The Economist

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FEBRUARY 4TH–10TH 2017

An insurgent in the White House

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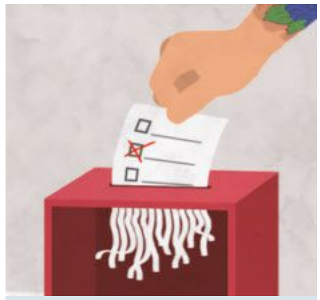

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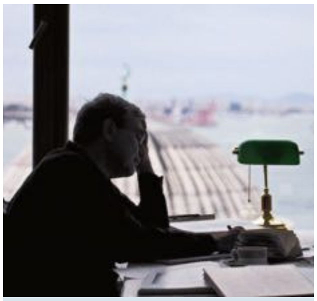

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Politics

America's **refugee** policy was thrown into turmoil by Donald Trump's executive order to halt all refugee admissions for four months and ban Syrian refugees indefinitely. In addition, all citizens from Iran, Iraq, Libya, Somalia, Sudan, Syria and Yemen were stopped from entering the United States for three months. The directive, issued without any input from the federal agencies that have to implement it, caused confusion in America and abroad, trapping people at airports. An almighty constitutional battle looms.

Jeff Sessions was approved as **attorney-general** by the relevant committee in the Senate. Mr Trump had earlier sacked the interim attorney-general, who was appointed as a stopgap until Mr Sessions could take office, after she told lawyers at the Justice Department not to defend the refugee ban.

In another controversial move Mr Trump gave Stephen Bannon, his senior political strategist, a seat on the **National Security Council**. The director of the CIA is also to join, but the chairman of the joint chiefs of staff and the director of national intelligence were demoted on the NSC. They will now attend only when "issues pertaining to their responsibilities" are discussed.

Neil Gorsuch was nominated by Mr Trump to fill the vacancy on the **Supreme Court** left by the death of Antonin Scalia a year ago. Mr Gorsuch is a federal appeals court judge from Colorado with a solid conservative record. Democrats in the Senate are in no mood to smooth the path of his confirmation.

Murder at prayers

A gunman killed six people at a mosque in Quebec City, the capital of **Canada's** French-speaking province. Police later arrested a man who reportedly has anti-immigrant and white-supremacist views.

Mexico's president, Enrique Peña Nieto, cancelled a planned meeting with Donald Trump. Mr Trump had earlier tweeted that Mr Peña should cancel the visit if Mexico was not prepared to pay for the border wall that America plans to build. In a telephone call the two leaders "acknowledged their clear and very public differences" on the wall.

In **Chile**, 11 people died in wildfires, which consumed over 350,000 hectares of forest and the town of Santa Olga in the central part of the country. The government declared a state of emergency and arrested 43 people on suspicion of starting some of the fires.

Brazilian police arrested Eike Batista, who used to be the country's richest man, on charges that he paid bribes to win contracts with the state of Rio de Janeiro. Mr Batista flew to Rio from New York to turn himself in.

Back in the club

Guinea's president, Alpha Condé, was elected chairman of the African Union, a year-long ceremonial post, while **Morocco** was readmitted. It withdrew in a huff 33 years ago after the admission of **Western Sahara**, which it claims and occupies. That dispute is still unresolved.

Evan Mawarire, a pastor from **Zimbabwe** who sparked a protest movement last year and then fled the country, was arrested after flying home.

Israeli police began clearing Amona, a small unauthorised Jewish settlement built on private land in the Palestinians' West Bank. Separately the Israeli government approved the construction of 3,000 more housing units in the West Bank.

Iran test-fired a ballistic missile. The UN sought to determine whether the launch violated the country's counter-proliferation undertakings.

Rich pickings

A billionaire Chinese businessman, Xiao Jianhua, who was living in Hong Kong, disappeared. Press reports said Mr Xiao was taken to mainland **China** by Chinese security agents. The case has attracted considerable attention in Hong Kong, where many people are still angry about the abduction of a bookseller by mainland agents a year ago.

An assassin shot and killed an adviser to the National League for Democracy, **Myanmar's** ruling party. Ko Ni, the victim, was a prominent advocate for religious tolerance.

Pakistan placed Hafiz Saeed, whom America and India maintain is the leader of a terrorist group called Lashkar-e-Taiba, under house arrest. He denies any terror links.

Rodrigo Duterte, the president of the **Philippines**, ordered the dissolution of the police squads that had been spearheading his war on drugs. The order followed the revelation that some members had killed a South Korean businessman.

Backsliding

The **Romanian** government bypassed parliament to decriminalise some forms of corruption by officials, sparking large protests in Bucharest. It is a further sign that Romania's anti-graft drive, a model for the region, is slowing down.

At least 12 **Ukrainian** soldiers were killed in an upsurge of fighting against Russian-backed separatists. The clashes followed a telephone conversation between Donald Trump and Vladimir Putin.

People on the terror watch-list in **Germany** will now be electronically tagged, even if they have not committed a crime. Meanwhile, 1,000 police rounded up suspected jihadists. One of those arrested is wanted in connection with an attack in Tunisia in 2015.

François Fillon, the Republican candidate in the **French** presidential elections, faced allegations of misusing public funds. A newspaper claims that he employed his wife as parliamentary assistant for a total of €831,000 going back to 1988, but cannot find evidence of work she had done.

A bill to allow the British government to trigger **Article 50**, the means to start negotiations to leave the EU, passed the House of Commons by 498 to 114 votes. Many MPs who want to remain in the EU nonetheless supported the bill, expressing the wish of constituents who have voted to leave. The bill goes to the House of Lords.

The British government posthumously pardoned thousands of **gay men** who had been convicted for homosexual acts before homosexuality was decriminalised in England and Wales in 1967. The measure is named the Turing law in honour of Alan Turing, who cracked the German Enigma code during the second world war. He committed suicide in 1954 after he was chemically castrated for being gay.

Business

Though the idea has been mooted for decades, India's government said the time was ripe for a serious discussion about the merits of a **universal basic income**. The finance ministry's annual economic survey included a chapter on UBI as a potential and more efficient substitute for the country's myriad welfare programmes, many of which take the form of subsidies that fail to reach the intended beneficiaries. The report emphasised that implementing a UBI would be fraught with difficulties, but its prominence in an official government document is noteworthy.

Next on the agenda

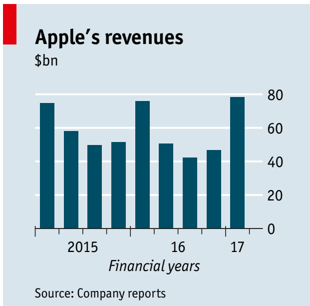
Donald Trump held a meeting with the bosses of America's biggest **drug companies**, an industry that has found itself in the president's crosshairs for "getting away with murder" by charging sky-high prices for medicines in public health-care schemes. The discussion was amiable. Mr Trump pledged to curb regulations, notably on clinical trials, that can lengthen the time spent developing new drugs, raising costs. But he also urged American drugmakers to make more of their products at home.

Mr Trump attacked alleged **currency manipulators**, taking aim at China, Germany and Japan for what he claimed were deliberate attempts to keep their currencies low in order to gain a trade advantage. Peter Navarro, his trade guru, described the euro as an "implicit Deutschmark" that is "grossly undervalued". Shinzo Abe, the Japanese prime minister, pointed out that Japan's stimulus programme is designed to reflate the economy. Expectations that the Trump administration wants a weaker dollar helped push it down by 3% against a basket of currencies in January.

The euro zone's **economy** grew by 1.7% in 2016, below the 2% it notched up in 2015. Still, that was more than America's 1.6% growth in GDP, its weakest pace in five years. Notwithstanding the Brexit vote, the best-performing economy in the G7 was probably Britain's, which grew by 2%.

Toxic wasteland

The head of the European Banking Authority proposed creating a publicly funded **"bad bank"** that would buy up €1trn ($1.1trn) in toxic debt that sits on the balance-sheets of European banks. Those non-performing loans, a quarter of which are in Italy, are a drag on growth. The EBA has no power to implement such a plan. Germany, which has very low levels of bad debt, would probably oppose it.



Apple cheered investors when it reported a rise in revenue for the last three months of 2016, dispelling worries about a wobble in sales. The company sold $78.4bn-worth of goods in the quarter, up by 3% from the same period in 2015. Sales of the iPhone increased by 5%, a relief for Apple after months of shrinking demand for its signature product. China was still a weak spot, though the 12% drop in revenue there was not as bad as in some previous quarters.

Lyft was downloaded more times over a day than **Uber** on the Apple app store for the first time, after its rival became ensnared in more bad publicity. A campaign to persuade people to delete their Uber app took off on social media when it was accused, wrongly as it turned out, of trying to take advantage of a taxi strike at New York's JFK airport that was being held as a protest against Mr Trump's ban on refugees. Lyft is planning to expand to another 100 American cities this year.

Toyota sold 10.2m cars last year, meaning it can no longer claim to be the **world's biggest carmaker**. That crown passes to Volkswagen, which, despite Dieselgate, parked sales of 10.3m vehicles in 2016.

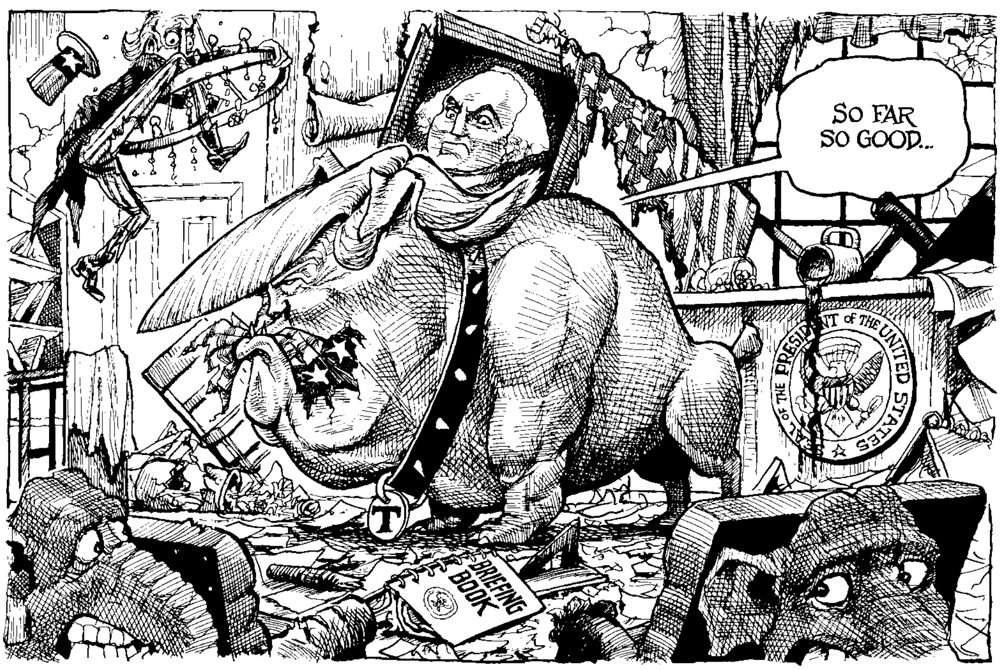
Vodafone confirmed that its subsidiary in India is in merger talks with **Idea Cellular**. The joint subscriber base of India's second- and third-biggest carriers would number 390m, combining Idea's strong presence in rural areas and Vodafone's urban base. Established operators have been shaken by the launch of the Jio network last year. Part of the Reliance empire owned by Mukesh Ambani, it has offered its customers free calls and data.

You'd better shape up

Facing a marked slowing of sales in America and forecasting a loss for this year, **Fitbit** decided to cut 6% of its workforce. The maker of smart fitness-trackers was a hot bet with investors at the time of its IPO in 2015, but they are now sweating. Fitbit struggles to compete in a saturated market for wearable devices.

Humanity took a gamble on its future by letting an **artificial-intelligence** machine take on four of the world's best poker players. After 20 days the machine, Libratus, won, collecting $1.7m in prize money. Libratus's achievement is another big step forward for AI: poker is a game of imperfect information, and it had to work out when its opponents were bluffing.

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



An insurgent in the White House

As Donald Trump rages against the world he inherited as president, America's allies are worried—rightly so

WASHINGTON is in the grip of a revolution. The bleak cadence of last month's inauguration was still in the air when Donald Trump lobbed the first Molotov cocktail of policies and executive orders against the capital's brilliant-white porticos. He has not stopped. Quitting the Trans-Pacific Partnership, demanding a renegotiation of NAFTA and a wall with Mexico, overhauling immigration, warming to Brexit-bound Britain and Russia, cooling to the European Union, defending torture, attacking the press: onward he and his people charged, leaving the wreckage of received opinion smouldering in their wake.

To his critics, Mr Trump is reckless and chaotic. Nowhere more so than in last week's temporary ban on entry for citizens from seven Middle Eastern countries—drafted in secret, enacted in haste and unlikely to fulfil its declared aim of sparing America from terrorism. Even his Republican allies lamented that a fine, popular policy was marred by its execution.

In politics chaos normally leads to failure. With Mr Trump, chaos seems to be part of the plan. Promises that sounded like hyperbole in the campaign now amount to a deadly serious revolt aimed at shaking up Washington and the world.

The Cocktail Party

To understand Mr Trump's insurgency, start with the uses of outrage. In a divided America, where the other side is not just mistaken but malign, conflict is a political asset. The more Mr Trump used his stump speeches to offend polite opinion, the more his supporters were convinced that he really would evict the treacherous, greedy elite from their Washington salons.

His grenade-chuckers-in-chief, Stephen Bannon and Stephen Miller, have now carried that logic into government (see pages 15-17). Every time demonstrators and the media rail against Mr Trump, it is proof that he must be doing something right. If the outpourings of the West Wing are chaotic, it only goes to show that Mr Trump is a man of action just as he promised. The secrecy and confusion of the immigration ban are a sign not of failure, but of how his people shun the self-serving experts who habitually subvert the popular will.

The politics of conflict are harnessed to a world view that rejects decades of American foreign policy. Tactically, Mr Trump has little time for the multilateral bodies that govern everything from security to trade to the environment. He believes that lesser countries reap most of the rewards while America foots the bill. It can exploit its bargaining power to get a better deal by picking off countries one by one.

Mr Bannon and others reject American diplomacy strategically, too. They believe multilateralism embodies an obsolete liberal internationalism. Today's ideological struggle is not over universal human rights, but the defence of "Judeo-Christian" culture from the onslaught of other civilisations, in particular, Islam. Seen through this prism, the UN and the EU are obstacles and Vladimir Putin, for the moment, a potential ally.

Nobody can say how firmly Mr Trump believes all this. Perhaps, amid the trappings of power, he will tire of guerrilla warfare. Perhaps a stockmarket correction will so unsettle the nation's CEO that he will cast Mr Bannon out. Perhaps a crisis will force him into the arms of his chief of staff and his secretaries of defence and state, none of whom is quite the insurgent type. But don't count on it happening soon. And don't underestimate the harm that could be done first.

