cushman & Wakefield, another property-services firm, says that since 2008, banks in Europe have shifted 34,000 back- and mid-office jobs to eastern Europe, a further 5,050 to Ireland and 14,200 to British cities outside London. Brexit will involve fewer (if better-paid) people.

But in all the cities vying for post-Brexit trade, a common refrain is heard: we wish it wasn’t happening. In Luxembourg too, Mr Mackel says, an ad was planned for the day after the referendum: “We would have missed you.” It didn’t appear. ■

Buttonwood | Undaunted by downgrades

Politicians have been able to ignore the bond markets

ONCE upon a time, countries jealously guarded their credit ratings. Before the 2010 British election, George Osborne, soon to be the chancellor of the exchequer, emphasised the importance of cutting the budget deficit in order to maintain the country’s top AAA rating.

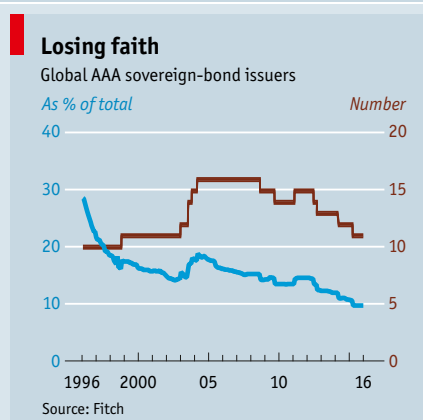
But despite the spending cuts and the tax increases he imposed, Britain was downgraded in 2013. There are only 11 countries with AAA status, according to Fitch, a rating agency, down from 16 in 2009. By value, only 40% of global sovereign debt has the highest rating, down from 48% a decade ago.

There has been an even more dramatic downward trend in corporate debt ratings. There were 99 AAA-rated American corporations in 1992, according to S&P Global, another ratings group; now there are just two. That trend is linked to the tax deductibility of interest: in terms of tax efficiency, it has made sense to increase the amount of debt, and reduce the equity, on the balance-sheet.

Clearly, at the sovereign level, the deterioration has been driven by the global financial crisis, which dented both economic growth and tax revenue. But with bond yields very low, and with central banks willing buyers of government bonds, countries have not paid a penalty for their bigger debt burdens.

Japan first lost its AAA rating in 2001, as its debt-to-GDP ratio soared. But that didn’t stop investors from buying its bonds, especially when the country succumbed to bouts of deflation. A very low nominal yield is still positive in real terms when prices are falling. Even if investors did lose their appetite, the Bank of Japan is a willing buyer; it has a target for the country’s ten-year bond yield of zero and, at 0.08%, the current level is not far off.

It is a similar story in America, which



lost its AAA ranking from S&P in 2011. Five years later, the ten-year yield was at a record low of 1.36%.

Clearly the bond vigilantes that spooked politicians in the 1990s have lost their menace. Dealing with the deficit is no longer the most important issue. It is not just central banks. Commercial banks, pension funds and insurance companies all also need to own government bonds for liquidity or regulatory reasons; they are relatively indifferent to the actual level of yield involved.

In fact, in terms of default probability, the difference between the highest credit ratings is pretty trivial. A 2014 study of rankings since 1975 by S&P found that 97% of AAA sovereign bonds and 86% of AA bonds were still ranked in the top two bands ten years later.

When markets don’t penalise them for running deficits, it seems rational for governments not to risk the wrath of voters by curbing borrowing and imposing austerity. There are exceptions to this rule—those countries that do not have the luxury of borrowing in their own currency. In the euro zone the most prominent example is

Greece, which is still struggling to deal with its debts (see Free Exchange).

But even the euro zone has got away with less punishment than might have been expected when the Maastricht criteria for single-currency membership were established 25 years ago. Germany has a debt-to-GDP ratio over 70%, more than ten percentage points above the target level. Its ten-year bonds yield just 0.37%.

The rise of populism means that governments are even less likely to worry about an adverse reaction in the bond markets. Donald Trump has promised a combination of tax cuts, infrastructure spending and the safeguarding of entitlements such as Social Security and Medicare. These plans have to pass Congress, but the Committee for a Responsible Federal Budget, a lobby group, estimated that they would push American debt to 105% of GDP (from 77%) in a decade. Britain has abandoned its target of eliminating its deficit by 2020 (Mr Osborne’s original target was 2015). Facing an insurgent threat from the likes of Marine Le Pen and Geert Wilders, European governments will be wary of raising taxes or cutting benefits.

In macroeconomic terms this is sensible. The main priority for rich countries should be developing a decent rate of growth rather than austerity. But if growth does not pick up significantly, the outline of a future crisis looks clear. Current debt levels are perfectly serviceable at current yields. But if yields rise another two to three percentage points that might no longer be the case, especially as government budgets will be strained by rising pensions and health-care costs from their ageing populations. At that point, bond investors might wake from their slumber and take their revenge.

Hank Greenberg

See you outside

NEW YORK

A settlement ends a long lawsuit, but the arguments go on

A SETTLEMENT to be signed in front of a New York judge as *The Economist* went to press on February 16th marked the end of years of attritional legal warfare. It was less clear who had won: the state of New York or Maurice (Hank) Greenberg, the now 91-year-old former chief executive of AIG, once the world's largest insurer, but saved by a government bail-out in 2008.

Eric Schneiderman, New York's attorney-general, had seemed in little doubt when he issued a surprise statement on February 10th. Hank Greenberg had admitted "to initiating, participating and approving two fraudulent transactions...that fundamentally misrepresented AIG's finances." He had agreed to pay a \$9m fine.

Mr Greenberg, however, saw things differently. Within hours of Mr Schneiderman's statement, his attorney, David Boies, issued a response, accusing the state of being false and misleading and noting that Mr Greenberg's own carefully negotiated statement had no "reference to any accounting being fraudulent" or suggested that Mr Greenberg was aware of any fraud.

By February 13th Mr Greenberg was on the offensive. In a press conference held at the Park Avenue headquarters of the insurance business he now runs, Starr Companies, he denounced Mr Schneiderman's characterisation of the deal and demanded an apology (not forthcoming). He had a sympathetic hearing in many quarters. Eliot Spitzer, the attorney-general who commenced the litigation in 2005, was known for loudly filing headline-grabbing cases.

Mr Greenberg had assembled a legal dream team at a cost, he estimated during a televised interview, of \$200m. His various lawyers filed eight pre-trial appeals and innumerable motions. In the process, the scope of the original charges was whittled down. Demands for damages shrank from billions to millions of dollars. Mr Schneiderman is the third attorney-general to have presided over the case; a fourth incumbent might have given up.

Mr Greenberg has long contended AIG would never have collapsed had he been permitted to remain in charge, and consequently its failure stemmed from the state's actions. But long before his departure, AIG under Mr Greenberg had built a massive derivatives position as well as a complex, opaque corporate structure that made outside scrutiny of risk difficult, if not impossible, and raised concerns that genuine problems were being hidden.

The alleged chicanery at the heart of the legal dispute involved whether the numbers AIG did provide were truly indicative of its performance. One of the contested transactions, with GenRe, a reinsurer, transformed an underwriting loss into an investment loss, protecting the reputation of its underwriting. The other appeared to boost AIG's loss reserves, and thus its appearance of financial strength. Neither of the deals improved the underlying performance of the company nor was intended to transfer much risk. Asked as the press conference ended why he did the GenRe deal, Mr Greenberg replied, oddly, "for appearances". That seemed to be precisely the point the attorney-general was trying to establish. But Mr Greenberg still insisted that "deceiving investors never entered our mind." He and the state have settled; but they refuse to call it a draw. ■

Spanish banking

See you in court

MADRID

Assigning blame for the calamitous near-collapse of Bankia

ALMOST five years have passed since the near-collapse of Bankia, one of Spain's biggest lenders, forced the country into a European banking bail-out. But inquiries into what went wrong continue—and widen. This week, for the first time, the investigations embroiled Spain's financial regulators, including a former governor of the central bank, the Bank of Spain, Miguel Ángel Fernández Ordóñez.

On February 13th the national court indicted Mr Ordóñez and seven other senior regulators, ordering a criminal investigation. The court is questioning why they allowed Bankia to sell shares in an initial public offering in 2011, less than a year before Bankia's portfolio of bad mortgage loans forced the government to seize control of it. It said there was evidence the reg-

ulators had "full and thorough knowledge" of Bankia's plight. After its nationalisation, it went on to report a €19.2bn (\$24.7bn) loss for 2012, the largest in Spanish corporate history.

The investigation comes as several bankers are already awaiting sentencing for mismanagement and fraud. Most prominent is the former chairman of Bankia, Rodrigo Rato, previously Spain's finance minister and managing director of the IMF. Mr Rato and other directors are accused of misleading investors, and, separately, of embezzling money by using corporate credit cards for their own purchases.

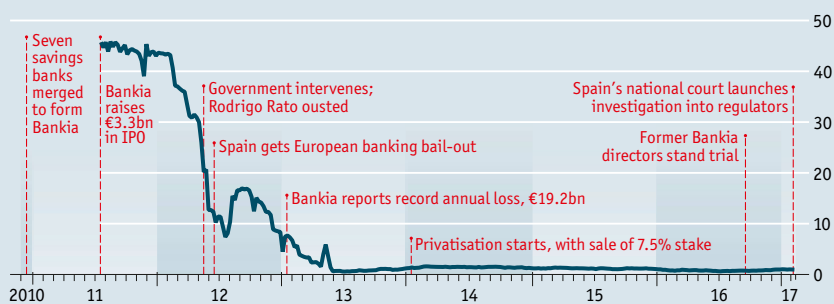
The evidence against the regulators comes mostly from internal e-mails and reports compiled by inspectors and then allegedly ignored by their superiors. In one in-house exchange of information mentioned by the court, an inspector called Bankia "a money-losing machine", whose deficiencies could not be solved by a share listing. The court also called "devastating" the content of another report, urging Bankia to look for a buyer, preferably a foreign one, rather than proceed with a listing. Based on its estimate of its losses, it described Bankia as "a group that is not viable", an opinion written in red capital letters. The report was sent to Pedro Comín, a director of the Bank of Spain and one of three central-bank officials who resigned this week after the court's indictment.

Spain's judges rarely send first-time offenders to prison for financial crimes. But in January five senior executives of Novacaixagalicia, a regional bank, became the first Spanish bankers to go to jail for being guilty of fraud and mismanagement during the financial crisis. The national court unexpectedly altered a sentence issued in 2015 that had found the five guilty of embezzlement, but had given them only suspended prison sentences.

Spain has drawn the curtain on its banking crisis, led by a slimmed-down and rescued Bankia that returned to profit under new management as early as 2013. But the long—and slow-moving—arm of the law is only now reaching those responsible for the mess in the first place. ■

The years that were flat

Spain, Bankia share price, €



Sources: Thomson Reuters; *The Economist*

Carbon tariffs and steel

Steely defences

Border taxes on carbon may be counterproductive

THE European Union wants to slash greenhouse-gas emissions to 80% below 1990 levels by 2050. It is on course to cut just half that amount. To get back on track, on February 15th, the European Parliament voted for a plan to raise the cost for firms to produce carbon. It has prompted growing calls for the bloc to tax the carbon emissions embodied in the EU's imports. At best, such a levy will barely curb emissions. At worst, it could cause a trade war.