Talking Trumpish

Americans who reject Mr Trump will, naturally, fear most for what he could do to their own country. They are right to worry (see page 28), but they gain some protection from their institutions and the law. In the world at large, however, checks on Mr Trump are few. The consequences could be grave.

Without active American support and participation, the machinery of global co-operation could well fail. The World Trade Organisation would not be worthy of the name. The UN would fall into disuse. Countless treaties and conventions would be undermined. Although each one stands alone, together they form a system that binds America to its allies and projects its power across the world. Because habits of co-operation that were decades in the making cannot easily be put back together again, the harm would be lasting. In the spiral of distrust and recrimination, countries that are dissatisfied with the world will be tempted to change it—if necessary by force.

What to do? The first task is to limit the damage. There is little point in cutting Mr Trump off. Moderate Republicans and America's allies need to tell him why Mr Bannon and his co-ideologues are wrong. Even in the narrowest sense of American self-interest, their appetite for bilateralism is misguided, not least because the economic harm from the complexity and contradictions of a web of bilateral relations would outweigh any gains to be won from tougher negotiations. Mr Trump also needs to be persuaded that alliances are America's greatest source of power. Its unique network plays as large a role as its economy and its military might in making it the global superpower. Alliances help raise it above its regional rivals—China in East Asia, Russia in eastern Europe, Iran in the Middle East. If Mr Trump truly wants to put America First, his priority should be strengthening ties, not treating allies with contempt.

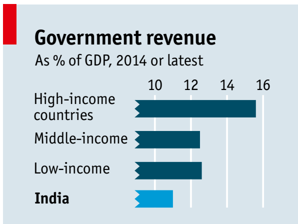
And if this advice is ignored? America's allies must strive to preserve multilateral institutions for the day after Mr Trump, by bolstering their finances and limiting the strife within them. And they must plan for a world without American leadership. If anyone is tempted to look to China to take on the mantle, it is not ready, even if that were desirable. Europe will no longer have the luxury of underfunding NATO and undercutting the EU's foreign service—the closest it has to a State Department. Brazil, the regional power, must be prepared to help lead Latin America. In the Middle East fractious Arab states will together have to find a formula for living at peace with Iran.

A web of bilateralism and a jerry-rigged regionalism are palpably worse for America than the world Mr Trump inherited. It is not too late for him to conclude how much worse, to ditch his bomb-throwers and switch course. The world should hope for that outcome. But it must prepare for trouble. ■

Universal basic incomes

Bonfire of the subsidies

India should replace its mess of welfare schemes with a single payment



ONE of the many indignities associated with being poor in India is navigating the country's thicket of welfare programmes. The central government alone runs 950 of them; the states operate many more on top. Some are big, like those doling out subsidised food and fertiliser. Many are little more than an excuse for government ministers to stage a photo-op.

The Indian government this week floated the idea of replacing most of these schemes with a "universal basic income" (UBI), an unconditional cash payment that could be disbursed not just to the poor but to everyone (see page 59). In rich countries, the UBI is raised as a possible response to a world where artificial intelligence and automation put large numbers of people out of a job. But unless technology destroys jobs on an unprecedented scale and creates none in their place, the case for such a scheme is premature. Functional social-safety nets and instruments such as tax credits make it possible to direct money to the needy in these countries. In India, despite its practical difficulties, the idea has a different logic and deserves a more sympathetic hearing.

For one, a little money would go a long way for India's poor. Over a fifth of its population lives below the poverty line. The scheme outlined this week by the chief economic adviser to the Indian government, Arvind Subramanian, would cut that figure to less than 0.5% by transferring about $9 a month to all adult Indians. If doled out to everyone, that would cost around 6-7% of GDP; the 950 welfare schemes soak up 5% of GDP.

Giving people cash would be far better than today's system of handing out welfare in kind. The plethora of schemes in place for Indians to claim subsidised food, fuel, gas, electricity and so on are inefficient and corrupt. Beneficiaries are at the mercy of venal officials who can lean on them to accept less than they are entitled to. Payments in kind rest on the paternalistic assumption that poor Indians are incapable of making rational spending decisions. A small trial in the state of Madhya Pradesh debunked the notion that a UBI would be frittered away on booze and gambling.

The idea of including India's plutocrats in the handout sticks in the craw. The government's paper on UBI is itself unsure about the "universal" bit of it, suggesting that a quarter of the population should somehow be excluded to make the scheme more affordable. But gauging who is poor and who isn't has repeatedly proved beyond the capacity of the Indian authorities. Over 35% of the richest 1% of Indians benefit from subsidised food to which they are not entitled. Worse, 27% of the poorest fifth of the population are denied their due.

Questions of affordability would loom less large if the Indian authorities collected more tax—central-government revenues are a measly 11% or so of GDP. And a universal benefit may operate better if the sharp-elbowed middle class had a stake in making sure it runs well.

Miss the robot

Even fans of the idea accept that there are practical problems. Crediting cash to the bank accounts of hundreds of millions of Indians is technically feasible thanks to Aadhaar, a digital-identification scheme that covers 99% of adults. But in the absence of a dense banking network, especially in rural areas, many poor Indians might struggle to gain access to the money. The capacity of India's state to manage the transition to a single welfare payment is also questionable, to put it kindly. There is a real risk that a UBI would supplement welfare programmes, rather than replace them. These are all reasons not to leap blindly towards it. But as a way of helping the world's poorest people, the case for a UBI is strong. ■

Emerging markets

Turkeys and blockbusters

Why and how the paths of developing economies are set to diverge

WISE investors know that winning bets shine more brightly if they are not overshadowed by big loss-making trades. The way in which capital flowed to and from emerging markets in recent years meant that such discrimination went out of the window. Now, however, change is coming.

Two influences in particular are behind this. The first is the retreat by America's Federal Reserve from ultra-loose monetary policy. Cheap credit gave good and bad economies alike a boost; as its effect fades, capital allocation will become more disciplined. The peculiar traits of each emerging market, from macroeconomic management to productivity growth, will have a greater say in how its economy performs as well as how investors view it. The second shift is in America's trade policy, which is taking a worrying turn towards economic nationalism—a course whose effects on emerging economies will differ depending on their location and trade patterns. As a result, the reasons for success or failure among emerging markets may be quite different from the recent past.

Begin with macroeconomic management, in which there is already a growing divergence. Turkey is at one end of the spectrum. Despite its fiscal prudence, it has other ills that have long made the cautious wary of emerging markets, including a big ▸▸

trade deficit financed by hot money and lots of foreign-currency debt. It also suffers high inflation. The central bank has been slow to tackle this and seems cowed by Recep Tayyip Erdogan, the president, who insists that high interest rates cause inflation (see page 58).

Contrast this with progress elsewhere. Little more than a year ago, South Africa was bracketed with Turkey as an emerging market to avoid. Its president, Jacob Zuma, attempted to subvert the Treasury, a bastion of orthodoxy. He failed. South Africa's central bank has also stuck to its inflation mandate in the face of a slowing economy and weaker rand. Despite a brutal recession, Brazil's central bank has also concentrated on pulling inflation back towards its goal of 4.5%; the country is getting to grips with the fiscal laxity which is the source of much of its economic misery. With interest rates at 13%, there is ample room to ease monetary policy. Central banks in Russia and India have also run fairly tight monetary policies. As inflation falls further, they will have scope to cut interest rates.

Ultimately, sustained success depends on productivity growth. The sharp slowdown in rich countries has been mirrored in emerging markets. It is marked in commodity-led economies, where resource booms have deterred productive investments in other industries. Export-led growth has proved a reliable spur to efficiency. It is harder to achieve consistent gains in output per person in any economy that looks inwards. Letting domestic spending rip often leads to wasteful building booms. Still, there are biggish emerging markets that have managed fairly steady productivity growth through the swings of the global credit cycle. India is one; Indonesia another. Of smaller countries, the recent records of Peru, the Philippines and Uruguay stand out.

With American economic nationalism, strengths will be tested against a new criterion: exposure to established trade routes. Supplying the American consumer was once a ticket to riches for emerging markets. It may now be a source of frailty: Mexico is now a target of American protectionism (see Free exchange). Other places may also suffer. Singapore, South Korea and Taiwan have enjoyed strong manufacturing output and exports on the back of a reviving world economy. But it is hard to feel upbeat about the prospects of such export-leaning economies if trade wars break out.

India, in contrast, missed out when a new breed of global supply chains in manufacturing was forged between rich and developing countries. But with anti-trade sentiment a growing threat, there is a lot to like about an economy of 1.25bn people that is powered by domestic demand. Brazil, too, has a biggish domestic economy with fairly weak trade ties to America and the potential to strengthen its regional links.

To the discerning, the spoils

Even in this new era, the influence of rich-world monetary policy will not disappear. The value of the dollar will continue to matter, especially to those emerging markets that took on lots of foreign-currency debts in the go-go years. Equally, the impact of economic policy and trade vulnerability will rarely be neatly aligned. Turkey, for instance, counters its macroeconomic weakness with underlying strengths in its patterns of commerce. It trades far more with Europe than America, an advantage it shares with economies in eastern Europe. This means the identities of those emerging-market economies that will thrive and those that will falter are not preordained. But the factors sorting blockbusters from turkeys will be new. ■

Augmented reality

Say AR

The technology is coming, even if it takes time for consumers to embrace AR

THE history of computers is one of increasing intimacy. At first users rented time on mainframe machines they did not own. Next came the "personal computer". Although PCs were confined to desks, ordinary people could afford to buy them, and filled them with all manner of personal information. These days smartphones go everywhere in their owners' pockets, serving as everything from a diary to a camera to a voice-activated personal assistant.

The next step, according to many technologists, is to move the computer from the pocket to the body itself. The idea is to build a pair of "smart glasses" that do everything a smartphone can, and more. A technology called "augmented reality" (AR) would paint computerised information directly on top of the wearers' view of the world. Early versions of the technology already exist (see page 64). If it can be made to work as its advocates hope, AR could bring about a new and even more intimate way to interact with machines. In effect, it would turn reality itself into a gigantic computer screen.

For the time being, the most popular AR apps are still found on smartphones. Pokémon Go, a smartphone game that briefly entranced people in 2016, used a primitive form of the technology. Another popular application is on Snapchat, a messaging app whose parent firm is gearing up for an IPO (see page 51): when teenagers overlay rabbit ears onto the faces of friends and family, they are using AR.

Bunny business

But the technology is advancing rapidly. Several companies already make fairly simple glasses that can project flat images for their wearers. They are increasingly popular with warehousing and manufacturing firms, who can use them to issue instructions to employees while leaving their hands free. Meanwhile, firms such as Magic Leap, Meta and Microsoft, are building much more capable headsets that can sense their surroundings and react to them, projecting convincing, three-dimensional illusions onto the world. Microsoft is already running trials of its HoloLens headset in medical schools (giving students virtual cadavers to dissect) and architectural practices (where several designers can work together on a digital representation of a building).

Designing a nifty piece of technology, though, is not the same as ushering in a revolution. Social factors often govern the path to mass adoption, and for AR, two problems stand out. One is aesthetic. The HoloLens is an impressive machine, but few would mistake it for a fashion item. Its alien appearance makes its wearers look more creepy than cool. One reason the iPhone was so successful was that it was a beautiful piece of design. Its metal finish and high-quality components, allied with a big advertising push from Apple, all helped establish it as a desirable consumer bauble.

The other big problem surrounds consent. The history of one much-hyped set of smart glasses should give the industry pause. In 2013 Google launched its “Glass” headsets to a chosen segment of the public. As well as those who thought the product looked silly, plenty found the glasses sinister, worrying that their users were covertly filming everyone they came into contact with. “Glassholes” became social pariahs. Two years later, Google withdrew Glass from sale.

Both of these problems are solvable. Computers only ever get smaller. Costs shrink relentlessly, too. It may well be possible one day to build a capable and affordable AR computer that looks like a pair of fashionable glasses. Social etiquette also evolves. The Snapchat generation may not be troubled by the idea of being perpetually on camera.

In the meantime, AR’s first inroads will probably come in the world of work, where bosses can order their employees to use headsets with little concern for the finer social niceties, or for how much of a berk they make people look. AR seems likely, in other words, to follow the same path to popularity as smartphones. The first mobile phones were clunky, brick-sized devices, mostly used by self-important bankers and a frequent target of mockery. You would not wear a HoloLens on a night out. Twenty years from now, though, your children may well be showing off a distant descendant. ■

Youth and democracy

Vote early, vote often

Why the voting age should be lowered to 16

HOW young is too young? Rich democracies give different answers, depending on the context: in New Jersey you can buy alcohol at 21 and cigarettes at 19, join the army at 17, have sex at 16 and be tried in court as an adult at 14. Such thresholds vary wildly from place to place. Belgian youngsters can get sozzled legally at 16. But on one thing most agree: only when you have turned 18 can you vote. When campaigners suggest lowering the voting age, the riposte is that 16- and 17-year-olds are too immature. This misses the real danger: that growing numbers of young people may not vote at all.

The trend across the West is disturbing (see page 49). Turnout of American voters under 25 at presidential elections fell from 50% in 1972 to 38% in 2012; among over-65s it rose from 64% to 70% (data for the 2016 election are not yet available). For congressional races, the under-25 vote was a dire 17% in 2014. A similar pattern is repeated across the rich world.

Young people’s disenchantment with the ballot box matters because voting is a habit: those who do not take to it young may never start. That could lead to ever-lower participation rates in decades to come, draining the legitimacy of governments in a vicious spiral in which poor turnout feeds scepticism towards democracy, and vice versa.

The disillusionment has many causes. The young tend to see voting as a choice rather than a duty (or, indeed, a privilege). The politically active tend to campaign on single issues rather than for a particular party. Politicians increasingly woo older voters—not only because they are more likely to vote but also because they make up a growing share of the electorate. Many young people see elections stacked against them. It is no surprise, then, that many of them turn away from voting.

Some countries make voting compulsory, which increases turnout rates. But that does not deal with the underlying disillusionment. Governments need to find ways to rekindle the passion, rather than continue to ignore its absence. A good step would be to lower the voting age to 16, ensuring that new voters get off to the best possible start.

This would be no arbitrary change. The usual threshold of 18 means that young people’s first chance to vote often coincides with finishing compulsory education and leaving home. Away from their parents, they have no established voters to emulate and little connection to their new communities. As they move around, they may remain off the electoral roll. Sixteen-year-olds, by contrast, can easily be added to it and introduced to civic life at home and school. They can pick up the voting habit by accompanying their parents to polling stations. In Scotland, where 16- and 17-year-olds were eligible to vote in the independence referendum in 2014, an impressive three-quarters of those who registered turned out on the day, compared with 54% of 18- to 24-year-olds. In 2007 Austria became the only rich country where 16-year-olds could vote in all elections. Encouragingly, turnout rates for under-18s are markedly higher than for 19- to 25-year-olds.