The EU's latest reforms try to put up the price of carbon by cutting the emissions allowances firms are granted. They include the EU's first border tax on carbon, levied on cement imports. Steel firms, also heavy users of carbon, say their exclusion from this scheme is unfair. This week Lakshmi Mittal, the CEO of ArcelorMittal, the world's biggest steelmaker, offered his support for the tax. Similar proposals in America are also gaining support. This month a group including two Republican former treasury secretaries, James Baker and George Shultz, proposed a similar carbon tax on all imports at the border.

Boosters say such proposals remove the distortions carbon taxes cause. Under the EU's reforms, steelmakers in Europe would pay up to €30 (\$32) to emit a tonne of carbon, but foreign producers selling in the EU would not have to pay a cent. Putting an equivalent tax on these imports is a neat solution to this problem. "It's wonderful in theory," says Jean Chateau, an economist at the OECD, a club of rich countries. But "in reality it's very problematic."

One big problem is how to calculate the carbon in imports. This is not easy even for simple steel sheets; for items made of several bits of metal from different sources, it is hellishly complex. Some countries might even refuse to provide the information. And any method brought in for foreign firms, if not applied to local ones, could fall foul of WTO rules, adds Michael Moore of George Washington University.

The environmental impact of such policies can be overstated. Several studies by economists at the DIW Berlin, a think-tank, have found little evidence that raising the EU's carbon price without a border tax has distorted trade so far. Border taxes may not force dirty producers to close anyway.

But what trade economists fear most is the risk that border taxes could spark a tariff war, adds Chris Beauman of the European Bank for Reconstruction and Development. Lobby groups could easily pervert



Fuel for a dirty war

the charges into a form of quiet protectionism. The EU and America are already in a politically driven tit-for-tat over steel duties with China. Rather than prod countries to tighten their own environmental regulations, new carbon tariffs could make that more vicious. A global carbon price would produce far greater economic benefits than border taxes, but would require closer international co-operation. A trade war is not the way to get there. ■

Asian trade

Bouncing back

The world's export dynamos shrug off the threat of a trade war, for now

IT IS easy to be downcast about the state of global trade. It has faced stiff headwinds in recent years: in 2016, for the first time in 15 years, it grew more slowly than the world economy. Regional and global trade deals are going nowhere, slowly. And America's new president has promised to protect his country from trade-inflicted "carnage".

Amid all this gloom, optimism seems foolhardy. But in Asia's export dynamos, trade is picking up steam. In January, Chinese exports rose year-on-year for the first time in ten months; South Korean shipments have increased for three months in a row. Surveys reveal strong export pipelines in Japan, Singapore and Taiwan. Healthy order books for Asia's manufacturers normally bode well for global trade and indeed the global economy. It is too soon to declare a definitive upturn in global trade, but it looks like more than a blip (see chart).

The simplest explanation for the re-

bound is that global demand is itself on solid ground. Global growth is still slower than before the financial crisis of 2008, but is heading in the right direction. Both the IMF and the World Bank think it will speed up a bit this year. Investors have turned more bullish: the MSCI all-world index, which covers 46 different markets, hit a record high this week. The rebound in Asian exports is more reason for bullishness.

Structural changes may also be at play in Asia. A much-cited factor behind the slowdown in global trade in recent years has been China's tightening grip on complex supply chains. As more production takes place inside a single country, fewer cross-border transactions are needed to produce final goods. Yet this consolidation within China is starting to meet more friction. China is still aiming for a bigger share of high-tech industries, but less-developed countries in Asia are scooping up more of its low-end manufacturing, and wealthier markets are also fighting back. Over the last nine months of 2016, China's export performance trailed the rest of Asia.

Nevertheless, there are good reasons to restrain the optimism. The rebound in exports from Asia's commodity producers such as Indonesia and Malaysia is mainly the result of higher prices for oil and metals. Growth in their trade volumes has been much slower. For Asia's high-tech economies, the rebound's durability hinges on the fickle tastes of consumers. Both Samsung and Apple are expected to launch shiny new gadgets this year. Semiconductor makers around the region have gone into overdrive in anticipation. If demand falls short of expectations, exports of electronics will quickly dive again.

And looming large over all these trends is Donald Trump. Fears that he might declare China a currency manipulator in his first few days in office came to naught. But his threats during the election campaign to slap heavy tariffs on Chinese products still linger in the background. A trade war would be unwelcome at any time. If it came just when the world was breaking free from a long slump in global trade, the irony would be all the more cruel. ■



Copper

Two down

Strikes and other supply constraints fuel long-term optimism on copper

DURING the commodity “supercycle”, prices largely marched up and down in unison, fuelled by the strength (or weakness) of demand in China. Since last year commodities have again been on a tear, but for more idiosyncratic reasons. In the case of copper, strikes and supply disruptions in two of the world’s largest mines have helped push prices this week to their highest level in 20 months. This fits into a narrative of longer-term potential supply shortages that has investors licking their lips over prospects for the red metal.

A strike that began on February 9th at Escondida in Chile, the world’s largest copper mine, has been compounded by a dispute between operators of Grasberg, another huge copper mine, located in the Indonesian province of Papua, and the government. That led to a halt in copper-concentrate production there, too, on February 10th. The two account for 9% of mined copper supply.

Robert Edwards of CRU, a consultancy, says a one-month shutdown at both mines would remove about 140,000 tonnes, or 0.7% of the world’s output this year. He adds that labour contracts amounting to 14% of production are up for renewal this year, raising the spectre of further strikes. The possibility that disruptions in 2017 could increase from 2016, at a time of robust Chinese demand, has pushed up prices recently (see chart).

In Chile, BHP Billiton, operator of Escondida, has clashed with the workers’ union over benefits. This week, both sides were toing and froing over whether to take part in informal mediation talks convened by the government. The union wants to preserve benefits from the previous labour contract and extend them to new workers. BHP is resisting.

Juan Carlos Guajardo, a Chilean analyst, says the stakes are raised by the introduction of a new labour code in April that will dismantle curbs on the power of unions and protect existing benefits. Both sides want the best possible deal before the new law takes effect. The union also wants compensation for the hardships of the past few years of falling prices, while BHP seeks to bring the labour productivity of the mine up to rich-world standards.

The Indonesian stand-off could be just as fractious. On January 12th the government said that if Freeport-McMoRan, an American firm that operates Grasberg, wanted to keep an exemption allowing it



to export copper concentrate despite a 2014 ban on ore exports, it would have to convert its decades-old “contract of work” into a new mining licence. Freeport says it will do so as soon as Indonesia attaches to the licence the same guarantees of fiscal and legal stability that the current contract af-

fords. The two sides remain at loggerheads, so Freeport has started sending Grasberg workers home.

Analysts believe that the government’s pressing need for tax revenues means it may seek a compromise. But damage has already been done. Rio Tinto, Freeport’s partner in Grasberg, says it is reconsidering the option to increase its interest in 2021.

In both Chile and Indonesia, swift resolutions are as likely as long-term disruptions. But in the meantime, they bolster the case of those who believe the red metal has a stellar future. On February 16th McKinsey Global Institute, a consultancy, joined the fray, singling out copper as a commodity for which demand could grow strongly over the next two decades, because of Chinese demand and its importance to electric vehicles and wind- and solar-energy units. It also predicted that supply would be constrained by the depletion of copper ores after 2025. Copper bulls will be snorting with excitement. ■

Inequality in China

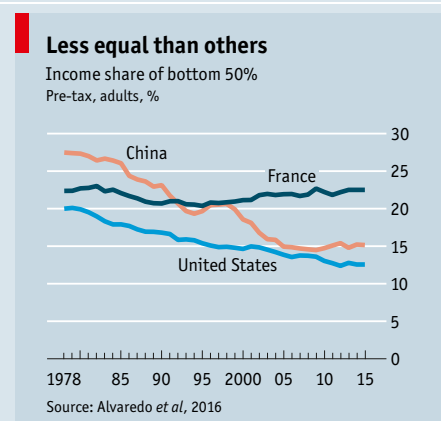
The Great Divide of China

A new paper charts China’s widening income gaps

JUST as China’s GDP has converged towards America’s, levels of inequality have also been catching up. That is one of the conclusions of research* from five authors, including Thomas Piketty, a French economist famous for his work on wealth and inequality. Their new paper compares the evolution of inequality in China, America and France over four decades.

Inequality has soared since China opened the door to private enterprise and growth took off. In 1978 the highest-earning tenth in China received just over a quarter of overall income before tax, significantly below the proportion in America and France at the time. By 2015, however, those top 10% of Chinese earners were paid two-fifths of total income—above the share in France, but still just below that in America (47%). Wealth, too, is concentrated in fewer hands: the richest 10% own nearly 70% of private wealth in China, up from 40% in 1995 (and not far below the American level of nearly 80%).

Rises at the top mean that the share of pre-tax income going to the poorest half of the Chinese population has shrunk dramatically and is now, at 15%, not much higher than the American equivalent. In both countries, the shares have fallen by nearly half since 1978 (see chart). Compare that with France, where the share is higher and has changed little, buoyed perhaps by labour-market policies, such as a more generous minimum wage.

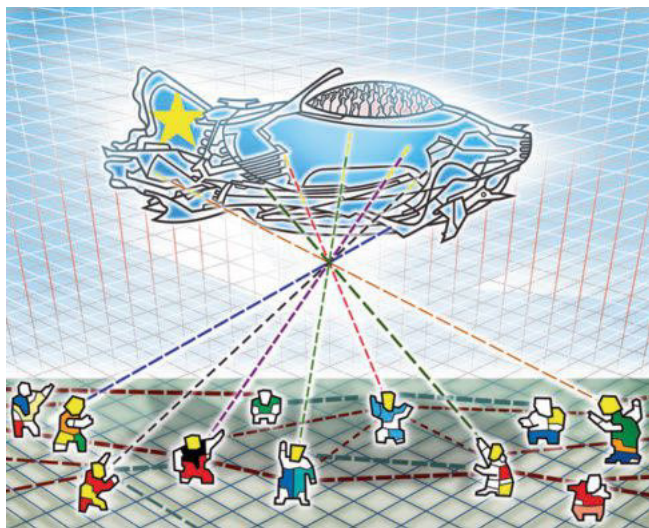


Greater disparity between rich and poor in the West may well have driven anti-establishment sentiment. It might seem no less palatable in China, where the government still calls itself communist. But there the pain has been soothed by rapid growth: it has lifted all boats. Income for the poorer half of the population fell by 1% in America between 1978 and 2015. In China it quintupled. Another comfort is that measures suggest that in recent years income inequality has no longer been rising. This form of catch-up growth, at least, is on hold.