Merely lowering the voting age is not enough, however. Youth participation in Scotland might have been still higher if more schools had helped register pupils. Governments also need to work harder at keeping electoral rolls current. Some are experimenting with automatic updates whenever a citizen notifies a public body of a change of address. Civics lessons can be improved. Courses that promote open debate and give pupils a vote in aspects of their school lives are more likely to boost political commitment later in life than those that present dry facts about the mechanics of government.

Standing up to gerontocracy

A lower voting age would strengthen the voice of the young and signal that their opinions matter. It is they, after all, who will bear the brunt of climate change and service the debt that paid for benefits, such as pensions and health care, of today’s elderly. Voting at 16 would make it easier to initiate new citizens in civic life. Above all, it would help guarantee the supply of young voters needed to preserve the vitality of democracy. Catch them early, and they will grow into better citizens. ■

Letters

Learning and earning

Your special report on lifelong learning mentioned Singapore's "individual learning accounts" (January 14th). Britain's attempt to mimic this policy proved disastrous, as fraud was widespread (see Anthony King's and Ivor Crewe's "The Blunders of our Governments"). Encouraging "new entrants" to this field sounds innovative, but one should be careful what one wishes for.

You also gave examples of universities innovating in lifelong learning, including Oxford's decision to start a massive open online course (MOOC). But we provide other flexible learning models, too, with face-to-face education through part-time provision and online courses with small classes to ensure interaction with a tutor, as well as between students. Thus, along with the proposed MOOC, Oxford runs almost a hundred ten-week online courses with participation capped at 32. Despite that small cap, several thousand students from around the world now study at Oxford online.

PROFESSOR JONATHAN MICHIE
President
Kellogg College
University of Oxford

It may seem counterintuitive, but at Amazon we offer training to our workers that could probably help them end up leaving the company. Many will pursue a career with Amazon. But for others, we are just one stop along their professional journey. We think it is right that we can help make an employee's time with us a positive, upward step by learning new skills.

We created Career Choice for hourly paid staff who otherwise might not have opportunities open to them. We help them get onto the programme by prepaying tuition, bringing classes into the workplace where it is convenient and doing the research to determine which career path will lead to employment in their region. It is a young programme, but nearly 10,000 Amazonians in ten countries have participated in Career Choice and hundreds have gone on to become nurses, IT technicians and transportation logistics experts, among other professions.

BETH GALETTI
Vice-president, human resources
Amazon
Seattle

As important as "equipping people to stay ahead of technological change" is, we also need an attitudinal change in our schools. We tend to think of schools as places where teachers impart knowledge to students, whose capacity for memorisation and repetition is rigorously tested. Now that we can search Google in a moment, these skills are no longer necessary. Children need to retain a basic framework of conceptual knowledge, but the detail can be recalled from computers.

We need to rethink our approach to schooling and understand that we are now educating for humanity. Creativity, empathy and leadership should be nurtured, equipping people with the skills set to start a business, lead a team and approach problems creatively. Exams must adapt to a new reality by allowing the use of the internet in order to test thinking rather than recall.

Before the workers of the future can take advantage of learning resources, schools should focus on what gives us an advantage over robots; our ability to create, think strategically, communicate with others and demand change.

LORD JIM KNIGHT
Chief education adviser
TES Global
London

Currency payment

Buttonwood wondered whether Marine Le Pen's plan to re-denominate French government euro bonds into new francs might constitute a sovereign default (January 14th). There is no ambiguity here: it would. If an issuer does not adhere to the contractual obligations to its creditors, including payment in the currency stipulated, S&P Global Ratings would declare a default. Our current AA rating on France suggests, however, that such a turn of events is highly unlikely.

MORITZ KRAEMER
Sovereign chief ratings officer
S&P Global Ratings
Frankfurt

Why states fail

By linking state failure to authoritarian institutions the analysis you gave about how best to fix fragile nations was too general ("Conquering chaos", January 7th). Countries with authoritarian regimes are the norm in history, but not all fail. Many, such as China, Kazakhstan and Saudi Arabia, do rather well. Most importantly, there is a huge variety among them, both in kind and in degree. Some features of authoritarian government—official national narratives, heavy-handed but controlled policing—are effective at preventing armed conflict, whereas others are not. Measures such as the Failed States Index look at the symptoms, not the causes, and tell us little about the reasons for "failure".

Moreover, corruption, rent-seeking and money laundering are never merely the fault of local institutions. In order to be worth anything, ill-gotten gains must find a haven beyond borders, in violation of anti-money laundering laws. Failed states and ordinary kleptocracies tend to be regimes whose members have offshore bank accounts and property portfolios in the markets of the West.

So rather than spending $1 trillion fuelling corruption in Afghanistan, perhaps NATO could allocate some of this to beefing up the enforcement of anti-corruption in places like London, New York and Paris.

JOHN HEATHERSHAW
Associate professor of international relations
University of Exeter

Scotland is part of the UK

Scotland's first minister surely does not have a "right to complain" about not being consulted about Brexit ("Supreme judgment", January 28th). Foreign policy has never been the responsibility of the devolved Scottish government. The Scots had a vote in the referendum, as did every other citizen of the United Kingdom, and they are represented in the Westminster Parliament. Nicola Sturgeon is playing a transparent political game. Her Scottish National Party now plans to table at least 50 amendments to the "Brexit bill", purely so it can claim that Westminister has ignored the Scottish people 50 times. The devolved assemblies should be consulted about legitimate constitutional issues, such as the border between Northern Ireland and the Irish republic. But this does not apply to the rabble-rousing of the SNP.

TIMOTHY FOXLEY
Stoke-on-Trent, Staffordshire

Paul Ryan's game plan?

The early days of the Trump administration ("The 45th president", January 21st) bring to mind Robert Graves's "I Claudius". The ageing Roman emperor longs for the return of the republic. To this end he marries Agrippina, mother of Nero, hoping that Nero will be so cruel and despised that it will lead to a rejection of future emperors. His strategy: "Let all of the poisons that lurk in the mud hatch out."

PAUL FRIEDMAN
Vancouver ■

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More letters are available at:
Economist.com/letters

America first and last

Also in this section

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17 How America's allies see it

In honouring promises to his nationalist base, Donald Trump and his advisers seek a divided nation and a divided world

THE cavalier view some members of President Donald Trump's inner circle take of the chaos they have unleashed since January 20th has startled both their opponents and many of their Republican colleagues. It should not. The insiders are doing things that Mr Trump promised to do on the campaign trail, and that they have long wanted to see done. And if they are doing it in a way that tramples other people's sensibilities, then all the better; it is what their supporters would want.

Take the executive order of January 27th that barred citizens of seven mostly Muslim nations from entering America for 90 days, and halted all refugee arrivals for 120 days. So what if it was put together amid such secrecy that Mr Trump's new secretaries for defence and homeland security were reportedly taken by surprise? Who cares if it was shoddily drafted in a way that saw travellers clutching visas and even green cards denoting legal permanent residency detained by customs officers until federal judges ordered their release? Billionaires from Silicon Valley complaining that their innovation is built on immigration? Protesters at airports and thronging the streets of foreign capitals? Bring it on. Even cases like that of Hameed Khalid Darweesh, an interpreter for the American government in Iraq, detained for nearly 19 hours at JFK airport in New York seemed to make no matter. Mr Darweesh cried as he told reporters he had been handcuffed, asking: "You know how many soldiers I touch by this hand?" Hardliners close to Mr Trump did not flinch when their president was forced to fire his acting attorney-general after she refused to comply with the travel ban. And they showed no sign of worrying that a policy nominally designed to reduce terrorism has little prospect of doing so (see box on next page).

The reason for this bullish insouciance is both straightforward and alarming. The president's currently most influential advisers believe that he has a mandate to blow up norms of good governance. When he fires bureaucrats who stand in his way, bullies business bosses into keeping jobs in America, browbeats members of Congress and—most deliciously—provokes swooning dismay among journalists, many of the voters who gave him that mandate applaud. With no interest in converting those who oppose him, such support is the best sort of strength.

The policy the executive order laid out is not, after all, an unpopular one. A Reuters/IPSOS poll released on January 31st found 43% of those questioned supported bans on people from Muslim countries as a precaution against terror; among Republicans support was 73%. Demonstrators carrying placards bearing such messages as "We Are All Muslims Now" and "Let Them In" in airports across the country saw the executive order as a version of Mr Trump's campaign pledge to ban all Muslims watered down with some dubious legal legerdemain (see page 28), and thus as bigotry. Mr Trump's supporters read those placards and wondered why any patriot would want to let in foreigners from dangerous lands, imperilling American families.

Mr Trump stokes up such polarisation by defining his opponents as foolish, out-of-touch, disingenuous or actively vicious. He could but fire his acting attorney general, Sally Yates, a career prosecutor who served as deputy attorney general under President Barack Obama, after she said that Justice Department lawyers would not defend the ban against legal challenges, on the basis that its broad intent was possibly unlawful and because her office had a duty to "stand for what is right". But it was startling to see the White House say that Ms Yates had "betrayed" the Justice Department and add: "Ms Yates is an Obama administration appointee who is weak on borders and very weak on illegal immigration." After the Democratic leader in the Senate, Charles Schumer of New York, grew emotional while discussing refugees, Mr Trump mocked him, saying: "I noticed Chuck Schumer yesterday with ▸▸

fake tears," adding: "I'm going to ask him who is his acting coach."

Mr Trump's most devoted tribune on television, the Fox News channel commentator Sean Hannity, devoted a segment of a show to the question: "Who is bankrolling the protests taking place at airports across the country?" All the evidence from social media points to the protests being both low-budget and fairly spontaneously organised.

For Mr Trump, belittling critics and intimidating business partners has been second nature for decades. It is a tactical proclivity that aligns well with the strategic agenda of the most zealously anti-establishment figures in his team, led by Stephen Bannon, a rumpled nationalist firebrand (pictured, right, on previous page). After serving as CEO of Mr Trump's campaign, Mr Bannon is now the president's chief strategist. Born into a Democrat-voting working class family in Virginia, Mr Bannon served in the navy and worked at Goldman Sachs before making his fortune as a Hollywood investor and dealmaker, thanks in part to a lucky stake in "Seinfeld", a sitcom. He went on to run Breitbart, a reactionary and often venomous website.

Since entering the White House Mr Bannon, 63, has revelled in his public image as a Darth Vader-ish villain. He recently told the *New York Times* that mainstream news outlets had been "humiliated" by the election outcome and were considered the "opposition party" by Team Trump. He advised that the media's best course would be to "keep its mouth shut and just listen for a while", because journalists do not understand America.

Now I am the master

In 2014 Mr Bannon gave a remarkable address to a conservative conference at the Vatican. He described working-class communities betrayed by "people in New York that feel closer to people in London and in Berlin than they do to people in Kansas and in Colorado". The corruption and greed of that rootless elite had caused a crisis in capitalism, Mr Bannon argued, "and on top of that we're now, I believe, at the beginning stages of a global war against Islamic fascism." His answer lay in the values of the "Judeo-Christian West", in "strong countries and strong nationalist movements" and possibly in an accommodation with President Vladimir Putin of Russia. Though he called Mr Putin a kleptocrat, Mr Bannon suggested that this might matter less than securing Russia as an ally against radical Islamists.

Mr Bannon has the trust of the president on foreign affairs. Witness the decision to give him a guaranteed seat on the National Security Council (NSC), enjoying the same access to that inner sanctum as James Mattis, the defence secretary, and Rex Tillerson, the secretary of state. A move that gives a political strategist privileges no longer enjoyed by the chairman of the joint chiefs of staff, who only attends when the agenda touches his military portfolio directly, has been lambasted by foreign-policy grandees as "stone-cold crazy" and "entirely inappropriate".

Indeed, Mr Bannon seems to have edged aside the national security adviser, Michael Flynn, in the battle for influence. An overbearing former general, Mr Flynn is suffering political death by a thousand briefings. Along with Jared Kushner, a New York businessman who is married to Mr Trump's daughter, Ivanka, and who is a recent but devout convert to America First populism, Mr Bannon has pushed Mr Trump to put into action the campaign promises that won him office.

A key ally is Stephen Miller, a 31-year-old policy adviser. Like some other members of Team Trump he comes from the Senate offices of Jeff Sessions, Mr Trump's pick as attorney general, one of Washington's most ferocious opponents of legal and illegal immigration. Mr Miller, who developed a taste for political combat as a right-wing teenager at a liberal high school

Will it work?

Beware the indirect effects

Closing its doors to refugees is unlikely to make America much safer

"IT'S big stuff," boasted Donald Trump as he signed the executive order entitled "Protecting the nation from foreign terrorist entry into the United States". The order suspends entry by citizens of seven mostly Muslim-majority countries (Iraq, Iran, Syria, Yemen, Sudan, Libya and Somalia) for 90 days; halts all refugee admissions for 120 days; and bans Syrian refugees indefinitely. It looks unlikely to make America markedly safer, and by stoking resentment it could indirectly do the reverse.

Terrorism is a threat to America. Some of the seven countries subject to Mr Trump's ban are fighting against jihadists of Islamic State and al-Qaeda, which is why some visa restrictions were imposed on them by the Obama administration. According to Charles Kurzman at the University of North Carolina, 23% of Muslim-Americans associated with violent extremism since 2001 had family links to those countries.

Yet in the past decade there have been few terrorist attacks committed by foreigners in America, and none of them have involved nationals from the seven affected countries. Nor have any deaths in America been caused by terrorists with family ties to those countries (see chart). The 12 deadly acts of terrorism committed by Muslims on American soil since September 11th 2001 have been by American citizens or legal residents, according to New America, a think-tank. The September 11th murderers were from Saudi Arabia, the United Arab Emirates, Egypt and Lebanon, none of which are subject to the ban.

Refugees are particularly unlikely to be a threat. Of the nearly 3.3m refugees admitted to America between 1975 and 2015, only 20 have attempted a terrorist attack. In those attacks three Americans were killed, according to the Cato Institute, a think-tank.

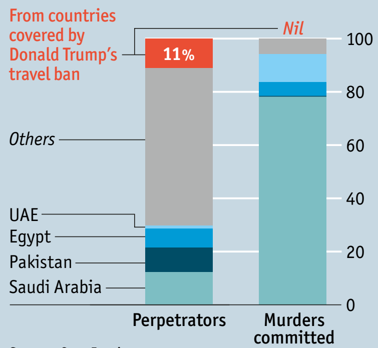
Syrian refugees who gain admittance to America, most of whom are women and children, have to have their status determined by the UNHCR, the UN's refugee agency, and go through a lengthy screening process, mostly in camps in Turkey, Lebanon or Jordan. In 2011 only 23 Syrian refugees managed to run this gauntlet; by 2014 the number had edged up to 249. In 2015, as the war in Syria raged on and as Europe admitted hundreds of thousands, the number rose to 2,192, and last year 15,479 of the 85,000 refugees admitted to America came from Syria. (Of that total 46% were Muslim and 44% were Christian.) The UNHCR estimates that some 20,000 refugees will now be affected by Mr Trump's actions.