* “Global inequality dynamics: new findings from WID.world”, by Facundo Alvarado, Lucas Chancel, Thomas Piketty, Emmanuel Saez and Gabriel Zucman, National Bureau of Economic Research Working Paper 23119.

Free exchange | Not enough Europe

European institutions have become part of the problem they were designed to solve



GREECE'S marathon crisis is at least instructive. Past flare-ups have illustrated a textbook's worth of economic principles. The latest episode—a dispute over the sustainability of Greece's mammoth debt—provides a lesson in political economy. The beleaguered economy itself is not at the centre of the disagreement; rather it is the European Commission and the IMF and others that are at loggerheads, squabbling over projections of Greek growth. This sort of institutional wrangling is not incidental to the process of European integration; it has historically been a crucial ingredient, helping defang the continent's tricky interstate relations. But as Greece's latest turn in the spotlight demonstrates, the role of Europe's institutions has changed during the euro-area crisis. Paradoxically, they themselves have become part of the existential threat facing the European project.

Like European identity itself, the role of "institutions" can seem vague, amorphous and of overstated importance. Yet institution-building has been one of the most consequential aspects of European integration. Economists view institutions as the solutions to social problems beyond the scope of markets and the state. Europe's supranational bodies are not simply talking-shops or bloated bureaucracies. They are entities apart from the EU's members, and come to develop their own identity and culture.

That the term "Brussels" is thrown around in national capitals as a catch-all for the pesky creature that is EU authority is a design feature, not a bug. Old enmities between European neighbours hinder co-operation. Even when the topic under discussion offers mutual gain, the spectre of, say, French leaders making concessions to Germans can so repel French voters as to scupper deals. Bowing to Europe's supranational institutions is less painful.

So Brussels has proved useful in domestic policy battles. In countries where politics long thwarted efforts to rein in inflation, put budgets on a sustainable course or liberalise the economy, EU membership altered the political dynamic: tough decisions could be blamed on the hard taskmasters in Brussels. And for countries looking to join the EU, the benefits of membership made unpalatable domestic reforms easier to swallow.

Perhaps most important, the architects of European integration counted on the institutions they were creating to defuse the danger posed when vacuums of power led to crisis. As Jean Mon-

net, a French official and a founding father of the European project, put it, "Europe will be forged in crises, and will be the sum of the solutions adopted for those crises." In the past, states at odds with each other might use diplomatic or military pressure to settle an argument. But in post-war Europe self-interested Eurocrats in Brussels would charge into power vacuums to assert their new authority. European institutions were a mechanism through which European infighting could be turned to state building.

These old patterns, however, have broken down during the drawn-out euro-area crisis. The locus of decision-taking, argue Markus Brunnermeier, Harold James and Jean-Pierre Landau in "The Euro and the Battle of Ideas", a book published last year, has moved: from Brussels to national capitals; then to Berlin and Paris; and finally to Berlin alone. When the crisis erupted in 2010 it was soon clear that meetings of heads of government or finance ministers mattered more than what the commission or parliamentarians said. Early on, Germany and France decided to reach their own consensus before EU meetings. It would prevail, focusing power in Berlin and Paris. As German economic performance and political continuity diverged from France, the duet became a solo. This dynamic brought back the sting to negotiations within Europe, along with old chestnuts about northern heartlessness and southern profligacy, eroding an already thin sense of European solidarity. In peripheral economies, the battle lines are clear enough; Greeks see themselves as bowing to Angela Merkel, Germany's chancellor, rather than to faceless Eurocrats.

EU national governments argue, with reason, that policies imposed by Europe did more harm than good: that, for instance, without an independent monetary policy or a currency to devalue, austerity is counterproductive. Brussels has graduated from convenient scapegoat to the IMF's bogeyman enforcer. Mainstream parties used to diverting blame to Brussels find themselves challenged by radical parties desiring to escape it.

Critically, instead of expanding in an attempt to limit the damage, as Monnet would have hoped, the authority of Brussels has been checked. The crucial decision to involve the IMF in euro-area programmes was partly based on a need to get around the Maastricht treaty's "no bail-out" strictures. But it was also rooted in a mistrust of EU institutions. Member states, and especially Germany, reckoned the IMF could impose conditions on indebted countries more credibly than the European Commission. A proposal to create a new institution, the European Monetary Fund, was rejected. The European Central Bank is the exception among EU institutions; its power has grown massively in the course of the crisis. But as the least accountable of the European institutions, its expanded authority does more to undermine the legitimacy of the European project than to reinforce it.

Blue Angela

Had the EU a longer history before it faced this existential crisis, enough power might have shifted to Brussels to make a more centralised response inevitable. But there is also an irony in the way the crisis has unfolded. No leader has worked harder to hold Europe together than Mrs Merkel. And yet the forcefulness of German leadership, and its decision to trust the IMF over the institutions in Brussels, have shaken Europe's delicate political economy. Strange to relate, Europe's unhappiness with Brussels may stem not from too much eurocracy, but too little. ■



The future of home delivery

Heel!

SEATTLE

Pedestrians will soon have to get used to sharing the pavements with parcel-carrying robots

WHO would be a delivery driver? As if a brutal schedule, grumpy motorists, lurking traffic wardens and the risk of an aching back were not bad enough, they now face the fear of robots taking their jobs. Though the buzzing, parcel-carrying aerial drones planned by the likes of Amazon and Google get most of the press, a more serious threat may come from a new breed of 'droids that are about to take to the world's pavements.

The latest, called Gita, was unveiled earlier this month by Piaggio Fast Forward, a subsidiary of Piaggio, an Italian firm that is best known for making Vespa motor scooters. Gita's luggage compartment is a squat, drumlike cylinder that has been turned on its side. This, as the picture above shows, is fitted with two wheels of slightly larger diameter than the drum. These let the whole thing roll smoothly along, keeping the luggage compartment upright, at up to 35kph (22mph). Normally, though, Gita does not travel anything like that fast. Instead, it follows at walking pace a metre or two behind its human owner—or, more accurately, an electronic belt that the owner wears. A wireless connection to a stereoscopic camera on this belt lets it map its surroundings, better enabling it to trail its owner around street corners or through doors.

Gita can carry up to 18kg of cargo for about eight hours between charges. That

makes it ideal for ferrying the shopping of those who still prefer to visit stores in person, rather than ordering goods online. Eventually, though, it will serve the online market too, using its own cameras, maps and ultrasonic sensors to carry out deliveries by itself.

Streetwalkers

Piaggio is now putting a dozen or so Gitas to work in pilot projects around America, doing things like carrying tools for workers, guiding people through airports and assisting with deliveries. And it is not alone. Starship Technologies, an Estonian company started by Ahti Heinla and Janus Friis, two of the founders of Skype, has similar ambitions. Starship's as-yet unnamed suitcase-sized robot has six small wheels, travels at 6kph and holds 10kg of cargo. Rather than doggedly following a human being, it navigates itself around using cameras and ultrasonic sensors—though a remote operator can take control of it to supervise tricky manoeuvres such as crossing roads.

Starship already has dozens of these robots trundling around delivering packages, groceries and takeaway food to customers in several European cities, and also in Washington, DC, and parts of Silicon Valley. When the kinks have been ironed out, it hopes to offer such deliveries commer-

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cially for about \$1 a pop. The firm says that its robots have covered tens of thousands of kilometres and met millions of people so far, with no accidents. And although each robot currently requires its own human overseer, the plan is that, ultimately, a single person will be able to herd a flock of up to 100 of them online.

One problem faced by the designers of 'bots such as these is that unlike roads, which have well-established rules, lane markings and traffic signals to guide autonomous vehicles using them, the pavements running alongside those roads are what roboticists refer to as "unstructured environments". People can walk, jog or roller-skate wherever they please on them, and there is an ever-shifting array of dogs, prams, signs and rubbish to avoid, as well.

The key to robotic navigation is to understand the way people use the space the robot is in, says Matt Delaney, an engineer who has worked on autonomous cars and lunar rovers, and is now starting his own robotic-delivery firm, Marble, in San Francisco. "The pedestrian environment is very cultural," he says. "If you monitor people over many long repetitions in testing, a robot can learn the best routes."

Marble will not yet say exactly how its robots adapt themselves from the fast-paced streets of Manhattan to the laid-back hills of San Francisco—possibly because the Bay Area's pavements are filling rapidly with aspiring rivals. Dispatch, also in San Francisco, is testing tricycle "Carry" robots, which look a bit like beer-cooling picnic boxes on wheels, on two Californian university campuses. And, down the road in Palo Alto, another newly started firm, Robby, is also working on a delivery 'bot.

Irritating though they may eventually become to some, however, lightweight, ▶▶

▶ slow-moving robots like Piaggio's and Starship's do not generate the safety concerns that accompany autonomous cars (which are heavy and fast-moving) and flying drones (which can fall out of the sky onto your head, and also cause a significant noise nuisance). As a result, they do not attract the same level of official regulation. Starship has successfully sponsored legislation in some American jurisdictions explicitly permitting autonomous delivery of the sort it is proposing to carry out. It has found, though, that most cities welcome the robots with open arms. They have the potential to reduce pollution and congestion by taking vans off the roads, to increase convenience and to reduce costs. And they have one other advantage. When they do bring something to your doorstep, they do not expect a tip. ■

Agrichemicals

Holding fast

A simple way to stop fertiliser being washed away by the rain

IN MEDIEVAL England peasants were permitted to graze their sheep on the lands of the nobility. There were no restrictions on how much their livestock could feed, but there was one ironclad rule: the peasants were not allowed to collect their animals' droppings. Though the English nobles who came up with such regulations could not have known that the excrement was rich in nitrogen and vital for plant growth, they clearly knew that lands denied faeces were less productive. Today most farmers rely on synthetic fertilisers to do the nitrogen-enhancing job once reserved for dung. Urea, a compound of nitrogen, hydrogen, carbon and oxygen, can

be made cheaply by mixing ammonia and carbon dioxide together at high pressure. The result is turned into pellets that can be scattered easily over fields.

Unfortunately, when such pellets are exposed to heavy rain, the urea they contain is quickly and wastefully washed away. A method of keeping it in place would thus be welcome. And Nilwala Kottegoda of the Sri Lanka Institute of Nanotechnology thinks she has one. As she and her team report in *Nano*, they have managed to bind urea molecules to a material that stops them dissolving too quickly in water. This material is hydroxyapatite, one of the components of bone.

Her choice of hydroxyapatite for investigation was no wild guess. It is already used to make capsules that release certain drugs slowly, in the way she wanted to achieve for urea. Hydroxyapatite is made by mixing phosphoric acid and calcium phosphate, so Dr Kottegoda simply added urea to the process. The result, she found, was that each molecule of the material clung on to six molecules of urea—a payload big enough to justify further testing.

To this end she and her colleagues steadily flushed water past samples of urea-enhanced hydroxyapatite held in tubes, while watching what happened using a spectroscope. The material shed its urea load gradually: 40% after 1,000 seconds; 60% after 2,000 seconds; 80% after 3,820 seconds. In contrast, when the researchers treated pure urea the same way, it was all gone in 320 seconds.