Though its protective effects may be minimal, the executive order seems likely to stoke resentment among radicalised young Muslims in America and countries as yet unbanned. It may also put at risk American troops in the Middle East, including the thousands deployed in Iraq and Syria to fight the Islamic State.

The wrong guys

United States, foreign-born terrorists

By country of origin, 1975-2015, % of total



Source: Cato Institute

in Santa Monica, California, has been blamed by some Trump supporters for causing unnecessary fights over immigration policy. Mr Miller, Mr Bannon and others in the president's inner circle reportedly clashed with the Department of Homeland Security (DHS) and its secretary, John Kelly, a former Marine general, over the fate of citizens from countries on the banned list who hold green cards. The Bannon camp insisted that such residents be admitted only on a case-by-case basis—a trampling of immigration procedures from which the administration later retreated.

Mr Bannon talks of Mr Trump's election as part of a "global revolt" by nationalists which will sweep away all governments that do not adapt to it. This dramatic historical narrative appeals to Mr Trump, who lauded the British decision to leave the European Union as a populist precursor to his own victory. But for all that the president enjoys humbling elites, he also craves their respect and admiration. He appointed high-flying former generals and titans of commerce to his cabinet because he wished to surround himself with "the best" and impress the world. If such grandees tire of the conflicts and chaos model of some around Mr Trump, their departures would hurt him politically.

Two national-security hawks in the Senate, John McCain of Arizona and Lindsey Graham of South Carolina, have said they fear the travel ban "will become a self-inflicted wound in the fight against terrorism." Other Republicans in Congress who have pushed back against the policy, though, have griped about questions of process rather than substance, complaining for instance about lack of consultation. Mr Trump was hardly the first choice of presidential candidate for many Republican members of Congress, especially in the Senate. But they are in no mood to topple him: they yearn to cut taxes and slash business regulation, and think Mr Trump will sign the laws that do so.

And they are also frightened. Chaos alarms Republican grandees and their business supporters. But if chaos is what Mr Trump's most ferocious insurgents seek, and if it serves as a signifier of authenticity to the base upon which the legislators' electoral fortunes stand, then chaos is a price they will accept, for now. ■

How America's allies see it

The world, watching

The executive order on visas and refugees is not the only worry other countries have about Trump's America

WITHIN hours of signing his executive order restricting travel from seven Muslim countries, President Donald Trump called King Salman of Saudi Arabia to discuss closer ties. "Trump reassures the allies…and the travel restrictions befuddle the world", read the front-page banner of *Asharq Al-Alawsat*, a newspaper owned by the king's son, on the following day.

Some of America's allies may be reassured; but many of them are aghast at a foreign policy that seems determined to destroy many of the institutions and alliances created in the past half century. A telephone call between Mr Trump and Malcolm Turnbull, the prime minister of Australia, is reported to have turned remarkably sour over a previous American pledge to resettle refugees. Strikingly, Donald Tusk, president of the European Council, wrote to 27 European leaders listing America alongside Russia, China and terrorism among the main external threats to the European Union. Meanwhile Enrique Peña Nieto, Mexico's president, cancelled a meeting with Mr Trump.

Some satisfaction on the part of Saudi Arabia is not surprising; like Egypt and the United Arab Emirates, two other Sunni countries, it was not targeted by the freeze on visas (see map). Gulf leaders disliked Barack Obama. And Mr Trump seems better disposed to despots than his predecessor; he has praised Egypt's president, Abd-el-Fattah al-Sisi, as "a fantastic guy". And many Arab states impose tight access restrictions on fellow Muslims.

Above all, Saudi Arabia saw the travel ban as re-establishing the isolation of its chief adversary, Iran, and other Shia dominated states. It will have been further delighted when, on February 1st, Mr Trump's national security adviser, Michael Flynn, said America was "putting Iran on notice" for destabilising the Middle East after a recent ballistic missile test and an attack by its Houthi allies on a Saudi frigate.

A veteran Saudi commentator, Abdulrahman al-Rashed, notes that "Trump's administration sees Iran as part of the problem, unlike the Obama administration, which viewed it as part of the solution." Rex Tillerson, the secretary of state, is well known in Riyadh. As head of Exxon Mobil before taking office, he visited the Gulf as recently as November. "He's as friendly to Saudi Arabia as it gets," said a diplomat.

Iran's reaction was as furious as Saudi Arabia's was smug, with hardliners and reformers alike reviving old revolutionary slogans. "It's increasing Iran's isolation at a time when the country desperately wants to be part of the global community," said Ali Alizadeh, an Iranian commentator. Valiollah Seif, the central bank governor announced that in March Iran would replace the dollar with other currencies in its accounting for foreign transactions.

Saudi glee could, however, be short-lived: America's intention to treat non-Muslim refugees preferentially, and its anti-Muslim rhetoric, could play into the hands of global jihadists who, like Mr Trump's adviser, Stephen Bannon, see a clash between Islamic and Christian civilisations.

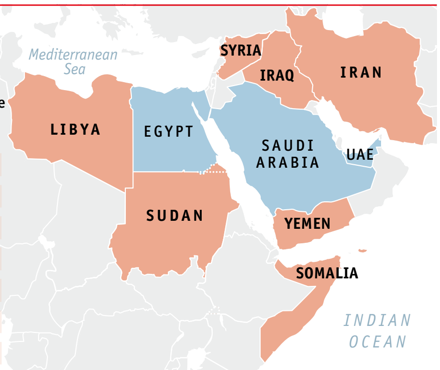
In such a division it might seem natural to find America and Europe on the same side, even if such talk gives many Europeans the heebie-jeebies. But Mr Trump's policies also seem designed to split him off from many of Europe's leaders—and to exacerbate ructions within their countries.

Angela Merkel, the German chancellor and an Atlanticist to her bones, declared the executive order's "general suspicion" of Muslims unjustified, a sentiment echoed in many other European capitals. A lat- ▸▸

Odd ones out

Countries affected by US travel ban*

	US visas issued 2015†, '000	US refugee arrivals from 2016†	% of total	Merchandise trade 2015, $bn
Iran	33.7	3,750	4.4	0.3
Iraq	47.9	9,880	11.6	6.3
Libya	7.4	1	<0.1	0.4
Somalia	13.8	9,020	10.6	<0.1
Sudan	3.7	1,458	1.7	0.1
Syria	8.3	12,587	14.8	<0.1
Yemen	7.1	26	<0.1	0.2
Selected neighbours				
Egypt	65.2	21	<0.1	6.2
Saudi Arabia	127.6	2	<0.1	41.8
UAE	20.1	1	<0.1	25.5



*90-day ban on entry and 120-day ban on refugee arrivals, from January 27th 2017; indefinite ban on Syrian refugees
†Year ending September 30th
Sources: Department of Homeland Security; State Department; US International Trade Commission

er clarification that EU citizens would not be affected so long as they were not travelling on a passport issued by one of the seven countries brought some mollification. But European leaders have a deeper concern: that Mr Trump may halt or reverse America's support for European integration, long a bipartisan staple of American foreign policy. Ted Malloch, who has been canvassed as a possible ambassador to the EU, has compared it to the Soviet Union and suggested he might like to help bring it down. Last year Mr Tusk and several other European leaders were rattled by post-election courtesy calls in which Mr Trump had gleefully solicited opinions on which country might be first to follow Britain out of the EU.

A further adversarial note was struck when, on January 31st, Peter Navarro, Mr Trump's senior trade adviser, declared TTIP, a half-negotiated trade pact between the EU and America, to be dead, and accused Germany of exploiting an undervalued euro to help its exporters. In the wake of Mr Trump's withdrawal from the TTP, a trade agreement between 12 Pacific Rim countries, this will spur on European efforts to conclude trade deals elsewhere, notably with Japan and Mexico, which is also looking to deepen ties with big economies other than America. Although the EU recently slapped tariffs on Chinese steel, some Europeans, like the Mexicans, see possibilities there, too. President Xi Jinping's paean to globalisation at Davos last month went down well.

The British exception

Yet Europe's unity is, as Mr Trump reminds it, fragile. Take Russia policy. If America lifts the sanctions it imposed on Russia after its annexation of Crimea and invasion of eastern Ukraine, Mrs Merkel will struggle to maintain a consensus on Europe's own economic measures, which must be renewed in the summer.

The British prime minister, Theresa May, became the first head of government to visit the new president. She is betting that getting close to Mr Trump may help smooth some of his rougher edges. During their meeting she worked hard to convince him that he will have more leverage with Russia if NATO is strong; he has repeatedly questioned the value of the "obsolete" alliance (see Lexington).

Embracing Mr Trump carries risks. The president is unpopular in Britain. Nearly 2m people have signed an online petition urging Mrs May to cancel the state visit she promised the Donald (see page 47). Her counterparts in the Brexit negotiations may be similarly unimpressed. Many of Britain's Brexiteers, though, see themselves as part of the anti-elitist "global revolt" Mr Bannon embraces. Europe's right-wing populists fell over themselves to celebrate America's visa restrictions. Geert Wilders of the anti-Islam Freedom Party, which is leading opinion polls in the Netherlands six weeks before a general election, said that similar bans in Europe would have thwarted terrorist attacks. "Racist? No. Simply GREAT," tweeted Matteo Salvini of Italy's far-right Northern League. Politicians like these see in Mr Trump not only vindication of their anti-elite, anti-immigrant instincts, but a president who shares their bleak analysis of contemporary Europe. On the campaign trail Mr Trump painted apocalyptic pictures of the continent beset by terrorism and ethnic strife.

Maybe we won't always have Paris

In the coming months Mr Trump will probably meet some of his European counterparts in the flesh at a NATO summit in Brussels—a "hellhole", as he once called it. He has already met his Mexican opposite number, President Peña, having made a visit to Mexico City during his campaign. But after further humiliating demands that Mexico pay for the border wall Mr Trump promised during his campaign a return visit was scotched. Relations between the two countries may be at their lowest ebb since 1916, when Woodrow Wilson sent over 6,000 soldiers into Mexico in pursuit of Francisco "Pancho" Villa. (There are reports, which the Mexican government denies, that in a telephone conversation with Mr Peña Mr Trump spoke of using American troops to hunt down criminals south of the border.)


Well, that was fun

Carlos Slim, a multibillionaire businessman who is the only Mexican to have met Mr Trump since election day, says he is "not a terminator but a negotiator". Mr Trump's anti-Mexican rhetoric, in other words, could be an opening gambit. But much as politicians hope this is true, they are preparing for the worst.

The Mexican people are unusually unified in their opposition to Mr Trump's politicking. Mr Peña, who has a popularity rating of just 12%, was excoriated for inviting Mr Trump to Mexico City last year; his newly forthright stance has earned plaudits. But the most likely beneficiary of Mexico's dislike of Mr Trump is Andrés Manuel López Obrador, leader of the hard-left Morena party. His strident nationalism appeals to voters who want a leader to stand up to Mr Trump. Since the American election, Mr López Obrador has risen 7-8 percentage points in the polls; at the same time the IMF's projections for GDP growth in 2017 have dropped from 2.3% to 1.7%.

With the oil price down, NAFTA-dependent trade is more or less the only motor the economy has. A floundering economy, a fractured political landscape and an anti-Trump boost could give Mr López Obrador the top job after Mexico's 2018 presidential election. That would put at risk the structural reforms in energy, telecoms and education that represent some of the few gains Mr Peña's administration has made, and the stability that has been fundamental to the development of the Mexican-American relationship for decades.

A slowing Mexico led by an anti-American president would deliver little benefit on the other side of the Rio Grande. Contrary to Mr Trump's rhetoric, firms that increase the number of their employees south of the border also increase them to the north—along with their R&D spending. And Mexico could import food from Brazil and Argentina at little extra cost. Those who facilitate illegal immigration from Central America will benefit from reduced co-ordination. So would drug smugglers, who are pretty well versed in tunnelling under walls, whatever their beauty. Hence Mr Peña's offer of a grand bargain in which trade, migration and security issues would be discussed together.

Mexico might also give serious thought to delaying. Trade negotiations, in particular, can take a very long time: why rush them? If there is a new administration in 2021 America's policies could be very different. Others may seek similar solace. But hoping four years could be a mere unpalatable interlude sits poorly with the change two weeks have brought the world. ■

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Uttar Pradesh goes to the polls

A state of shocks

RAMPUR

Elections in India's biggest state could hobble or exalt the national government

IF IT were a country, Uttar Pradesh (UP) would rank just ahead of Brazil in population, right next to Britain in land area and close to Lesotho in poverty. Measured by the complexity of its politics, though, India's most populous state is second to none. With a plethora of faiths, castes and political allegiances, spiced up by garish nepotism, rank criminality and a first-past-the-post voting system prone to wild swings, elections in UP are always raucous and notoriously tricky to predict.

Yet they are important. The state's 140m voters directly elect a sixth of the Lok Sabha, the lower house of India's parliament; those MPs include Narendra Modi, the prime minister, as well as Rahul Gandhi, a high-up in India's main opposition party, Congress. The legislature that sits in the state capital, Lucknow, also appoints a substantial share of members in India's upper house, the Rajya Sabha.

The landslide capture of 73 of UP's 80 Lok Sabha seats is what clinched a sweeping majority for Mr Modi and his Bharatiya Janata Party (BJP) in the 2014 general election. But the opposition's lingering hold on the state assembly, dating from local elections in 2012, helps thwart the BJP from gaining enough seats in the Rajya Sabha to pass laws as it likes.

Small wonder that most eyes are turned to UP, even though four smaller states (Goa, Manipur, Punjab and Uttarakhand) are also heading to the polls in the next few weeks, in a staggered series of elections whose final results will be announced together on March 11th. If the BJP can repeat its success of 2014, it bodes well for Mr Modi's chances of securing another five-year term at the next national election in 2019. His longer-range ambition of controlling the Rajya Sabha would also draw closer, and with it the prospect of pursuing the less constrained Hindu-nationalist agenda that the BJP's base craves.

A poor showing for the BJP, in contrast, could help lift its only nationwide rival, the once-powerful Congress, out of a prolonged tailspin. It could also provide a platform for either of two parties that are strong in the state, the Samajwadi Party (SP) and the Bahujan Samaj Party (BSP), to gain influence in Delhi, India's capital. Both have won state elections in the past. The BSP's firebrand leader, Mayawati, pulled off a stunning triumph in 2007 by forging an alliance between her own, low-caste Dalits, who make up 21% of UP's people, and the state's Muslim minority, who account for a further 19%. But her frivolous spending—on multiple statues of herself, among other things—paved the way for a comeback in 2012 by the SP.