To find out whether the new fertiliser would make a difference in the field, Dr Kottegoda collaborated with some farmers near Sammanthurai, in eastern Sri Lanka. She ran tests on equal-sized rice paddies for four months. Some plots received no fertiliser at all. Some got pure urea equivalent to 100kg of nitrogen per hectare. Some got an amount of the newly created urea-hydroxyapatite that contained the same quantity of nitrogen as the pure urea. And

in all cases the level of phosphorus (another important plant nutrient, levels of which were boosted incidentally by the hydroxyapatite) were adjusted to match from plot to plot.

The hydroxyapatite did, indeed, make a difference. Plots that received no nitrogen-based fertiliser at all averaged 5.5 tonnes of rice per hectare. Those that received urea alone yielded 7.25 tonnes per hectare. Those fertilised with urea-hydroxyapatite managed 7.8 tonnes per hectare.

Though the newly compounded fertiliser is more expensive to produce than its conventional equivalent, Dr Kottegoda calculates that this cost would quickly be offset if using urea-hydroxyapatite obviated the need to re-scatter fertiliser over a paddy after heavy rain—and that does not even take into account the increase in yield it brings with a single application. There might also (though she did not measure this) be a bonus reduction in the amount of phosphorus-based fertiliser a farmer needs to deploy in addition to nitrogen-based pellets. A simple idea, then. But a potentially important one. ■

Tropical diseases

Blame the worm

A strange and poorly understood illness may actually be a symptom of another

NODDING syndrome is a form of epilepsy that strikes children, mostly between the ages of five and 15. Despite the innocuous name, it is debilitating. It robs its victims of their mental capacity, stunts their growth and causes both the characteristic “nodding-off” motion which gives its name and more serious seizures, often when a child is being fed. The exact death rate is unknown, but it is high.

The syndrome is also something of a medical mystery. The first cases were identified in Tanzania in the 1960s. Now it has spread to parts of Uganda and South Sudan. No one knows how many people are affected, but it is thousands, at least. Nor has anyone been sure what causes the disease. But Tory Johnson, of America's National Institutes of Health, and her colleagues have a theory. As they describe in a paper just published in *Science Translational Medicine*, they suspect that nodding syndrome is an “autoimmune” disease caused by sufferers' attempts to fight off infection by a parasitic worm.

The worm in question is *Onchocerca volvulus*, a tiny nematode spread by the bites of black flies that is best known for causing river blindness. Epidemiologists had already drawn a link between nodding syn- ▶▶



Spreading growth

drome and areas infested by *O. volvulus*, but whenever people have looked, they have failed to find traces of the worm in sufferers' brains, or in the cerebrospinal fluid (CSF) that bathes their brains and spinal cords. This led to the suspicion that, if the worm is indeed responsible, it is doing its harm indirectly.

To investigate, Dr Johnson and her colleagues analysed blood and CSF from children with nodding syndrome in both Uganda and South Sudan. They were looking for antibodies. These are proteins produced by the immune system which bind to and disable specific molecules on the surfaces of invading viruses, bacteria and the like, thus damaging or destroying the invader. One of the antibodies they discovered was tailored to a protein called leiomodulin-1, which is produced by mammalian nerve cells. In particular, studies of mice suggest it is found in both the cerebellum (a region of the brain which, among other things, helps control muscle function) and in the cerebral cortex (where abstract thinking happens).

Trials in a Petri dish confirmed that the leiomodulin-1 antibody Dr Johnson isolated is toxic to human nerve cells. That suggests nodding syndrome is, indeed, autoimmune: the victims' immune systems are attacking their own brains. It does, though, leave the question of why infection with *O. volvulus* should cause this antibody to be produced in the first place.

Dr Johnson and her colleagues think they know the answer to that. When they looked at proteins produced by the worm, they found one, called tropomyosin, that is strikingly similar to leiomodulin-1. This similarity suggests antibodies intended to attack the worm's proteins could end up inflicting collateral damage on the human versions, too. And it might not just be tropomyosin that is involved. The researchers found a handful of other worm proteins that were chemically similar to their human counterparts.

It is an elegant chain of reasoning. But the study is not conclusive. For one thing, only half of those with nodding syndrome seemed to be producing the antibody to leiomodulin-1. That, though, might be explained by the fact that many of the samples tested came from people who had been infected years before, and who may have thrown off the parasitic infection (which is susceptible to treatment with drugs) while still suffering the neurological effects. More difficult to explain is that a third of nodding-free people seemed to be making the antibody too. But perhaps it does not always attack human proteins.

Whatever the details, though, Dr Johnson's hypothesis is tantalising. If she is right, then nodding syndrome may not be a separate disease at all, but, like river blindness, simply another symptom of infection with *O. volvulus*. ■

Oceanic pollution

Entrenched

Nasty chemicals abound in what was thought an untouched environment

NOT far off the coast of Guam lies the Mariana trench. Its floor is 10,994 metres below sea level. If Mount Everest were flipped upside down into it, there would still be more than 2km of clear water between the mountain's base and the top of the ocean. Such isolation has led many to assume that it and similar seabed trenches will be among the few remaining pristine places on the planet. However, a study led by Alan Jamieson of Newcastle University, in England, has shown that nothing could be further from the truth. As Dr Jamieson and his colleagues report this week in *Nature Ecology and Evolution*, trenches are actually loaded with pollutants.



A messenger from the deep

Despite the cold, the darkness and the high pressure, ocean trenches are home to ecosystems similar in many ways to those found on other parts of the planet. In one important respect, though, they are different. This is the source of the energy that powers them. In most ecosystems, sunlight fuels the growth of plants, which are then consumed by animals. In a few shallower parts of the ocean, hydrothermal vents provide energy-rich chemicals that form the basis of local food chains. No vents are known to exist below 5,000 metres, though, and no sunlight penetrates a trench. The organisms found in them thus depend entirely on dead organic material raining down upon them from far above.

Since these nutrients, having once flowed into a trench, never make their way out again, Dr Jamieson found the notion

that trenches have somehow remained untouched by human activities questionable. He suspected that long-lived pollutants such as polychlorinated biphenyls (which were once used widely in electrical equipment) and polybrominated diphenyl ethers (employed in the past as flame retardants) might have made their way into the bodies of organisms living in trenches.

To test this idea out, he and his colleagues sent an unmanned lander to the bottom of the Mariana trench and also to the bottom of the Kermadec trench, near New Zealand. This lander fell to the seabed and spent between eight and 12 hours there, capturing amphipods (a type of crustacean, pictured) using funnel traps baited with mackerel. At the end of its mission it jettisoned some ballast and floated back to the surface with its prey.

In total, the lander collected specimens from ten sites in the two trenches. The shallowest site sampled was 7,227 metres down in the Kermadec trench. The deepest, in the Mariana, was 10,250 metres. When the team looked for pollutants in the captured amphipods, they found that polybrominated diphenyl ethers were indeed present, but at moderate concentrations. Levels of polychlorinated biphenyls, however, were almost off the scale.

In animals collected from clean coastal environments, polychlorinated-biphenyl levels do not normally exceed one nanogram (billionth of a gram) per gram of tissue. In grossly polluted areas, like the Liao river in China, that level may rise a bit above 100 nanograms. In the Mariana trench, Dr Jamieson found, amphipods dwelling at 10,250 metres yielded 495 nanograms per gram of the pollutant. Those 8,942 metres down yielded 800 nanograms. And at 7,841 metres he and his colleagues discovered the staggering level of 1,900 nanograms per gram of amphipod tissue analysed. Values from the Kermadec trench were more modest, but still pretty high—ranging from 50 nanograms to 250 nanograms per gram.

Precisely why the Mariana trench has such elevated levels of polychlorinated biphenyls remains unclear. Dr Jamieson suspects it has to do with the trench's proximity to the North Pacific Subtropical Gyre, a whirlpool hundreds of kilometres across that has amassed enormous quantities of plastics over the years, and which has the potential to send the pollutants that bind to those plastics deep into the ocean as the plastics degrade and descend.

What consequences all this has for the Mariana's organisms is unclear. Polychlorinated biphenyls disrupt the hormone systems of some animals that dwell nearer the surface, and can also cause cancer, so the news is unlikely to be good. But what Dr Jamieson's work shows beyond peradventure is that no part of Earth's surface is safe from the activities of Man. ■



The evolution of Islam

The road once travelled

When Islam encountered modernity

FEW topics are as bitterly contested today as the nature of Islam. America has just elected a president who speaks pointedly of “Islamic terrorism”; his predecessor balked at connecting Islam with violence and said those who did, including terrorists, were misreading the faith.

In Western intellectual debates, meanwhile, some maintain that Islam stultifies its followers, either because of its core teachings or because in the 11th century Islamic theology turned its back on emphasising human reason. Others retort indignantly that the Islamic world’s problems are the fault of its Western foes, from crusaders to European colonists, who bruised the collective Muslim psyche.

A new book by Christopher de Bellaigue, a British journalist and historian of the Middle East, hews to the latter side, but with an unusual twist. He describes how Islam’s initial encounter with modernity, two centuries ago, had some benign consequences and he sees that as a basis for hope. Sceptics will inevitably call the book’s title, “The Islamic Enlightenment”, naive or oxymoronic.

Still, having focused for a number of years on Iran and modern Turkey (from where he reported for *The Economist*), Mr de Bellaigue is well-placed to tease out at least one strand of the debate about Islam: the reaction to European influence as it unfolded over the 19th century in the political and cultural centres of the Muslim

The Islamic Enlightenment: The Modern Struggle Between Faith and Reason. By Christopher de Bellaigue. *Bodley Head*; 398 pages; £25. To be published in America by Liveright in April; \$35

world following Napoleon’s invasion of Egypt in 1798.

The author succeeds in his main purpose, which is to show that in Cairo, Istanbul and Tehran, prominent figures embraced aspects of Western thought and technology with discernment and gusto while remaining good Muslims. His heroes are writers, doctors, generals and sultans. They include Abdulrahman al-Jabarti, an Egyptian sheikh who articulated the fascinated shock with which his compatriots greeted the arrival of Napoleon, accompanied by scientists and scholars. Jabarti had grown up believing that his own faith’s superiority should assure success in war. However, his honest, lively mind had to acknowledge both the invaders’ more effective firepower and the intellectual heft which the French were bringing to the study of his homeland.

In Istanbul the sultan, Mahmud II (pictured), responded to the rising strength of Western powers by imitating them. He curbed the rapaciousness of his civil servants and clerical reactionaries. By removing religious restraints on the study of the book, he ushered modern hygiene and

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medicine into a region ravaged by plague.

In Persia, meanwhile, Abbas Mirza, a charismatic prince, drew on French and British help to modernise an army run on medieval lines. Young Persians were sent to train in Britain and proved quick learners. One of them, Mirza Saleh, wrote a remarkable account of his travels and became the country’s first journalist.

Mr de Bellaigue shows that in the Islamic world, just as in the West, efficient forms of transport and communication made it easier for intelligent individuals, including women, to share ideas. This is one example of the rich detail that his research brings to the stories of these Muslim modernisers and the violent reaction they sometimes triggered.

In the book’s final two chapters, there is an abrupt change of pace as the author speeds through Islam’s dealings with European colonial powers during the late 19th and, above all, in the early 20th century. It is a fairly accomplished gallop through difficult terrain and its purpose is to show, in very broad terms, why relations between Muslims and Westerners would eventually turn so sour. Western policies became greedier and more cynical, especially during and after the first world war, and this triggered a sharp reaction in the Muslim world, enraging humble, pious folk as well as clever elites.

The author empathises with the resentment felt by Muslims over being used as geopolitical pawns and over the arbitrary borders that were drawn by Europeans. That prompts him to write with a degree of understanding about all the popular movements that successively shook Islam’s heartland, including Turkish nationalism, the Muslim Brotherhood in Egypt and even the Iranian uprising of 1979.

He acknowledges that these last two movements amounted to a form of “coun- ▶▶

►ter-enlightenment”, reinstating theocracy, but he insists that even the mullahs’ Iran has some modernising features: they educated an unprecedented number of girls.

Mr de Bellaigue is equally adamant that the positive legacy of the period closest to his heart (the early and mid-19th century) is still partially intact. For him, the very fact that there was once an era in which the Islamic world drew, selectively and intelligently, on Western ideas and technology while remaining true to itself, still gives hope. For one thing, it means that Muslims now migrating to the West retain, deep in their collective memories, an intimation that Islam can flourish in an enlightened form. His book thus offers a refreshingly optimistic counterpoint to the idea that Muslim and Western world-views are doomed to clash. ■

Northern Europe

Island of mystery

Heligoland: Britain, Germany and the Struggle for the North Sea. by Jan Ruger. OUP; 370 pages; \$34.95 and £25

AS A historical oddity, the story of Heligoland—a partly populated lump of rock in the North Sea—is worth readers’ attention. Its rust-red cliffs were ruled mostly by Danes until 1807. Then Britain seized the island, just 46km (29 miles) off the continental coast, using it as a forward base to break Napoleon’s economic blockade. Otto von Bismarck, a Prussian statesman, craved the outcrop, and in 1890 Britain ceded it to Germany in exchange for a free hand in the former slave-trading sultanate of Zanzibar.

In these upheavals Heligoland’s inhabitants (today they number roughly 1,400) were never consulted. It seems they cared little, as long as preferential taxes and steady flows of visitors from the mainland continued to let them prosper. Even under British control, Heligoland was a beloved destination for throngs of German romantic painters, musicians, pamphleteers and poets. A poem written on the island by Hoffmann von Fallersleben, in August 1841, became the lyrics of Germany’s national anthem. Day-tripping tourists crowded its spa resorts and celebrated pollen-free air, gambling and dancing.

For Jan Ruger, the author of a brisk account of the past two centuries on Heligoland, the island matters for reasons more serious than its remote peculiarity. He calls Heligoland “an apt location from where to rethink the Anglo-German past.” It is indeed a good vantage point. When ties were friendly, as in the last decade of

the 19th century, the island saw remarkable intermingling of German and British customs, language and laws. At the time, though living under the German flag, Heligoland could even elect to be British citizens and serve in the Royal Navy.

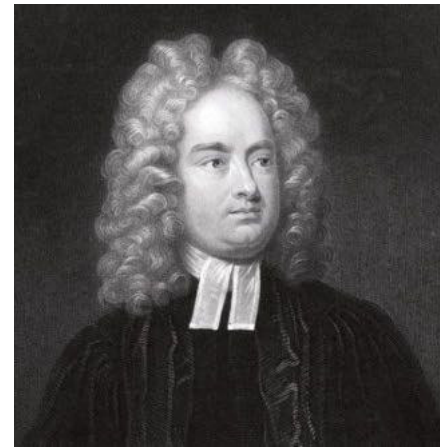
Then during periods of antagonism, notably in the first half of the 20th century, the island became a symbol of bitter confrontation between two of Europe’s strongest powers. Before the first world war British newspapers and politicians including Churchill vowed there must be “no more Heligolands”, lamenting the decision to cede even the smallest territory to a rising enemy. Germany made the island a “monument” to nationalism, writes Mr Ruger. By the 1920s Hitler and Goebbels liked to be seen visiting the island, from which they would gaze over the sea towards Britain. Pro-Nazi painters depicted muscular eagles soaring above Heligoland’s cliffs. In both the wars, Germany fortified the rock and built mammoth harbours for submarines and ships. After each war, Britain flattened the place.

Mr Ruger makes his case that Heligoland’s fortunes are a useful bellwether of wider relations and he relates his story in an engaging style. Wisely, he never quite suggests that the island—even as a military outpost—was of much more than symbolic importance. Heavily fortified Heligoland did not prevent Britain’s navy, for example, from blockading Germany from afar in the first world war.

More people should know Heligoland’s story for the echoes it has today. The late 19th century saw an emerging, militaristic great power, with a fast-growing navy, eager to exploit a speck of land in the ocean even if that provoked an established global power. Much the same is happening with China, as it militarises atolls in the South China Sea. Frantic debates in Britain, just over a century ago, about Germany’s intentions in Heligoland, sound strikingly similar to discussion today, in America, over China’s rise. Geopolitics, like history, has a habit of repeating itself. ■



A clod washed away by the sea



18th-century literary life

A man in full

Jonathan Swift: The Reluctant Rebel. By John Stubbs. W.W. Norton; 752 pages; \$39.95. Viking; £25

“A TALE OF A TUB”, “Drapier’s Letters” and “A Modest Proposal”, which envisaged the Irish poor farming infants for the tables of the wealthy, all made Jonathan Swift famous in his time. But these attacks on abuse of power and injustice, readable as they are, are of limited interest now. By contrast “Gulliver’s Travels” endures and will continue to do so for its narrative and message. It is erroneously considered to be a children’s book because most readers come across it at an early age in abridged, illustrated editions that focus on the voyages to Lilliput and Brobdingnag and the arresting experiences of being first a giant in a land of little people and then “terribly small and vulnerable” in a country of giants. Swift’s tales of these encounters, and subsequent ones with the virtuous Houyhnhnms and odious Yahoos, were in fact satires designed to remind his contemporaries that the world is not “just what we are told it is on our own bit of earth...no civilisation has a freehold on ‘normality’”. This is all too readily forgotten today.

A man of many contradictions, torn in his loyalties, Swift was born in Ireland in 1667 of English descent. Increasingly, as dean of St Patrick’s cathedral in Dublin, he would campaign for Ireland and its frequently starving people. But he regarded it as “where he was obliged to live”. England, its mightier neighbour, home to fellow-scribblers—Alexander Pope, Joseph Addison and John Gay—was “where he wanted to be”. At first a Whig, he became “the most articulate champion” of the Tory government of 1710-14, despite preferring to be “in-different to party politics”. A high Anglican ►►

▶ but no Jacobite (as rumoured), convinced that “the Church of England was right”, he was more hostile to Nonconformists and Dissenters than to Roman Catholics. A paradox, “thrillingly rebellious and self-assured, yet stoutly institutional”, he was a “velvety writer” of savage attacks on government and a “titanic patriot”.

Swift’s life was shaped by the upheavals and civil war that began in 1642. “Most heinously of all”, they caused him to be born in Ireland after his parental family was dislodged from where they belonged. In his 20s he lived through the Glorious Revolution and the conflicts in Ireland that culminated in William III’s victory over the deposed Stuart monarch at the battle of the Boyne in July 1690 (commemorated in Ulster to this day). He idolised his origins, longed for an English, pre-civil war, rural idyll that had never truly existed, hated change “and indeed the movement of time itself” which was “shifting in the direction of irrevocable decay”. Emotionally and physically, he passed his life “between the two islands, a prisoner of the Irish Sea”.

As in his political opinions, so in his personal life, Swift was inconsistent. At times he was very generous, at others excessively mean. He was loved for his great wit and entertaining company but, partly perhaps because he suffered from deafness, vertigo, short sight and a “lurking melancholy”, he could be “very irritable” and had “no command of his temper”.

His “dreadfully delicate sense of honour” could cause him to treat those closest to him with unreasonable cruelty or neglect. This was particularly the case with the most important women in his life, the two Esthers, Johnson and Vanhomrigh, known as “Stella” and “Vanessa”. He loved them both and wrote to them frequently. They moved to Dublin for him and he greatly enjoyed their company, but countenanced marriage with neither and stayed away when they were dying.

John Stubbs’s painstaking, scholarly book is much more than a life of Swift. It is an extended, thorough history of literary, clerical, social and political life in Ireland and England during the century from 1640. An immense amount of attention is devoted to obscure individuals and events and the general reader may prefer to read Victoria Glendinning’s much shorter, yet full and enlightening, biography which came out in 1998. However, Mr Stubbs’s account has a few surprising factual errors—the battle of the Boyne, arguably the best-remembered event in Irish history, is dated as 1689, a year early, and the medieval town of Kilkenny is placed “60 miles to the south-east” of Dublin (which would put it smack in the middle of the Irish Sea). That said, Mr Stubbs’s work is a magnificent achievement and an engrossing read that will surely represent the last word on his subject for many years to come. ■

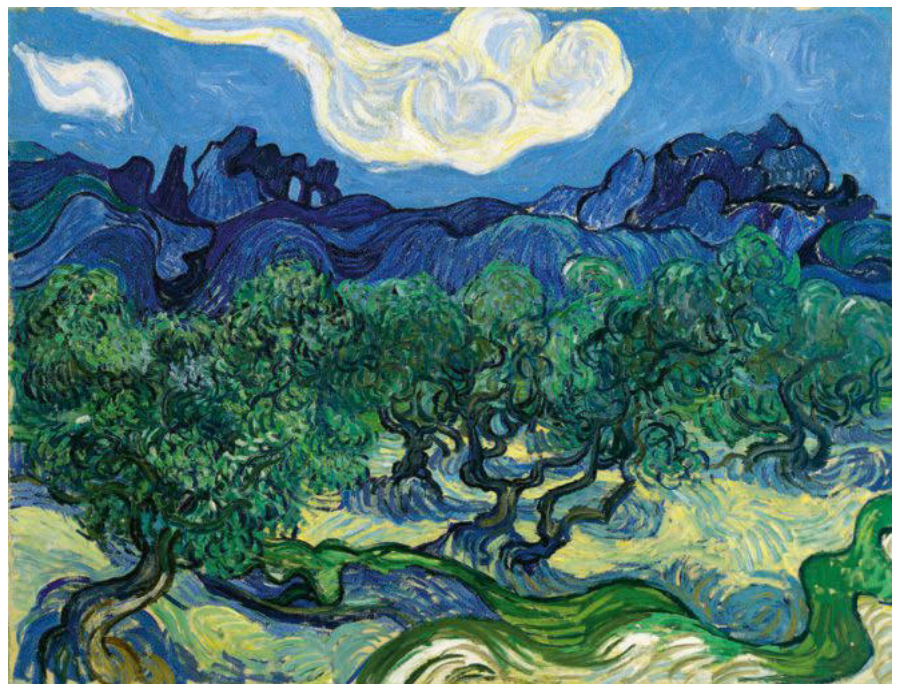
Late style

When time is precious

The final years focus the mind

OUT, out, brief candle! As life nears its end, thoughts can acquire urgent clarity. This truth is more perceptible among some artists than others; novelists, for example, find endless ways of disguising it. But it is so evident among playwrights, composers, and visual artists that “late style” has become an accepted critical concept. Consider the late plays of Henrik Ibsen, furiously rattling the bars of the bourgeois cage. Discount for a moment a brain-researcher’s recent suggestion that the abstraction of Willem de Kooning’s late paintings reflects the onset of dementia, and consider instead the late works of Vincent van Gogh and Francisco Goya.