Dominated by the Yadav family, the SP is a traditional patronage machine with a strong foothold among mid-ranked castes. (Yadav is also a term for several caste-groups that together make up 9% of UP's population.) Its current scion and the state's chief minister, Akhilesh Yadav (pictured), has broadened this base by appealing to upwardly mobile young people, using ambitious development plans and handouts of computers for students, as well as by reaching out to Muslims.

Such newfangled ways rankle with the party's old guard, which includes his father and uncle. A tussle over control of the party, including a legal battle over the ownership of its symbol—a bicycle—has given the SP little time to prepare. A last-minute electoral alliance with Congress has prompted further dissent within the ranks. But the younger Mr Yadav is personally popular, and his newfound friendship with Mr Gandhi, whose forebears are somewhat more illustrious, gives their alliance a respectable look.

Three's a crowd

India's notoriously unreliable opinion polls put the SP/Congress and BJP in a rough tie at just over 30% each, with the BSP trailing slightly behind. But because the voting system can easily tilt on a few percentage points, few experts are willing to call a winner just yet. They are not even sure how Mr Modi's most controversial policy, the sudden voiding, in November, of 86% of India's paper currency, will play out. "Demonetisation" caused severe shock, with businesses unable to trade and workers unable to collect pay. Yet even among the poor and hardest hit, many still believe that Mr Modi did the right thing by hitting the rich.

The BJP, which has a base among upper-caste Hindus, holds some useful cards. Mr Modi is a strong national figure, and his party is less tainted with corruption than its rivals. The just-revealed national budget, unsurprisingly, includes tax breaks for the poor and for small businesses, as well as boosts to spending on rural welfare. The ▸▸

BJP can also rely on grassroots help from Hindu-nationalist groups. Its local candidates have not shied away from pressing religious buttons, well-worn in a state that has witnessed periodic sectarian clashes. The most recent, in 2013, left at least 42 Muslims and 20 Hindus dead.

But such tactics were tried in state elections in 2015 in the neighbouring state of Bihar, where the BJP had also done well in national elections. They failed after two local parties unexpectedly buried their differences and merged, winning in a landslide thanks in part to a solid Muslim vote.

Few Muslims will vote for the BJP, leaving the SP and BSP to compete for their favour. But a visit to Rampur, a Muslim-dominated district in the north-west of the state, reveals that at a local level this contest is not even about parties so much as personalities. Kazim Ali Khan, a candidate for the BSP, happens to be the titular nawab of Rampur, whose ancestors once ruled the district as a princely state. Abdullah Azam Khan, the SP candidate, is from a rival clan whose forebears are said to have worked in the royal stables. The two clans have been enemies for generations.

Mr Khan the nawab, who has switched party allegiance several times over the years, accuses the rival clan of exploiting public office to enrich itself by grabbing land from the rural poor. Speaking in a tent erected in a village, he urges voters to punish the other side. "This is not an election," he says. "It's a war." ■

Police corruption in the Philippines

The usual suspects

MANILA

The president admits his drug-squad officers are even worse than the drug-pushers

EVEN Rodrigo Duterte, who initiated a bloodthirsty campaign against drug-dealers and drug-users on becoming president of the Philippines last year, and who brooks almost no criticism of his war on drugs, had to admit that the police had gone too far.

Policemen from the national drug squad, including senior officers, falsely accused a South Korean businessman of involvement in narcotics. They hauled him off to the national police headquarters in Manila, demanded ransom from his family, pocketed the money and then strangled him, burning his body and flushing the ashes down a lavatory.

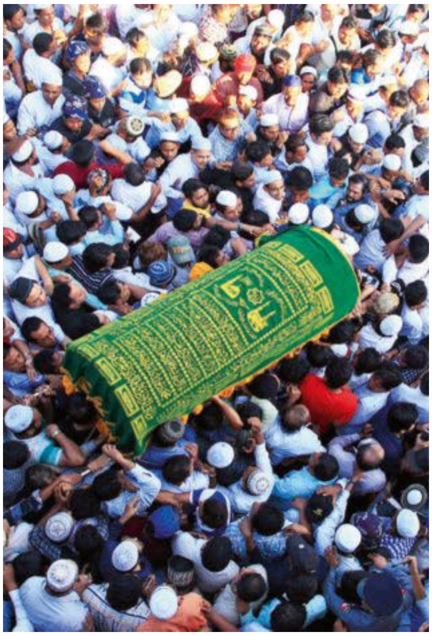
After the National Bureau of Investigation, a separate agency, revealed all this, Mr Duterte ordered a pause in the campaign to give the police time to purge their ranks. He now wants the Philippine Drug Enforcement Agency, another independent force, to lead the war, which he says will continue until his term ends in 2022. Ronald Dela Rosa, the director-general of the police, said he was disbanding all its drug squads. He also instructed the entire force to observe a day of prayer (pictured).

When running for election last year, Mr Duterte promised to rid the Philippines of drugs by whatever means necessary. Even before he took office, the police showed unusual alacrity in anticipating his wishes, mounting operations in which officers often killed suspects alleged to have resisted arrest. In office, Mr Duterte has egged the police on, giving inflammatory speeches calling for the slaughter of drug-dealers, and promising to protect officers who kill suspects. He rebuffed, often rudely, expressions of concern that his campaign might be violating human rights.

The police's own records indicate that since Mr Duterte became president in June officers have killed 2,555 drug suspects alleged to have resisted arrest. The figures indicate that another 3,603 killings connected with the drug trade remain unsolved. The victims had often been abducted, bound and tortured. Officers usually ascribe such deaths to fighting between drug gangs or to mysterious vigilantes. But many Filipinos assume that the police and gangs or vigilantes are often one and the same. In the 24 hours after the purge of the police was announced, reports of unexplained killings abruptly ceased.

Mr Duterte reacted to the scandal in typical fashion, holding a press conference in which he revealed a vague plan through a rambling monologue punctuated by coarse exclamations. "You son of a whore!" he said, addressing himself to the drug-squad officer suspected to be the mastermind of the kidnapping. The president offered a reward of 5m pesos ($100,000) for his capture. "Dead or alive," Mr Duterte said. "If you bring him dead, the better." Mr Dela Rosa leant in to whisper to the president that the officer was already in custody. Mr Duterte ploughed on, inveighing against the police force in general, which he described as corrupt to the core. "You use the power to enforce the law and arrest people for shenanigans," he said. "Almost 40% or so of you guys are habituated to corruption."

This assertion—in contrast to the standard mantra that only a small minority of officers are bad apples—drew attention. After all, Mr Duterte was a close ally of the police during his career as a prosecutor and then mayor of the Philippines' third-biggest city. Until now he has unstintingly supported the tactics the police have used, and reserved expressions like "son of a whore" for their critics. In the unlikely event of the purge of the force leading to prosecutions, the question of whether the president turned a blind eye to murders of drug suspects—or even incited them—is bound to be asked. But if Mr Duterte is worried, he shows little sign of it. "I don't give a shit," he insists. "I have a duty to do, and I will do it." ■



An assassination in Myanmar

Death of an advocate

YANGON

The killing of a prominent Muslim lawyer rattles the country

KO NI was shot in the head at close range in broad daylight. He was waiting for a taxi outside Yangon's bustling international airport, holding his three-year-old grandson in his arms. A prominent lawyer and adviser to the ruling National League for Democracy (NLD) party, he had just returned from Indonesia, where he had been part of a delegation studying democracy and conflict resolution.

Mr Ko Ni was also a Muslim and a prominent defender of religious minorities in a country seething with anti-Muslim sentiment. The climate has worsened since attacks on Burmese border guards last October that have been blamed on the Rohingya, a persecuted Muslim minority group. Since then the Burmese army has taken a scorched-earth approach in northern Rakhine state, home to the largest concentration of Rohingya. Human-rights groups and international monitors have accused the army of torching villages and raping and murdering many of their inhabitants. Mr Ko Ni, who was not himself Rohingya, spoke against the law that long ago stripped them of citizenship. That was daring: most people close to the government see the Rohingya as interlopers from Bangladesh, with no right to stay in Myanmar.

Unsurprisingly, Mr Ko Ni had received death threats from Buddhist extremists. One Muslim activist who preferred to remain anonymous said: "People who speak against the nationalists…people who speak the truth about the situation in Rakhine state…are not secure."

Whether Mr Ko Ni's killer targeted him because of his religion and as a prominent advocate of tolerance remains unclear. Police arrested a 54-year-old named Kyi Lin shortly after the killings. (Taxi drivers at the airport had chased the fleeing gunman; he shot one of them dead before being overpowered by others.) Little is known about him. Initially he claimed to come from Mandalay, the country's second city, but police later said that was untrue.

The Irrawaddy, an independent news website, reported that Mr Kyi Lin told police he had been hired by a man named Myint Swe, who had promised to reward him with a car. Both men have reportedly dabbled in illegal antiquities-dealing, but no clear motive has emerged for the murder. Police later said they had arrested Mr Myint Swe near the border with Thailand.

But that makes Myanmar no less anxious. Some NLD members suspect Mr Ko Ni was chosen for his religion—not out of bigotry, but to undermine the government through religious discord. Nyan Win, an NLD executive-committee member, said in a televised interview that he feared further assassinations. Some see a military link: Mr Ko Ni was a constitutional expert, and had advised the government on reforms to the charter, imposed on the country in 2008 after a sham referendum, that gives vast and unaccountable power to the army. A press release from the president's office after the murder claimed its intent was to "destabilise the state".

If so, it has failed—for now. After Mr Ko Ni's murder, friends and relatives gathered near his home in Yangon's colonial district. "We are very angry", said one Muslim NLD member, "but we will control our anger." Ko Lay, a 43-year-old sailor who lives nearby, said Mr Ko Ni "did so much good for the country, but we cannot always know if people love him or hate him." ■

How North Korea depicts the South

Blurred derision

SEOUL

The North Korean media cheer the political chaos across the border

"NOTHING can stop the South Korean people's righteous fight to drive out the darkness of dictatorship and…usher in the dawn of a new democracy." The phrase could almost be mistaken for the rallying cry of one of the millions of South Koreans who have joined weekly protests to unseat their democratically elected president, Park Geun-hye. But it actually appeared last month in North Korea's *Rodong Sinmun*, the official newspaper of a dark dictatorship.

Since an influence-peddling scandal surrounding Ms Park erupted in October, the chance to jeer at her misfortune—North Korea routinely insults her as a "miserable political prostitute"—has been too good for its propagandists to pass up. They have published news and pictures of the demonstrations with impressive speed, and cheered Ms Park's impeachment in December by South Korea's National Assembly.

Public protests against the government of the South are "pure gold" for the North's regime, says Sokeel Park of Liberty in North Korea, a group that works with defectors. Yet denigrating the South is not as easy as you might think. In its latest footage KCNA, the North's official news agency, gleefully showed the serried ranks of protesters in Seoul, but blurred the city's skyscrapers, presumably in an attempt to hide from the North's downtrodden subjects the prosperity over the border.

But the government in the North no longer has a monopoly on information. More North Koreans are tuning in to foreign radio broadcasts, and South Korean dramas are smuggled into the country on USB drives. The prominent coverage of the South Korean protests in *Rodong Sinmun*, meanwhile, has inadvertently made them a sanctioned topic of discussion in the North, says DailyNK, a news outlet with informants there.

The protests against Ms Park have also stirred debate among many defectors living in the South. Lee Jeong Hyeok, who escaped from North Korea in 2002 as a teenager, has taken to the streets. It was his first real opportunity, he said, to act out the democracy that he had been taught in the South's textbooks. His North Korean girlfriend took photographs to show her future children an event that was "unimaginable" when they were living in the North. Even those Northerners who know *Rodong Sinmun* is distorting the news, says Mr Lee, struggle to understand what is really happening.

Another North Korean defector who demonstrated in Seoul says that, while in the North, he had read about mass protests in South Korea out of curiosity, yet had never seen them as relevant to his situation. He had voted in North Korea (it holds sham elections) as well as in the South. But the recent protests, he said, had brought home to him that democracy must be fought for, too.

Gambling in Japan

In a spin

TOKYO

The government has legalised casinos, but Japanese still do not like the idea

MOST forms of gambling are banned in Japan, but many Japanese still like to have a flutter. Over ¥23trn ($203bn) is waged annually on pachinko, a noisy variant of pinball. Add in lottery tickets, plus horse, boat and bicycle racing—the only other types of betting allowed—and you have a vast industry. Pachinko players alone spend more than the combined betting revenue of all the casinos in the world's top gambling resort, Macau.

Japan's government has struggled to convince citizens that the current strictures should be relaxed. When the Diet legalised casinos in December after years of political wrangling, a poll by NHK, the country's public broadcaster, put support for the move at just 12%. The leader of Komeito, a party with Buddhist roots that is part of the governing coalition, voted against the bill. Critics said it would exacerbate problem gambling and attract "anti-social forces", a euphemism for *yakuza* gangs.

Shinzo Abe, the prime minister, insists casinos will be only one part of family-friendly resorts, with hotels, shops and conference facilities. In an anaemic economy, his enthusiasm is not hard to understand: the construction of these huge complexes could generate ¥5trn in economic activity—with another ¥2trn a year once they have opened, largely from increased tourism, estimates Makoto Yonekawa of the Daiwa Institute of Research, a think-tank.

Foreign casino-operators have already begun lobbying for a slice of this pie. Las Vegas Sands, MGM Resorts and Hard Rock Café International are among the companies looking for licences and local partners. Bureaucrats are crafting more legislation to decide how many resorts to permit and where to put them. This, say analysts, is where the road could get bumpy.

Some politicians want to deter locals from visiting casinos by imposing an entry tax. Pachinko's seedy reputation is one reason. Though the industry has shrunk by about 40% from its peak 20 years ago, there are still about 11,000 pachinko parlours—and thousands of addicts. Public hostility recently forced the mayor of Yokohama, one of three proposed sites for the resorts, to begin back-pedalling on her support. Investors fear outbreaks of NIMBYism elsewhere, too. In a recent survey 75% of Japanese said they would not like a casino to be built near their homes.

Officials in Osaka have come up with a way around this problem: they want to build a resort on an artificial island in Osaka Bay. Well-heeled tourists, mainly from China, are expected to be the main punters, says Susumu Hamamura, a Komeito politician. About 20m people visited Japan last year. The government wants to double this by 2020, along with the roughly ¥3.5trn that tourists spend annually.

Even if the casinos get off the ground, Japan faces stiff regional competition from Macau, Malaysia and Singapore. What will give the country an edge, predicts Mr Yonekawa, is Japanese culture. The proposed sites for another mooted resort, in Hokkaido, Japan's northernmost island, are *onsen* (hot spring) retreats, he points out. "Japanese cuisine and hospitality will win many customers."