Look at Goya’s “Black Paintings”, the most famous of which is “Saturn Devouring his Son”. No falling-off in technical mastery there, but a view of humanity which is visionary in its hellishness. Look at the paintings which Van Gogh made during his days in the asylum at Saint-Rémy, such as “The Olive Trees” from 1889 (pictured). Observation has given way to a celebratory stylisation, as swirling brushstrokes reflect exuberant patterns of clouds, trees, flowers and swelling ears of wheat. For these artists “late style” meant an encounter—one terrible, the other joyful—with the hyperreal.



Better late

The term “late style” was coined by Theodor Adorno, a German Marxist philosopher, as a label for his doctrinaire view of Beethoven. For him, Beethoven’s last works were the triumphant expression of a determined refusal to resolve life’s conflicts harmoniously. This view was later endorsed by Edward Said, a Palestinian-American writer and academic, who—in a posthumous article in the *London Review of Books*—declared that this “negativity” of late Beethoven was actually a strength. “This lateness is a thing in its own right,” Said wrote approvingly, “not a premonition or obliteration of something else.”

Now musicians with very different views are wading into the lateness debate. In a recital series at the Wigmore Hall in London last year, Sir Andras Schiff played the last piano sonatas of Haydn, Mozart, Beethoven and Schubert. The connecting thread was a culminating aesthetic mastery. In “Late Style”, a series of recitals in America and Europe through the spring this year, Jonathan Biss, a young American pianist, is presenting chamber works by three of those composers, as well as Carlo Gesualdo, Robert Schumann, Benjamin Britten and Johannes Brahms.

For each of these composers, late style meant something different. Gesualdo had murdered his wife and her lover, and spent his last days in a torment which one can sense in his crazily discordant late works. The emotional devastation of Schumann’s final days becomes starkly evident in his ruthlessly pared-down *Gesänge der Frühe* (“Songs of Dawn”). The Britten string quartet which Mr Biss has chosen shows the composer delighting in an extreme—and to him quite new—economy of expression. ▶▶

▶ The chaotic middle movement of Mr Biss's chosen Schubert sonata reflects the composer, who was dying of syphilis, going to pieces in rage and terror. Brahms's late works suggest a man whose emotional energy has been sapped dry; Beethoven's suggest the opposite. What links these composers, as Mr Biss points out, is that "with each of them, something has happened to completely change their style".

What is that something? It seems to be an amalgam of circumstance and psychology, and no composer exemplifies this more vividly than Beethoven. Deafness to

the world of real sound gave Beethoven the freedom to create hitherto undreamed-of new sound-worlds, and that played into his vaulting ambition to address posterity.

Moreover, his late works were deeply symbolic, sometimes seeming, through sheer technical illusionism, to make time stand still—as though he wanted to extend his own life. In "Late Beethoven" (2003) Maynard Solomon, an American musicologist, points to the frequency—most clearly seen in the *Hammerklavier* sonata and the Ninth Symphony—with which a series of themes is tried and impatiently rejected,

before the right one is hit upon to launch a finale. Mr Solomon likens this process to a search for the thread out of a labyrinth, and the liberated playfulness of the final Bagatelles indicates that Beethoven had indeed found that thread.

As Fiona Maddocks observes in "Music for Life", an elegant collection of mini-essays published last year, people tend to over-romanticise last works, and there is some truth in that. But many great artists experience a psychological and artistic step-change late in life. For them, life's candle burns most brightly when it is about to go out. ■

Johnson | A taxonomy of dishonesty

The press should call out politicians when they lie. But lying isn't the same as talking nonsense

HIS inauguration was the biggest ever. Donald Trump could not make it through the first days of his presidency without saying something that was demonstrably untrue. The *New York Times* dubbed it a "falsehood". When Mr Trump said that over 3m people had voted illegally, the *Times* headline was sharper: "Trump Repeats Lie About Popular Vote in Meeting with Lawmakers". That word keeps recurring. CNN and MSNBC (both cable-news stations) recently said that Mr Trump had lied about the murder rate being the highest in almost a half-century. (It is in fact near historical lows.) Mr Trump says a lot of things that are nakedly false. Are they all lies?

There is a difference between falsehood and lying. The Oxford English Dictionary defines a "lie" as a "false statement made with intent to deceive". It says "falsehood" is "an uttered untruth; a lie. Also false statements, uttered untruth, in general." Falsehood is thus the wider word, covering lying and "uttered untruth, in general". Lying requires an intent to deceive—which implies knowing that what you're saying isn't true.

What does a journalist know about the contents of Donald Trump's mind? Certainly, the president cannot resist talking up his own greatness. Some have accused him of suffering from narcissistic personality disorder. Long-distance mental-health diagnoses are beyond the remit of the language columnist. But the media's overuse of "lie" indicates that journalists gloss all too easily over the fine distinction between "lie" and "falsehood".

Certain verbs, "factive" ones, can be used only when the information that follows is true. You can't say, "He admitted that the moon was made of styrofoam" or "She learned that the UN was poisoning the water supply" unless you are aiming



for a comic or jarring effect. "Admit", "learn" and other words like them presuppose the truth of the following clause.

"Lie" is special, a special kind of "anti-factive" verb. Not only must the information in question be false, but the user of the verb "to lie" must know—or have very good reason to believe—that the speaker knows it to be false. If Mr Trump really does have a pathological need to believe fantastic things about his greatness, he may very well think that he must have beaten Hillary Clinton in the popular vote, and that the only reason he didn't was down to the millions of illegal votes.

For a "lie", Mr Trump would have to have known the truth. If he did, he told a whopper that immediately gave rise to demands for proof—proof he could not provide. Mr Trump did not modify his words, back down or duck further questions. If he was lying, he was setting himself up for an ever-bigger embarrassment. Instead, the

president doubled down, promising a thorough investigation into voter fraud. It's possible that he believes his own guff. The same goes for the murder rate: Mr Trump said something wildly wrong about something easily checkable, leaving an adviser, Kellyanne Conway, flailing to cover for him by saying that Mr Trump may have been "relying on data perhaps for a particular area; I don't know who gave him that data".

Using "lie" strictly is not easy; it is impossible to know another mind perfectly. But politics often has a way of leaving evidence: e-mails, memos, witnesses. Michael Flynn, briefly Mr Trump's national security adviser, said he never discussed sanctions with Russia's ambassador. The *Washington Post* reported that America's spies knew otherwise. He had to resign.

Journalists should be tough when powerful people say untrue things. When those statements first hit the headlines, "false" packs plenty of punch. Reporters should demand to know the reason for the false statements. In cases like Mr Flynn's, with clear evidence, they can say "he lied". In cases like that of Mr Trump and the murder rate, journalists should demand to know his sources, perhaps asking whether the president trusts conspiracy-theorist websites over his own FBI. It hardly spares Mr Trump to call him "deluded" rather than a liar. Finally, there is the possibility that the president simply has no regard for the truth at all, not even caring whether he's right or wrong. In that case, the press lacks an easy term for this kind of falsehood. Many won't print "bullshit", one proposed suggestion.

Using exact terms will only make it more powerful when the press catches Mr Trump red-handed in a "lie". Reporters can be patient as well as precise. His presidency is still young.

Economic data

% change on year ago

	Gross domestic product			Industrial production latest	Consumer prices		Unemployment rate, %	Current-account balance		Budget balance % of GDP 2016 ^f	Interest rates, % 10-year gov't bonds, latest	Currency units, per \$	
	latest	qtr* 2016 ⁱ	2016 ⁱ		latest	2016 ⁱ		latest 12 months, \$bn	% of GDP 2016 ^f			% of GDP 2016 ^f	Feb 15th
United States	+1.9 Q4	+1.9	+1.6	nil Jan	+2.5 Jan	+1.3	4.8 Jan	-476.5 Q3	-2.6	-3.2	2.51	-	-
China	+6.8 Q4	+7.0	+6.7	+6.0 Dec	+2.5 Jan	+2.0	4.0 Q4 [§]	+210.3 Q4	+2.4	-3.8	3.07 ^{§§}	6.87	6.57
Japan	+1.7 Q4	+1.0	+0.9	+3.2 Dec	+0.3 Dec	-0.2	3.1 Dec	+190.9 Dec	+3.7	-5.5	0.10	115	113
Britain	+2.2 Q4	+2.4	+2.0	+4.3 Dec	+1.8 Jan	+0.7	4.8 Nov ^{††}	-138.1 Q3	-5.4	-3.7	1.35	0.80	0.69
Canada	+1.3 Q3	+3.5	+1.2	+1.5 Nov	+1.5 Dec	+1.5	6.8 Jan	-53.6 Q3	-3.5	-2.4	1.79	1.31	1.39
Euro area	+1.7 Q4	+1.6	+1.7	+2.0 Dec	+1.8 Jan	+0.2	9.6 Dec	+394.6 Nov	+3.3	-1.8	0.37	0.95	0.89
Austria	+1.2 Q3	+2.4	+1.5	+2.3 Nov	+1.4 Dec	+0.9	5.7 Dec	+8.0 Q3	+2.5	-0.9	0.64	0.95	0.89
Belgium	+1.1 Q4	+1.6	+1.2	+0.4 Nov	+2.6 Jan	+1.8	7.6 Dec	+3.4 Sep	+1.0	-3.0	0.83	0.95	0.89
France	+1.1 Q4	+1.7	+1.2	+1.3 Dec	+1.4 Jan	+0.3	9.6 Dec	-26.8 Dec [‡]	-1.1	-3.3	1.05	0.95	0.89
Germany	+1.8 Q4	+1.7	+1.8	-0.6 Dec	+1.9 Jan	+0.4	5.9 Jan	+294.5 Dec	+8.9	+0.6	0.37	0.95	0.89
Greece	+0.2 Q4	-1.4	+0.4	+2.1 Dec	+1.2 Jan	-0.8	23.0 Nov	-1.0 Nov	-0.3	-7.5	7.77	0.95	0.89
Italy	+1.1 Q4	+0.8	+0.9	+6.6 Dec	+0.9 Jan	-0.1	12.0 Dec	+50.9 Nov	+2.7	-2.5	2.25	0.95	0.89
Netherlands	+2.3 Q4	+2.0	+2.0	+4.8 Dec	+1.7 Jan	+0.1	6.4 Dec	+57.1 Q3	+8.1	-1.1	0.54	0.95	0.89
Spain	+3.0 Q4	+2.8	+3.2	-1.6 Dec	+3.0 Jan	-0.3	18.4 Dec	+24.3 Nov	+1.8	-4.6	1.75	0.95	0.89
Czech Republic	+1.6 Q3	+0.8	+2.4	+2.7 Dec	+2.2 Jan	+0.7	5.3 Jan [§]	+3.7 Q3	+1.7	nil	0.67	25.6	24.1
Denmark	+1.1 Q3	+1.6	+1.0	+10.0 Dec	+0.9 Jan	+0.3	4.3 Dec	+24.5 Dec	+7.3	-1.4	0.42	7.03	6.64
Norway	+1.8 Q4	+4.5	+0.6	-2.2 Dec	+2.8 Jan	+3.5	4.7 Nov ^{††}	+18.0 Q3	+4.2	+3.5	1.83	8.36	8.62
Poland	+2.0 Q3	+7.0	+2.8	+2.4 Dec	+1.8 Jan	-0.7	8.3 Dec [§]	-2.5 Dec	-0.5	-2.5	3.89	4.08	3.92
Russia	-0.4 Q3	na	-0.5	+3.0 Dec	+5.0 Jan	+7.1	5.3 Dec [§]	+22.2 Q4	+2.0	-3.6	8.25	57.3	78.8
Sweden	+2.8 Q3	+2.0	+3.1	-0.9 Dec	+1.7 Dec	+1.0	6.5 Dec [§]	+22.2 Q3	+4.6	+0.2	0.76	8.94	8.44
Switzerland	+1.3 Q3	+0.2	+1.4	+0.4 Q3	+0.3 Jan	-0.4	3.3 Jan	+68.2 Q3	+9.4	+0.2	-0.09	1.01	0.98
Turkey	-1.8 Q3	na	+2.4	+1.2 Dec	+9.2 Jan	+7.8	12.1 Nov [§]	-32.6 Dec	-4.4	-1.1	10.94	3.68	2.93
Australia	+1.8 Q3	-1.9	+2.4	-0.2 Q3	+1.5 Q4	+1.3	5.7 Jan	-47.9 Q3	-3.1	-2.3	2.79	1.30	1.41
Hong Kong	+1.9 Q3	+2.5	+1.2	-0.1 Q3	+1.2 Dec	+2.4	3.3 Dec ^{††}	+13.3 Q3	+2.8	+1.3	1.85	7.76	7.79
India	+7.3 Q3	+8.3	+6.9	-0.4 Dec	+3.2 Jan	+4.8	5.0 2015	-11.1 Q3	-0.6	-3.8	6.86	66.9	68.2
Indonesia	+4.9 Q4	na	+5.0	+4.3 Dec	+3.5 Jan	+3.5	5.6 Q3 [§]	-16.3 Q4	-2.1	-2.3	7.50	13,331	13,490
Malaysia	+4.3 Q3	na	+4.3	+4.8 Dec	+1.8 Dec	+2.1	3.5 Dec [§]	+5.6 Q3	+1.9	-3.4	4.13	4.45	4.17
Pakistan	+5.7 2016**	na	+5.7	+7.8 Nov	+3.7 Jan	+3.8	5.9 2015	-5.0 Q4	-1.8	-4.6	7.59 ^{†††}	105	104
Philippines	+6.6 Q4	+7.0	+6.9	+23.0 Dec	+2.7 Jan	+1.8	4.7 Q4 [§]	+3.1 Sep	+0.9	-2.3	4.86	49.9	47.5
Singapore	+1.1 Q3	+9.1	+1.8	+21.3 Dec	+0.2 Dec	-0.5	2.2 Q4	+63.0 Q3	+23.6	+0.7	2.24	1.42	1.40
South Korea	+2.3 Q4	+1.6	+2.7	+4.3 Dec	+2.0 Jan	+1.0	3.8 Jan [§]	+98.7 Dec	+7.4	-1.6	2.15	1,142	1,212
Taiwan	+2.9 Q4	+1.8	+1.4	+6.2 Dec	+2.2 Jan	+1.4	3.8 Dec	+74.7 Q3	+12.9	-0.2	1.13	30.7	33.3
Thailand	+3.2 Q3	+2.2	+3.2	+0.5 Dec	+1.6 Jan	+0.2	0.8 Dec [§]	+46.4 Q4	+10.7	-2.1	2.58	35.0	35.6
Argentina	-3.8 Q3	-0.9	-2.2	-2.5 Oct	— ***	—	8.5 Q3 [§]	-15.7 Q3	-2.7	-4.7	na	15.5	14.8
Brazil	-2.9 Q3	-3.3	-3.5	nil Dec	+5.4 Jan	+8.1	12.0 Dec [§]	-23.5 Dec	-1.2	-6.3	10.22	3.06	3.98
Chile	+1.6 Q3	+2.5	+1.7	+0.3 Dec	+2.8 Jan	+3.8	6.1 Dec ^{§††}	-4.8 Q3	-1.6	-2.8	4.13	640	709
Colombia	+1.2 Q3	+1.3	+1.6	+2.2 Dec	+5.5 Jan	+7.5	8.7 Dec [§]	-13.7 Q3	-4.8	-3.8	6.86	2,877	3,410
Mexico	+2.0 Q3	+4.0	+2.1	-0.6 Dec	+4.7 Jan	+2.9	3.7 Dec	-30.6 Q3	-2.9	-2.6	7.43	20.4	19.1
Venezuela	-8.8 Q4~	-6.2	-14.1	na	na	+428	7.3 Apr [§]	-17.8 Q3~	-2.0	-24.3	10.43	9.99	6.31
Egypt	+4.5 Q2	na	+4.3	+17.2 Dec	+28.2 Jan	+13.8	12.6 Q3 [§]	-20.8 Q3	-6.9	-12.2	na	16.5	7.83
Israel	+5.2 Q3	+3.6	+3.5	-4.5 Nov	+0.1 Jan	-0.5	4.3 Dec	+13.3 Q3	+3.3	-2.2	2.40	3.75	3.89
Saudi Arabia	+1.4 2016	na	+1.4	na	+1.7 Dec	+3.5	5.6 2015	-46.8 Q3	-5.7	-11.4	na	3.75	3.75
South Africa	+0.7 Q3	+0.2	+0.5	-0.8 Dec	+6.6 Jan	+6.3	26.5 Q4 [§]	-12.3 Q3	-3.8	-3.4	8.58	13.1	15.9

Source: Haver Analytics. **% change on previous quarter, annual rate. [†]The Economist poll or Economist Intelligence Unit estimate/forecast. [§]Not seasonally adjusted. ^{††}New series. ~2014 **Year ending June. ^{†††}Latest 3 months. ^{††††}3-month moving average. ^{§§§}5-year yield. ^{***}Official number not yet proved to be reliable; The State Street PriceStats Inflation Index, Nov 35.38%; year ago 25.30% ^{†††††}Dollar-denominated bonds.

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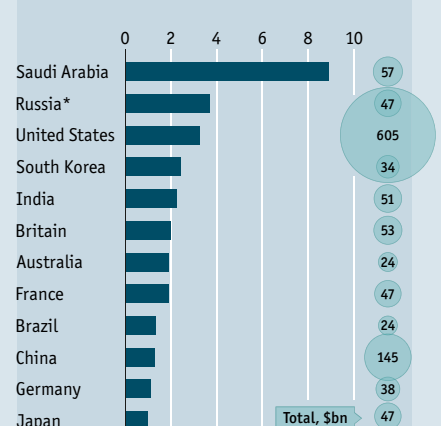
Markets

	Index Feb 15th	% change on		
		one week	in local currency terms	in \$ terms
United States (DJIA)	20,611.9	+2.8	+18.3	+18.3
China (SSEA)	3,364.4	+1.5	-9.2	-14.1
Japan (Nikkei 225)	19,438.0	+2.3	+2.1	+7.2
Britain (FTSE 100)	7,302.4	+1.6	+17.0	-1.2
Canada (S&P TSX)	15,845.0	+1.9	+21.8	+29.3
Euro area (FTSE Euro 100)	1,125.4	+2.5	+2.8	+0.1
Euro area (EURO STOXX 50)	3,323.7	+2.6	+1.7	-1.0
Austria (ATX)	2,807.9	+3.8	+17.1	+14.0
Belgium (Bel 20)	3,618.6	+1.0	-2.2	-4.8
France (CAC 40)	4,924.9	+3.3	+6.2	+3.4
Germany (DAX)*	11,793.9	+2.2	+9.8	+6.9
Greece (Athex Comp)	626.3	+2.5	-0.8	-3.4
Italy (FTSE/MIB)	19,056.2	+1.5	-11.0	-13.4
Netherlands (AEX)	496.7	+2.7	+12.4	+9.4
Spain (Madrid SE)	968.7	+2.8	+0.4	-2.3
Czech Republic (PX)	972.8	+1.8	+1.7	-1.0
Denmark (OMXC20)	828.3	+3.0	-8.6	-10.7
Hungary (BUX)	33,981.5	+4.3	+42.1	+41.7
Norway (OSEAX)	769.7	-0.2	+18.6	+25.6
Poland (WIG)	57,899.3	+4.1	+24.6	+20.7
Russia (RTS, \$ terms)	1,172.6	+0.7	+54.9	+54.9
Sweden (OMXS30)	1,574.0	+1.6	+8.8	+2.6
Switzerland (SMI)	8,486.3	+1.3	-3.8	-4.5
Turkey (BIST)	87,881.9	-0.4	+22.5	-2.8
Australia (All Ord.)	5,859.1	+2.7	+9.6	+16.1
Hong Kong (Hang Seng)	23,994.9	+2.2	+9.5	+9.4
India (BSE)	28,155.6	-0.5	+7.8	+6.6
Indonesia (JSX)	5,380.7	+0.4	+17.1	+21.1
Malaysia (KLSE)	1,709.8	+1.3	+1.0	-2.5
Pakistan (KSE)	49,214.2	-1.3	+50.0	+49.9
Singapore (STI)	3,088.5	+0.7	+7.1	+6.8
South Korea (KOSPI)	2,083.9	+0.9	+6.2	+9.1
Taiwan (TWI)	9,799.8	+2.7	+17.5	+25.6
Thailand (SET)	1,573.4	-1.0	+22.2	+25.5
Argentina (MERV)	19,657.1	+2.7	+68.4	+40.9
Brazil (BVSP)	67,975.6	+4.8	+56.8	+103
Chile (IGPA)	21,722.0	+2.0	+19.7	+32.6
Colombia (IGBC)	9,968.9	-0.9	+16.6	+28.7
Mexico (IPC)	47,161.7	+0.5	+9.7	-6.9
Venezuela (IBC)	34,288.5	+21.3	+135	na
Egypt (EGX 30)	12,448.4	-5.9	+77.7	-15.7
Israel (TA-100)	1,282.6	+3.0	-2.5	+1.2
Saudi Arabia (Tadawul)	7,073.7	+1.5	+2.3	+2.4
South Africa (JSE AS)	52,485.2	+1.3	+3.5	+22.9

Defence budgets

The ten biggest defence budgets in 2016 added up to over \$1.1trn, according to the International Institute for Strategic Studies (IISS). America remains the biggest spender, China ranks second. The balance of power is shifting to Asia though: between 2012 and 2016 defence spending in Asia grew on average by 5-6% a year in real terms and now stands at \$367bn. China makes up 10% of global military spending, up from 3% a decade ago. Commodity exporters in the Middle East have been hit by low oil prices: spending in the region was down by 12% in real terms last year. Saudi Arabia has particularly suffered: its defence budget shrank by 31% last year, although it was still worth almost 10% of GDP.