Mr Hamamura agrees. He voted for the casino bill despite opposition from his own party boss because he believes it will be good for Japan. "Over 140 countries have legal casinos; why should we be left out?" he asks. Even he accepts, however, that most Japanese are "emotionally" against casinos and will need to be convinced. He plans to win them over, he says, by explaining one of the overlooked benefits of the resorts: they will give foreigners something to do at night. ■

4% of GDP

Citizenship in New Zealand

Exceptional

SYDNEY

A tech billionaire becomes a Kiwi

"IT WOULD give me great pride to let it be known that I am a New Zealand citizen," Peter Thiel wrote in his application to become one in 2011. "I have found no other country that aligns more with my view of the future". Yet Mr Thiel, a German-American billionaire, seems to have managed to contain his pride in the five years since the application was approved. His status only became public knowledge last month, after documents detailing a property purchase were dug up by the *New Zealand Herald*, a newspaper.

The news provoked outrage in certain quarters. Would-be New Zealanders must normally spend the better part of five years living in the country before becoming citizens. Mr Thiel had visited the country only four times when he lodged his application. The government of the day granted him citizenship nonetheless, under a rule that allows the normal requirements to be waived under "exceptional circumstances".

Mr Thiel's application, released by New Zealand's government on February 1st, stressed his contribution to the economy. Mr Thiel had set up a venture-capital fund in Auckland before applying for citizenship, and had invested $7m in two local ventures. As a Silicon Valley luminary (he co-founded PayPal, a payments firm, and sits on the board of Facebook) he was well placed to assist Kiwi startups. He would, he promised, devote "a significant amount of my time and resources to the people and businesses of New Zealand". His foundation had also donated $1m to an appeal for the victims of a recent earthquake.

Mr Thiel is not the first person to have the residency requirement waived: the government sometimes hurries through citizenship for sportsmen who might represent New Zealand internationally, for instance. But his case, critics maintain, gives the impression that passports can be bought—something the government denies.

Many Kiwis shrugged. The country already grants residency to investors, and seems to have done well out of Mr Thiel. Some of the consternation may stem from Mr Thiel's politics: he was a big donor to Donald Trump's election campaign. He has also voiced support, unlike most in Silicon Valley, for Mr Trump's new restrictions on immigration. Whether he would advocate exceptions to those rules is not clear.

Banyan | Sun, sand, sentinels

As geopolitical tensions grow in East Asia, so does the discomfort of the balmy Ryukyu Islands

AT THIS time of year pack ice grinds the beaches of northern Japan, but in the Ryukyu Islands in the south farmers are cutting sugar cane. The Japanese archipelago spans an immense distance: from Cape Soya in northern Hokkaido a smudge on the horizon reveals Sakhalin in Russia's Far East. From the tiny island of Yonaguni, last in the Ryukyu chain, you can sometimes make out the mountains of eastern Taiwan.

Over lunar new year the Ryukyu Islands, which together make up Okinawa prefecture, were heaving with holidaymakers. Okinawa has a growing reputation as an island paradise for all tastes. Package tours poured families from mainland China into the airport at Naha, the capital, for winter sun, duty-free malls and hearty stir fries—spam is a speciality. Some 400km farther south, a cruise ship nosed between coral reefs into the main port of Ishigaki island and disgorged Taiwanese tourists in search of the local black pearls. A few adventurers even made it to Yonaguni, where they dived among the hammerhead sharks or stood on the quay in Kubura to watch the fishermen bring in their daily haul of swordfish. The island lies in the middle of the life-giving Kuroshio current, the western Pacific's Gulf Stream.

Among security types, Okinawa is known as a garrison island. The roar of F-15s is certainly a feature of life in Naha, but most visitors get little hint of the military presence. The sense of peace is not a figment of tourist brochures. Pacifism is hard-baked into Okinawans' sense of themselves. Masahide Ota, a former governor, once said the main features of the Ryukyu kingdom, which was independent until Japan annexed it in 1879, were a "devotion to peace and an absence of weapons". Okinawans love to mention Basil Hall, a naval captain who visited in 1816 and marvelled at the kingdom's mildness, decorum and seeming lack of weapons. Hall later called on Napoleon Bonaparte in St Helena and perplexed the exiled emperor with tales of the Ryukyus. "But without arms, how do they fight?" Napoleon exclaimed.

In truth, there were arms. But squeezed between bigger neighbours, China and Japan, it suited the Ryukyuans to promote a sense of Confucian virtue. And peace is a fragile thing, even today. Just as Hokkaido once lived on a cold-war tripwire, facing the Soviet Union, so the Ryukyu Islands are caught up in East Asia's 21st-century geopolitics. Yonaguni is little more than 100km from Taiwan, and it is hard to imagine how conflict between China and America over that country would not draw in Japan. Yonaguni is also the closest inhabited Japanese island to the Senkaku islets, which, with growing ferocity, China claims (and calls Diaoyu). On a hill behind Kubura a chain-link fence and CCTV are going up around a new base for 160 troops from Japan's Self-Defence Forces. The base is to conduct surveillance of the surrounding seas and skies. Yonaguni has become the new tripwire.

The base was controversial among the 1,500 islanders, over two-fifths of whom voted against it. Even those in favour blame Japanese right-wingers, especially a former Tokyo governor, Shintaro Ishihara, for inflaming the Senkaku dispute. In the end, strong-arming by the central government and a promise of economic benefits from the base won the day.

More bases are planned for the southern Ryukyus. A heliport is mooted for the more populous Ishigaki, from which the Senkakus are administered. All the cement and barbed wire may even help to convince the sceptical Donald Trump that Japan is pulling its weight in its alliance with America. Shinzo Abe, the hawkish prime minister, needs little encouragement.

Few people in Okinawa think open hostilities with China are imminent, or perhaps even likely. But many resent the way geopolitical tensions and a hawkish government are spreading the curse of military encampments: previously, the southern Ryukyus had but one small radar base.

That stands in contrast to the northern end of the chain. Okinawa, with 0.6% of Japan's land area, plays host to three-fifths of all America's facilities in Japan and half of the 53,000-odd American troops. Nearly a fifth of the main island is given over to American bases. For 70 years, Okinawa has been the fulcrum of America's military presence in Asia.

The Americans first came in the 1850s, with gunboats opening the Ryukyus as well as Japan to trade. They reappeared at the end of the second world war, fighting their way towards Japan proper. The Japanese authorities, who before the war had tried to snuff out the local culture and language, mounted a furious defence in Okinawa to save the "home islands". Roughly a quarter of Okinawans died, caught in the brutal fighting. The survivors emerged to find Americans their masters. America then fostered not just a taste for spam, but also a distinct local identity, hoping to dampen Okinawans' desire to rejoin Japan. When Okinawa did revert in 1972, the bases stayed. The resentment feeds an Okinawan sense of separateness, and even a tiny independence movement.

Spam today, spam tomorrow

In elections, Okinawans vote overwhelmingly for candidates opposed to the American bases and to the noise, accidents and crime associated with them. This week the governor of Okinawa, Takeshi Onaga, flew to Washington to convince the Trump administration not to carry on with the construction of a hugely unpopular new base for American marines. Yet the American defence secretary, James Mattis, was also on his way to Japan, reportedly to emphasise the firmness of the alliance and the need for Japan and America to work together.

In Tokyo Mr Abe's allies speak witheringly of Okinawans, but shy away from suggesting bigger bases in the heartland. Okinawa considers itself doubly colonised, by both Japan and America. Sadly, with regional tensions only likely to rise, its continued subjugation seems assured. And the curious mix of tourist paradise and bristling fortification will grow ever more jarring. ■

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Local government

Call the mayor!

BEIJING

For local officials, hotlines play an important political role

IN 1375 a secretary in the justice department wrote a long petition to the Ming emperor. Bored by the endless preamble, the Son of Heaven had the functionary dragged to the court and flogged. That night he read to the end of the petition and discovered four sensible proposals crammed into its final page. He ordered them to be enacted the next day.

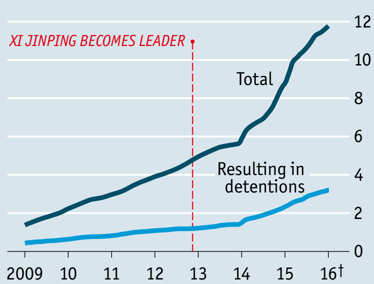
Xi Jinping, China's president, is less attentive to petitions (called "memorials to the throne" in imperial times) than was his Ming predecessor. China still has bureaus where citizens can appeal against official injustice, but the government discourages people from using them. It often locks up those who try, putting them in "black jails" without trial. But if appeals to the emperor now fall on deaf ears, humbler forums for complaint are encouraged. The two main ones are known as "mayor's mailboxes" and "12345 hotlines".

There are mayor's mailboxes on the websites of every municipal government, usually indicated by a button next to a biography of the official with an exhortation to "write me a letter" (or, in practice, send an e-mail). The hotlines allow people to be put through to a local bureaucrat. The first one was set up in 1983. Since then they have proliferated, creating an unco-ordinated tangle. But the past few years have seen rounds of consolidation. Shanghai announced a single hotline in 2013. Guangzhou, in the south, did so in 2015. The unified ones all use the same number, 12345.

Such services may sound parochial, but they play an important role. Chinese officials find it hard to gauge what citizens are thinking. There is no free press and no elections to give them clues. Internet chatter is censored automatically, often before criticism reaches officials' ears. So e-mails to the "mayor" and hotline calls provide rare and valuable guides to public concerns about a wide range of issues: local governments handle everything from social housing to education and health care. The Communist Party hopes that the hotlines and e-mails will make local administrations more accountable, more efficient and—perhaps—more popular. But do they?

Hotting up

China, recorded public protests*, '000



*Involving ten or more people
†To June 30th

Source: Dui Hua Foundation

In recent months state media have been promoting what they call a model example—the 12345 hotline in Jinan, capital of the coastal province of Shandong. It was launched in 2008, has about 60 operators on duty and gets nearly 5,000 calls a day, rising to 20,000 on busy ones. In 2014 Wang Zongling of the Standardisation Administration, which sets national standards, looked at the hotline's impact on the government in Jinan. Before it was set up, the city had 38 hotline numbers for contacting different departments. That was "chaos", the administration said.

The single hotline brought some order. The average time for handling a complaint fell from 10-15 days before it was set up to five afterwards. The share of calls put through to the right person rose from 80% to 97%. Partly because it is now possible to call city hall without wasting your time, enquiries rose from just over 4,000 a day between 2008 and 2011 to almost 5,000. Since the 12345 operators were better trained than before, they processed calls more quickly and the cost per call fell.

But Jinan is a special case. A survey last year by Dataway Horizon, a consultancy in Beijing, found wide variations in the quality of service. In Beijing, Shanghai and Chongqing, which are among the richest cities, all hotline calls were put through right away. In Yunnan, Tibet, Shaanxi and Qinghai—less-developed provinces in the west—only a fifth of calls were even answered on the first attempt. A meeting last July to introduce a hotline in Wuxi near Shanghai reportedly degenerated into a squabble between a deputy mayor and district councillors who argued that it would waste money. In nearby Hangzhou the hotline crashed last month when parents flooded it with calls complaining that ▸▸

school exams were too difficult.

In an attempt to improve widely varying levels of service, the central government recently laid down rules for running 12345 hotlines. Starting in July, calls must be answered within 15 seconds, at least one person on duty should be able to speak a language other than Mandarin and the line should be open 24 hours a day.

Perhaps because they are often poorly run, hotlines do not seem to be making local governments any more popular. These form the most despised tier of authority in China: many of the most egregious face-to-face abuses of power take place locally. In Jinan, despite all those efficiency gains, the survey found that "enquirer satisfaction" was only 1.3% higher after the hotline was established than before it. The spread of hotlines has had no discernible impact on the rise of anti-government demonstrations, most of which are aimed at local governments (see chart, previous page).

But it is possible that there would have been even more protests without the safety-valve of hotlines. State media say one of their roles is to help with "stability maintenance" by alerting officials to potential flashpoints. Many public protests relate to bread-and-butter issues, such as the ones a local newspaper said were most frequently raised by callers to the 12345 hotline in Nanjing, a southern city: the management of apartment blocks, the water supply, illegal construction, violations of consumer rights and shoddily built housing.

The same topics flood mayors' mailboxes (both virtual and real). Diana Fu of the University of Toronto and Greg Distelhorst of the Massachusetts Institute of Technology have trawled through over 8,000 letters and e-mails sent to mayors' offices in nearly 300 cities. They found that environmental problems headed the list of concerns. Four of the top 15 involved various kinds of dispute over property.

Arguments over property are among the most frequent causes of unrest. Local government is largely financed by selling land, which is often seized without fair compensation. Very few people dare to protest explicitly about political issues, but all politics is local—and in China local politics is all about land.

Calling for the resignation of a mayor may be risky, but the correspondence read by Ms Fu and Mr Distelhorst shows that complainants are not shy about pointing fingers at lower-level officials. "Zhou's behaviour is despicable," seethes one writer about a civil-service examiner caught up in a bribery case in Zhaotong city, Yunnan province. Another, from Shaanxi province, asks: "Is it possible that the budget for road repairs has been swallowed up by corruption (just a suspicion)? I would not rule out reporting it to the media…"

For bureaucrats, such accusations may be a salutary surprise. Most officials spend their lives talking to one other about party business, not listening to the public. Over the next few months, party committees across the country will hold tens of thousands of meetings to discuss preparations for a five-yearly congress in Beijing later this year. As some officials admit privately, none of these gatherings will help them understand any better what most of the country is thinking. Perhaps the hotlines and mailboxes may. ■

Hong Kong

Trembling tycoons

HONG KONG

A billionaire's disappearance sows anxiety about China's secret agents

XIAO JIANHUA was not alone among mainland China's mega-rich in his fondness for the Four Seasons hotel in Hong Kong's financial district. It describes itself as "perfect for the business elite", among whom Mr Xiao certainly ranks. Hurun Report, a rich-list compiler, named him last year as China's 32nd wealthiest man, with a fortune of $6bn. He is reported to have made the hotel his home, on and off, since 2014. Yet the "luxurious and stylish sanctuary" of its suites, and Mr Xiao's team of female bodyguards, may not have proved enough to protect him. He has now disappeared—snatched, very possibly, by mainland China's security agents. The mystery has compounded worries in Hong Kong about the reach of China's heavy-handed police.

Hong Kong's own police, who supposedly enjoy independence from China's, say they were told on January 28th that the mainland-born businessman had vanished. They say records show that Mr Xiao (pictured) crossed the border the previous day. On a social-media account operated by his company, Tomorrow Group, Mr Xiao said he was receiving medical treatment abroad and denied having been abducted to the mainland. But the *South China Morning Post*, a newspaper in Hong Kong, quoted a source close to him as saying the businessman was indeed in mainland China. Another unnamed source, quoted by the *Financial Times*, said Mr Xiao had called his family and told them that he had been taken by mainland police and that he was fine.