Defence spending, as % of GDP, 2016



Source: IISS

*Excludes some defence-related spending such as pensions

Other markets

	Index Feb 15th	% change on		
		one week	in local currency terms	in \$ terms
United States (S&P 500)	2,349.3	+2.4	+14.9	+14.9
United States (NAScomp)	5,819.4	+2.4	+16.2	+16.2
China (SSEB, \$ terms)	344.8	+1.8	-19.2	-19.2
Japan (Topix)	1,553.7	+1.9	+0.4	+5.4
Europe (FTSEurofirst 300)	1,465.1	+2.2	+1.9	-0.8
World, dev'd (MSCI)	1,833.6	+1.7	+10.3	+10.3
Emerging markets (MSCI)	941.8	+2.2	+18.6	+18.6
World, all (MSCI)	443.7	+1.8	+11.1	+11.1
World bonds (Citigroup)	881.5	-1.4	+1.3	+1.3
EMBI+ (JPMorgan)	792.5	-0.2	+12.5	+12.5
Hedge funds (HFRX)	1,220.9 [§]	+0.6	+4.0	+4.0
Volatility, US (VIX)	12.0	+11.5	+18.2 (levels)	
CDSs, Eur (iTRAXX) [†]	73.0	-2.8	-5.3	-7.8
CDSs, N Am (CDX) [†]	62.9	-5.8	-28.8	-28.8
Carbon trading (EU ETS) €	5.1	-4.2	-39.6	-41.2

Sources: Markit; Thomson Reuters. [§]Total return index.

[†]Credit-default-swap spreads, basis points. [§]Feb 14th.

Indicators for more countries and additional series, go to: Economist.com/indicators

The Economist commodity-price index

2005=100

			% change on	
	Feb 7th	Feb 14th*	one month	one year
Dollar Index				
All Items	148.3	150.7	+1.8	+20.4
Food	160.1	160.2	-0.5	+9.9
Industrials				
All	136.0	140.9	+4.6	+35.8
Nfa [†]	150.5	150.9	+3.2	+41.5
Metals	129.8	136.6	+5.3	+33.3
Sterling Index				
All items	216.9	220.0	-1.5	+38.2
Euro Index				
All items	169.3	177.4	+2.2	+27.0
Gold				
\$ per oz	1,234.0	1,226.2	+2.0	+0.9
West Texas Intermediate				
\$ per barrel	52.2	53.2	+1.4	+82.5

Sources: Bloomberg; CME Group; Cotlook; Darmann & Curl; FT; ICCO; ICO; ISO; Live Rice Index; LME; NZ Wool Services; Thomson Lloyd & Ewart; Thomson Reuters; Urner Barry; WSJ. ^{*}Provisional [†]Non-food agricultural.

GLOBAL COMPASS

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A typist's life

Brunhilde Pomsel, secretary to Joseph Goebbels, died on January 27th, aged 106

THERE was only one time she felt afraid of him. But well into her 11th decade, when she remembered it, Brunhilde Pomsel would tremble and the hairs would start to lift on her arms. The day was February 18th 1943, when she had gone with a colleague to the Berlin Sportpalast to hear her boss give a speech. Everyone at the Ministry of Enlightenment and Propaganda was meant to go; as a junior, one of six secretaries in her office, she hadn't known how to get out of it. So there they were, in the huge sports stadium, among the party high-ups in the reserved seats.

She knew Joseph Goebbels as soon as he appeared, of course: small, frail and tense, with his exquisitely neat hair and hands and the dragging club foot, which always made her feel sorry for him. What she did not recognise was what he became as he spoke: a raving, ranting midget, foaming and roaring about the need for total war, and making the crowd roar back its approval. She and her colleague gripped hands in terror, forgetting to applaud, until an SS man poked their shoulders to remind them. They clapped then, bewildered.

As for the speech itself, she didn't take it in. She was apolitical, as she kept saying when, seven decades later, she began to talk about it. Stupidly so, but there it was. Yes, she had voted for Hitler in 1933 because

she felt, like most Germans, that Germany had been betrayed by its own government and kicked around by other countries. She joined the Nazi party then, too, because she had to join to get a job in state radio, but she celebrated by having coffee with her Jewish best friend Eva, so that was all the difference it made to her. And she had gone to work for Goebbels, Hitler's chief of propaganda and architect of his most savage schemes, because she had an excellent typing speed and was ordered to. As a good Prussian girl, she did her duty.

Besides, it was a nice job. The pay was great, 275 marks a month, with flexible hours and pleasant people. As for her work, it was the usual round of typing, taking calls, sorting post, filing. She had to change some figures once, as the war turned, reducing the numbers of Germans killed and increasing the number of rapes of German women by Soviet soldiers. She was also given the file of Sophie Scholl, a student leader of the anti-Nazi resistance, who was executed for handing out leaflets at the airport. Her instructions were not to look at it, but to put it in the safe. She did as she was told, and felt proud for having obeyed; proud, too, to have the key of the safe, but never to use it without Goebbels's permission. The very thought that she had his trust made her feel a little more noble.

Not that she often saw him. He was polite but distant, and she wondered whether he knew her name. He invited her one day to dinner at his villa, even seating her next to him, but never said one word to her. If she had been a Hollywood starlet, he would have been all over her; but she was only medium pretty, and wore glasses. Magda, his wife, was kind, and gave her a beautiful blue wool suit when her flat was bombed. The six children were darlings, so well-behaved, and played on her typewriter when they came to the office.

Her Jewish friends

The spell she was under—the spell everyone was under—broke only in April 1945, when she spent ten days cowering from Soviet artillery in Hitler's bunker, trying to get drunk and stay drunk, gulping cold food out of cans, and numb as a lost soul. She planned to tell the Russians, when they came, that she was only Goebbels's typist. He had already shot himself and Magda and they had murdered the children, pushing cyanide into their mouths as they slept. The thought of that made her cry bitterly, unable to forgive them.

But what about the murders of all those others, that business of the Jews? She never knew they had been killed. There were camps; the Jews went to them; and then were sent on, she was told, to repopulate the eastern lands. That all made sense. As for the Jews she knew, their lives got difficult, but she was not sure why. Her first boss, Hugo Goldberg, a lawyer, kept cutting her hours and pay as his clients dwindled. Her friend Eva had to stop visiting her at the ministry, and eventually disappeared; she found her many decades later, on the death-roll of Auschwitz. Just before her death she confided to the maker of a documentary about her that the love of her life had been Gottfried Kirchbach, a Jew; he had escaped to Amsterdam, but her regular visits to him aroused too much suspicion, and had to end. For medical reasons she also had to abort his child. She never married afterwards.

This untypical story had not emerged in the documentary, or in any other interview she gave. Some things she still kept hidden—including, perhaps, the fact that she could be brave. She was tired of everyone saying she must have known more and should have resisted. No, she had been a silly superficial coward, but she had done nothing to be ashamed of. What could a typist have to apologise for?

Besides, she had been punished: five years peeling potatoes and sewing laundry sacks in Soviet prisons, no bed of roses, before she returned to Germany and other secretarial jobs. Back in her flat in ransacked Berlin, she found the blue suit Magda had given her still hanging in the wardrobe. She wore it for many years. ■

PRIDE AND PREJUDICE

#WorkWithPride

HOW CAN COMPANIES CREATE LGBT-INCLUSIVE WORKPLACES WHERE YOU CAN #WORKWITHPRIDE?

FEBRUARY 8TH – MARCH 8TH 2017

Supported by



PARTICIPATE IN #WORKWITHPRIDE VIDEO COMPETITION

The Economist Events' #WorkWithPride competition (part of the Pride and Prejudice initiative), supported by Goldman Sachs, calls on young professionals and future jobseekers to share ideas on the ways companies can improve their diversity-and-inclusion policies to be able to attract better, brighter talents. We seek the next generation of the workforce to air their opinions on how they can help bring significant change to workplaces across the region, making companies better, more inclusive places to work.

We invite eligible contestants to submit a 45-second video that answers the question – How can companies create LGBT-inclusive workplaces where you can #WorkWithPride?

THE PRIZE



A complimentary pass to attend Pride and Prejudice 2017 on March 23rd 2017 and a guaranteed interview with Goldman Sachs.



An opportunity to participate in a Q&A session with an editor from *The Economist* at the upcoming Pride and Prejudice conference.



A round-trip to Hong Kong (economy-class flight) and accommodation (two nights maximum) to attend the event on March 23rd 2017.

HOW TO ENTER

Submit a 45-second video on the competition Facebook page and, tell us: how can companies create LGBT-inclusive workplaces where you can #WorkWithPride?

For terms and conditions, visit workwithpride.economist.com

THE PROCESS

Competition opens for submission
February 8th – March 8th



Vote for your favourite video on the competition Facebook page
February 8th – March 8th



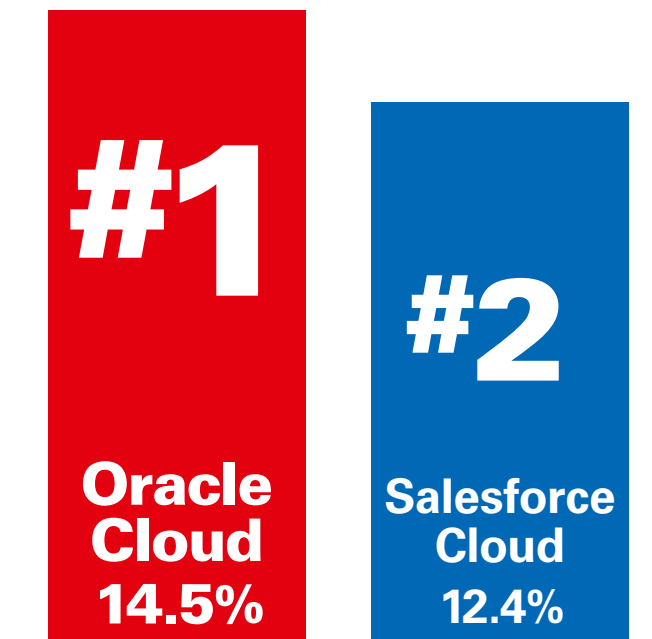
Competition closes; submissions reviewed
March 8th – March 14th



Winner and top two finalists announced and invited to attend Pride and Prejudice 2017
March 23rd

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