Where now, Xiao?

The case has drawn considerable attention in Hong Kong. Memories are fresh of the abduction a year ago of a bookseller from Hong Kong to the mainland by Chinese agents. He, as well as three associates who were detained while visiting the mainland, were eventually allowed to return to Hong Kong. But another colleague who was snatched from Thailand remains in custody on the mainland. China's treatment of the booksellers appeared to be related to their trade in gossipy works about China's leaders. It was the most blatant trampling on the autonomy of Hong Kong's police since the territory's return to China in 1997—at least, until now.

Mr Xiao is unlikely to draw as much sympathy. But businesspeople in Hong Kong will be watching closely. Some of them are familiar with the thuggishness of China's police through their dealings on the mainland. With its far fairer legal system, Hong Kong has long been viewed as a haven—not least, by mainlanders like Mr Xiao (whose statement on social media this week said that he was also a Canadian citizen and had a diplomatic passport from an unnamed country).

It is unclear why the mainland's police would want to question him. But his connections with China's political elite, as well as his vast wealth—his company has business interests ranging from finance to information technology, property and mining—have made him a topic of much speculation. During the Tiananmen Square protests of 1989 Mr Xiao led a pro-government student union at Peking University, the nerve centre of the unrest. That loyalty may have helped his rise to become "something of a banker for the ruling class", as the *New York Times* described him in an investigative report in 2014.

If, as local media suggest, President Xi Jinping's anti-corruption drive has spilled over into Hong Kong, along with its settling of political scores, then Hongkongers would be right to be nervous. Many people on the mainland will be watching closely, too. As Mr Xiao's career appeared to show at least until recently, it pays in China to be politically attuned. ■

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The Supreme Court

Gorsuch test

NEW YORK

The president's nominee is well-qualified. His confirmation will still be bitter

ELEVEN years ago, Neil Gorsuch, Donald Trump's choice to replace Antonin Scalia on the Supreme Court, sailed through the Senate by a voice vote when George W. Bush appointed him to the Tenth Circuit Court of Appeals. This time, with the ideological tilt of America's highest court hanging in the balance and Democrats fuming over their Republican colleagues' stonewalling of Merrick Garland, Barack Obama's choice to fill the seat, Mr Gorsuch will face a tougher crowd. In contrast to William Pryor, another judge shortlisted for the seat, who once called *Roe v Wade* "the worst abomination" in the history of constitutional law, Mr Gorsuch is not given to incendiary remarks. Democrats may be hard-pressed to vilify the scholarly jurist, but their sense that he has been tapped for a stolen seat is certain to cloud his confirmation hearings.

On many issues dear to conservatives Mr Gorsuch is a perfect match. He usually sides with companies, provides little relief for condemned prisoners appealing against death sentences, goes out of his way to protect institutions claiming that laws like Obamacare burden their religious liberty and rejects objections to religious displays like the Ten Commandments in public parks. Mr Gorsuch has also signalled deep scepticism of the so-called Chevron doctrine, which gives wide latitude to federal agencies. And although Mr Gorsuch has never written a legal opinion addressing *Roe v Wade*, it seems clear he is—personally, at least—pro-life. In his 2006 book, "The Future of Assisted Suicide and Euthanasia", Mr Gorsuch wrote that, "all human beings are intrinsically valuable and the intentional taking of human life by private persons is always wrong".

Like every justice on the bench today, Mr Gorsuch is a product of the Ivy League, with degrees from Columbia and Harvard. Before returning to Denver, his birthplace, to begin his stint at the Tenth Circuit, Mr Gorsuch served as a clerk to two Supreme Court justices, including the key swing justice who has been on the bench since 1988: 80-year-old Anthony Kennedy. He then went to Oxford on a Marshall Scholarship, earning a doctorate in legal philosophy, and spent a decade at a Washington law firm. He also spent a year working in George W. Bush's Justice Department.

Inkblots

Two months after Scalia's death, Mr Gorsuch praised him as a "lion of the law" whose "great project" was to denote "the differences between judges and legislators". Lawmakers properly consult their own moral convictions when crafting policy, he said, but judges must strive "to apply the law as it is". They should examine only "text, structure and history", not personal visions of how they would like the world to look. As an advocate of Scalia's judicial philosophy of originalism—whereby judges interpret the constitution in the light of its meaning when it was adopted—Mr Gorsuch has developed a conservative paper trail as an appellate judge and won cheers from the Federalist Society and the Heritage Foundation, two stalwart organisations of American conservatism.

He also shares Scalia's literary talents. In a speech in 2014, Mr Gorsuch framed an exploration of "law's irony" in terms of a Dickens novel, weaving in references to Burke, Cicero, Demosthenes, Goethe, Kant and Shakespeare. But he's hardly stuffy. Mr Gorsuch also peppered the talk with contemporary culture, evoking David Foster Wallace and joking that the "modern" rules of civil courts date back to 1938: "Maybe the only thing that really sounds new or modern after 70 years," he said, "is Keith Richards of the Rolling Stones. Some might say he looks like he's done some experimenting too."

Mr Gorsuch may have ample charm and talent, but Democrats have pledged to fight any nominee Mr Trump puts forward. With only a 52-to-48 edge, Republicans cannot rely on their majority to get Mr Gorsuch confirmed. Senate rules permit any member of the minority party to wage a filibuster that only a 60-vote supermajority can quell. If Democrats do this, the only path to filling the seat may be the "nuclear option"—a simple majority vote to change Senate rules and abolish the filibuster for Supreme Court nominations. Mr Trump has urged this, if necessary, but so far Mitch McConnell, the Senate majority leader, has been non-committal. "We're going to get this nominee confirmed," Mr McConnell has said. The fate of the filibuster, he told Mr Trump, is "not a presidential decision. It's a Senate decision." ▸▸

He may have little choice. Although some think the filibuster would be better saved for the next confirmation battle, most Democrats are showing few signs they will capitulate. The day after Mr Gorsuch was nominated, the Senate minority leader, Chuck Schumer, reaffirmed that Mr Gorsuch will need 60 votes. Bipartisan support "should be essential", he said, for Supreme Court nominations. Richard Hasen, a law professor at the University of California, Irvine, says there may be good reason for Democrats to filibuster even if this prompts Republicans to go nuclear. A strident stand, he says, would be well-deserved "payback for the obstructionism" on Mr Garland and would appease "the Democratic base", averting a possible "Tea-Party rebellion on the left". Would such a move exacerbate the politicisation of the judiciary? The Supreme Court is already an ideological institution suffused with partisanship, Mr Hasen observes. That ship, he says, "has sailed". ■

Checks and balances

A crumbling fortress

WASHINGTON, DC

America's democratic system might struggle to contain a despot

THE most troubling interpretation of the executive order that Donald Trump signed on January 27th, temporarily banning visitors from seven mainly Muslim countries, is not that the president means to honour his campaign promises. It is that he will find ways to do so even where what he promised—in this case, to keep Muslims out of America—is illegal. "When he first announced it, he said 'Muslim ban'," explained Rudy Giuliani, a former would-be Trump attorney-general. "He called me up, he said, 'Put a commission together, show me the right way to do it legally'."

Even if Mr Trump can resist the urge to lock up Hillary Clinton and reinstitute torture, which he also promised to do on the trail, he is already testing the boundaries of presidential propriety and power. The potential conflicts of interests in his administration is riven is an obvious example: Mr Trump is the first president since Richard Nixon not to sell or place in blind trust his business, including a hotel division that has announced plans to triple its American properties since his inauguration.

All this is worrying in itself. Making matters worse, however, is the sorry state of America's system of checks and balances, a web of mutually compromising powers woven, in fear of tyrants, around the presidency, Congress and judiciary. "We're not quite at code blue," says Norm Ornstein of the American Enterprise Institute. "But we are definitely in the emergency room and heading towards the intensive-care unit."

This might sound surprising. In his first 11 days as president, 42 law suits were fired at Mr Trump or his administration. Massachusetts, New York, Virginia and Washington challenged the immigration order. But the courts alone will not constrain Mr Trump. Courts can issue stays to pause executive actions. But it could take over a year for the states' challenge to reach the Supreme Court. By then Mr Trump could have changed America's immigration system so much that the judges' verdict would be largely irrelevant.

The legal firepower recently accrued by the presidency has also made the judges' task harder. The job of White House counsel was created to provide the president with sound legal advice; it has ballooned into a battery of lawyers—almost 50 under Barack Obama—whose task is to find legal cover for whatever the president wants to do. The evolution of the proposed Muslim ban into a bar on visitors from some countries was consistent with such machinations. And this is indicative of a wider power grab by the executive, gaining strength for decades, which accelerated under Mr Trump's immediate predecessors.

In matters of war, foreign policy and civil liberties, for example, George W. Bush and Barack Obama claimed vast power. And neither the courts nor Congress, even when hostile to the president, seemed able to stop them. If Mr Trump assumes the right to order the execution of American citizens suspected of terrorism or to try someone on the basis of evidence that the state will not divulge, he will merely be following the example of his predecessors.

Dial 911 to speak to your congressman

It was largely on the basis of this power grab that Bruce Ackerman, a legal scholar, predicted in 2010 that the president would be changed "from an 18th-century notable to a 19th-century party magnate to a 20th-century tribune to a 21st-century demagogue." The current situation may be worse than he envisaged in "The Decline and Fall of the American Republic", due to the eagerness of the Republican-controlled Congress to pander to Mr Trump, weakening the main check on the presidency.

A month before the election, after a video surfaced in which he boasted of his ability to maul women, 16 Republican senators and 28 Republican members of the House of Representatives said they no longer supported him. Yet Mr Trump's unruly first fortnight in power, including much evidence that the White House has become, as Mr Ackerman foresaw, a "platform for charismatic extremism and bureaucratic lawlessness", has drawn few whispers of dissent from Republican congressmen. A few senators, led by Ben Sasse of Nebraska, John McCain of Arizona and Lindsey Graham of South Carolina, have ventured criticism, especially over warnings that Mr Trump will lift sanctions on Russia. Yet at the Republican retreat in Philadelphia on January 26th, dominated by talk of healthcare reform, tax cuts and deregulation, the cheers for the president were full-throated. "I cheered him myself," said Mr McCain. "I want him to succeed, I believe he is commander-in-chief, so, where we disagree, I can't just play whack-a-mole."

The reasons for the growth of tribalism in American politics over the past half century—which include the culture wars, introduction of primaries and success of Newt Gingrich, a former Speaker of the House and now Trump henchman—in transforming what had been a consensus-prizing assembly into a parliamentary bear-pit, are so familiar that it is easy to lose sight of how dynamic a process this is. Partisanship does not simply imply deadlock, of the kind that bedevilled Mr Obama. It is steadily eroding the norms that enshrine the cautiously collaborative spirit of the American system, in which much of its defence against authoritarianism resides.

Thus, for example, the parcel of House rules and conventions known as the Regular Order which was designed to ensure all members, including those of the minority party, got a fair crack at amending and debating bills; it was trashed by one of Mr Gingrich's successors, Dennis Hastert, who is now in jail for molesting children. Similarly, the filibuster, which was conceived as an emergency device to prevent the minority having egregious legislation and government appointments imposed on it. Once rarely used, it was employed by Democrats to block five Bush appointees a year; it was used by Republicans to block 16 Obama appointees a year, driving the then Democratic leader in the Senate, Harry Reid, to abolish its use in blocking cabinet appointments. If the Democrats try to block Neil Gorsuch, whom Mr Trump nominated for the vacant Supreme Court judgeship on January 31st, the Republicans will probably abolish its use in that case also. And another important check on the tyranny of the majority party will be lost.

It is striking that such great changes have not caused more disquiet. That probably reflects the fact that while the parties drifted apart, America continued to elect presidents who were more centrist than their parties. Mr Bush's and Mr Obama's agendas were in some ways more similar to each other than Mr Trump's is to either. Moreover both former presidents honoured the constitutional system; when their edicts were checked, they retreated. That is not an attitude Mr Trump's rhetoric suggests he shares.

"Can the system that has put a demagogue in the White House now hold him to account?" asks Mr Ackerman. "We don't know. But I can say that over the past half century its capacity to restrain has been dramatically reduced." ■

Trade with Mexico

Playing chicken

WASHINGTON, DC

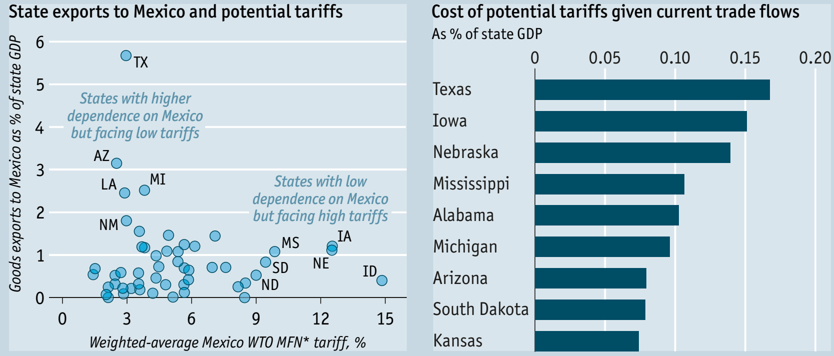
Farmers and Texans would lose most from barriers to trade with Mexico

MEXICO sells America more goods than America sells Mexico, and it enrages President Donald Trump. In 2015 the difference was $58 billion (0.3% of GDP). That is enough, thinks Mr Trump, to justify rewriting the North American Free-Trade Agreement (NAFTA), which allows goods to flow across the Rio Grande free of tariffs. Yet the trade deficit masks bigger figures: America sends almost $240bn in goods to Mexico every year. Were NAFTA to disappear in a renegotiation-gone-wrong, many Americans would pay a price—and not just as consumers faced with dearer avocados. Which American producers would suffer?

Suppose, optimistically, that each side followed World Trade Organisation (WTO) rules. Then, tariffs would revert to so-called "most favoured nation" rates. (That might sound vaguely friendly, but it simply means neither side can offer a different deal from what it gives to any other WTO member.) By matching these tariffs to trade flows for about 5,000 goods, *The Economist* has estimated which states' exporters would be worst-affected by the levies.

The toll booth in the wall

United States, 2015



Sources: BEA; Census Bureau; WTO; *The Economist*

*Most favoured nation, 2016

Farm states face the highest charges. Whacking tariffs on malt, potatoes and dairy products would cause Idaho's exports to Mexico to incur an average levy of nearly 15%. Iowa and Nebraska would pay on average 12.5% for the privilege of sending goods over Mr Trump's wall. Some products would be particularly badly hit. In 2015 Iowa's farmers shipped $132m of high-fructose corn syrup to Mexico. Without NAFTA, Mexico would slap a tooth-aching 100% tariff on the stuff.

Little wonder that the farm lobby tends vocally to support free trade. Yet farm states are lucky to have plenty of customers elsewhere. Idaho's exports to Mexico are worth less than half a percent of its GDP. Other state economies are more tangled up with Mexico's. These places should worry about NAFTA's fate despite facing low average tariffs (see chart).

Among this group, Texas stands out. It faces an average tariff of only 3%, but its exports to Mexico are worth nearly 6% of its GDP (compared with 1.3% nationally). As in Iowa, farmers would suffer. Texan cuts of *Gallus domesticus*—otherwise known as chicken—would incur the largest tariff bill, $174m, of any single product category in the country. In total, as a percentage of GDP, Texas would pay more than any other state. Michigan also fits this category. Its exports of cars and parts—many of which end up back in America—would attract tariffs averaging only about 5%. But with such shipments totalling $4.1bn, the bill would be painfully large.

All this gives Mexico some leverage. But Mr Trump has a stronger hand, because Mexican firms depend more on American consumers than vice versa. Part of the problem may be that rural America is already in the bag for the Republicans. Of the 25 states which would pay most in tariffs, as a percentage of their GDP, only four voted for Hillary Clinton in November.

Mr Trump may not feel any need to obey WTO rules. The White House's latest trade spat is with Germany, a country already paying WTO tariffs (because no trade deal exists with the European Union). Peter Navarro, Mr Trump's chief trade adviser, told the *Financial Times* on January 31st that the "grossly undervalued" euro has allowed Germany to "exploit" America. The White House has also recently hinted that it will adopt a congressional plan to "border-adjust" the corporate tax, which probably breaches WTO rules. If Mexico retaliated with rule breaking of its own, the costs to American producers would be greater—and harder to predict. ■

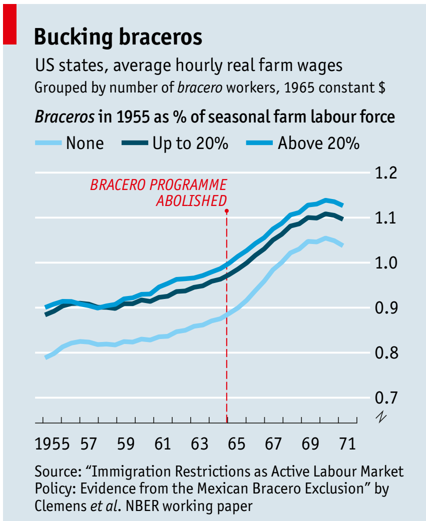
The economics of immigration

Man and machine

Kicking out immigrants does not raise Americans' wages

MEXICAN immigrants were said to be holding down wages and taking jobs that could go to honest Americans. The poorest natives were supposed to be suffering most grievously. "We cannot afford to disregard it," intoned the president. "We do not condone it." The immigrants were soon sent home and not allowed to return.

All that happened in the early 1960s. The president was John F. Kennedy; the Mexicans were participating in the *bracero* programme, which allowed almost half a million people a year to take seasonal work on America's farms. But the parallels with the present are plain. Donald Trump has also complained that immigrants are keeping Americans from good jobs and has promised to do something about it (another parallel: not since Kennedy has America seen such an astonishing presi-



dential coiffure). So it is a good moment for a bracing new assessment of the *bracero* scheme and its demise.

Michael Clemens and Hannah Postel of the Centre for Global Development, and Ethan Lewis of Dartmouth College, have used archived records of American agricultural jobs and wages to test whether Kennedy was right. Did ending the *bracero* scheme in 1964 in fact lead to higher wages and more work for Americans in the fields?

The answer is a firm no. In states where farmers had relied heavily on foreign labour—a group that includes California and Texas—American natives found a few more farm jobs in the mid 1960s. But the rise was small and temporary; within a few years the long decline in agricultural jobs had resumed. And the trend was almost identical in states where there had been no *braceros*. Similarly, farm wages rose in states where there had been lots of migrant workers, states where there had been few migrant workers and states where there had been almost none (see chart). Ending the *bracero* scheme seems to have affected American workers not a bit.

This would seem, as a contemporary put it, to repeal the laws of supply and demand. And the authors rule out two obvious explanations for why the change was so ineffective. Above-board Mexican migrants were not replaced by illegal immigrants: the surge in illicit workers began only in the 1970s. Nor were they replaced by legal immigrants from elsewhere. The explanation is, rather, that farmers swapped Mexicans for machines.

Some farm jobs, like tomato picking, could be automated fairly easily in the 1960s. And ending the *bracero* scheme seems to have accelerated mechanisation in the tomato fields of California. Much the same happened with cotton and sugar beet. Other crops, like lettuces and asparagus, still required human pickers. Production of some such crops simply declined.

These days America has a more direct method of raising labourers' wages: it forces farmers to pay them more. In California, America's most important farming state, politicians have ensured that workers will receive at least $15 an hour by 2023. And Manuel Cunha, a citrus grower who is president of the Nisei Farmers' League, complains about other costly reforms, such as mandatory overtime pay for people who work more than eight hours a day.

In response, he says, farmers are moving from crops that require careful handling, like apricots—"just look at an apricot and it will turn brown"—to crops that can be harvested by machine. Almond trees are spreading across California. In spring the fields are white with their blossom. In September great machines shake the nuts to the ground and sweep them up. ■

Muchachos de campo

Working and race

Colouring in

A trio of labour economists suggest that effort at work is correlated with race

GIVEN the long history of making racial slurs about the efforts of some workers, any study casting black and Hispanic men as lazier than whites and Asians is sure to court controversy. A provocative new working paper by economists Daniel Hamermesh, Katie Genadek and Michael Burda sticks a tentative toe into these murky waters. They suggest that America's well-documented racial wage gap is overstated by 10% because minorities, especially men, spend larger portions of their workdays not actually working. After rejecting a number of plausible explanations for why this might be, the authors finally attribute the discrepancy to unexplained "cultural differences".

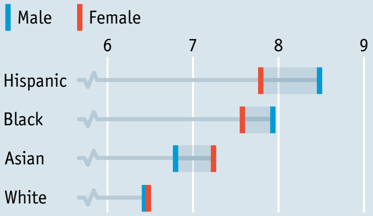
Acutely aware of the sensitivity of these findings, the professors delayed publication until after the presidential election. "I knew full well that Trump and his minions would use it as a propaganda piece," says Mr Hamermesh, a colourful and respected labour economist. The paper may yet be seized on by those who are keen to root out "political correctness" and are perennially unhappy with current anti-discrimination laws.

The study's method is straightforward. The data come from nearly 36,000 "daily diaries", self-reporting on how Americans spent their working hours, collected from 2003 to 2012. Relying on the assumption that workers are equally honest in admitting sloth, the authors calculate the fraction of time spent not working while on the job—spent relaxing or eating, say—and find that it varies by race to a small but statistically significant degree. The gap remains, albeit in weaker form, even with the addition of extensive controls for geography, industry and union status, among others. Non-white male workers spend an additional 1.1% of the day not working while on the job, or an extra five minutes per day. Assuming their controls are adequate, that would still leave 90% of the wage difference between white workers and ethnic minorities, which was recently estimated to be 14%, unexplained. This could conceivably be the product of discrimination, or of something else.

Digging out the cause of this curious gap remains hazardous. Worse treatment by managers of minority workers may itself encourage slacking, says Philip Cohen, a sociologist at the University of Maryland. The authors argue that this point is moot, since self-employed minority workers ▸▸

Idle hands

United States, time spent not working while on the job, 2003-12, by race and sex, %



Source: "Racial/ethnic differences in non-work at work" by Daniel Hamermesh, Katie Genadek and Michael Burda, NBER, January 2017

show similar behaviour, but the difference is not statistically significant. A recent experimental approach, in which cashiers in French grocers' shops were randomly assigned to more- or less-biased managers, saw greater absences and more sluggish scanning when working under the unfair bosses. It found that eliminating manager bias would increase time spent at work by minorities by an estimated 2.5%.

Uncomfortable though the topic may be, the authors have attempted a rigorous analysis. Denunciations came quickly, however. Within hours of publication, Mr Hamermesh received vitriolic messages and was labelled a racist in an online forum popular among economists. Mr Hamermesh, an avowed progressive, who refers to Donald Trump only by amusing nicknames and resigned from a post at the University of Texas over a state law permitting the open carrying of firearms, finds this unfair. He notes that Americans work too much. His preferred solution would not be for some groups to work more, but for others to work less. ■

The murder rate

Spiking

Our calculations suggest murder is rising at its fastest pace since the 1970s

MURDER, which grew rarer for 20 years, is on the rise again. But by how much? In 2015, the number of murders increased by 11% nationwide. During 2016, an escalation of gang violence in Chicago left 764 people dead in a city where 485 had been killed a year before. A dispute ensued over whether the Windy City was simply an isolated example or a barometer of a wider problem. National statistics for 2016 will not be released for eight months, but to get an early sense of the answer *The Economist* has gathered murder statistics for 2016 for the 50 cities with the most murders. These places contain 15% of the country's population and around 36% of murder victims. Our numbers show that, in 2016, murders increased in 34 of the cities we tracked. Three cities experienced a spike in deaths sharper than the 58% suffered by Chicago. Since cities tend to reflect the country as a whole, this suggests that the murder rate is rising at its fastest pace since the early 1970s.

Today's violence needs to be set in context. Despite the recent uptick, the murder rate in our 50 cities was lower in 2016 than it was in 2007, and for the 26 years before that. Criminologists disagree about why murder became less common. What they do agree on is that the improvement has been uneven. Newark, just ten miles from New York city, has a murder rate that is nine times higher than its neighbour's. And unlike New York, where murder is at just 15% of its 1990 peak, in Newark the rate has barely budged.

After the riots in Ferguson, Missouri, in 2014, Heather Mac Donald, author of "The War on Cops", offered a simple explanation for the rise in murder. The riots were a response to the killing of Michael Brown, a black man, by a police officer. The "Ferguson effect", Mrs Mac Donald argued, occurred when police officers retreat from cities when relations with the people they serve became bitter, causing crime to go up nationwide. Murders and shootings did increase by 57% in St Louis, a city close to Ferguson, in the two years after Brown's death. Similarly, when Freddie Gray died in the custody of Baltimore police in April 2015, murders and shootings in the city increased 70% during the year that followed. But we find little evidence for a broader "Ferguson effect" in the rest of the country. Among our 50 cities, data show that in the four months immediately after Brown's death there was no change in the arrest rate for murder, and just a five percentage-point fall in the arrest rate for gun assaults. This does not look like a widespread retreat by the country's police forces.

A stronger message from the individual murder records from the FBI for 50 cities is that the quality of police work, the availability of (usually illegal) guns and the chances of getting caught all matter a lot. This is partly because the motivation for murder is changing. Gang-related killings have steadily increased over the past 35 years, from just one in 100 murders in 1980 to nearly one in ten in 2015. Drug-related murders—which are likely to have some gang-related element—have increased in the past two years, after falling for two decades. In 2015 they accounted for one in 25 murders in big cities.

When murder rose in the late 1980s, the age of both victims and perpetrators dropped by some three years. Unlike then, the recent spate of killings has seen the age of both victims and offenders continue to rise. The average killer in 2015 was four years older than in the 1990s. Gang-related murderers are, on average, six years older now than they were then.

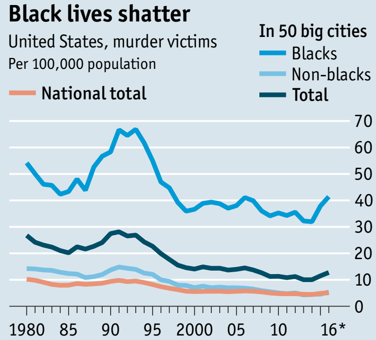
This is where variation in law enforcement comes in. Gang murders involving guns are particularly hard to solve. After 20 years of stability, the murder-clearance rate—where a murder is solved because an arrest is made—fell suddenly in 2013 from 60% to 55% in 2015. There are stark differences by race. In 1980, 56% of murder victims in our dataset were black. In 2015, 68% were. In the early 1980s, police solved around 65% of murders regardless of the race or sex of the victim. Among black women and white men, that percentage has changed little. Among black men it fell to under 55% in 2012, and has since dropped to just 47% in 2015. People are more likely to kill if they think they will not get caught, and unsolved killings can set off a cycle of revenge.

Largely thanks to DNA evidence, police are increasingly capable of solving murders when the victim is attacked with hands, bats or knives. In these cases, clearance rates have increased from 70% to 78% in the past dozen years. Against this trend, when the victim is killed by a gunshot, a suspect is arrested just half the time. In the 1980s the arrest rate for gun-related murders was higher, at 65%.

Taken together our evidence suggests that police should focus their efforts on tackling gang-related murders where a black man is killed with a gun. Bill Bratton, who has led police forces in Boston, Los Angeles and New York, likens the policing of cities to a doctor treating a patient. While some cities may only require a check-up and a few sessions of therapy once in a while, others need invasive surgery. Among our 50 cities, gun use has increased from 65% to 80% of all murders since 1980. But that number varies enormously by city. Guns were responsible for 60% of murders in New York and 85% of those in Chicago between 2010 and 2015. Whereas New York and Chicago have made similar rates of progress in reducing murders in which a gun is not used, Chicago's gun-murder rate is five times New York's. ■

Black lives shatter

United States, murder victims
Per 100,000 population



Sources: FBI; Census Bureau via IPUMS; NACJD; cities' police departments; *The Economist* *Estimate

Lexington | Strength in numbers

NATO leaders worry that Donald Trump seems to see allies as a burden

EUROPEAN publishing saw a sensational hit in the 1840s with "The Mysteries of Russia", a Frenchman's take on the supposed brutality of Slavic life. Its most lurid tale described a Russian peasant fleeing wolves on a sled, who—unable to outpace the slavering pack—escaped by hurling her children, one by one, to their deaths. Jump to 2017 and modern-day European leaders fear that President Donald Trump takes a rather similar view of allies, notably those in the 28-member NATO military alliance. European politicians, generals and diplomats have scrutinised Mr Trump's interviews and speeches and concluded that, by instinct at least, should they ever hold America back, he sees allies as potential burdens fit to be thrown, wailing, into the void.

As part of an America First approach to geopolitics, Mr Trump has made clear that he resents the unconditional nature of Article 5, the treaty clause that treats an attack on one NATO country as an attack on all, committing members to a collective response. As a candidate in 2016, he growled that only those allies keeping a political pledge to spend at least 2% of GDP on defence—"paying their bills" as he put it—should count on America coming to their aid. Both before and after his election he has called NATO "obsolete" because it is not focused on fighting terrorism. Mr Trump has suggested that he might trade away sanctions on Russia, imposed in 2014 in response to the invasion of Ukraine and toughened as recently as December 2016, if "good deals" can be done with President Vladimir Putin—whether those involve agreeing to shrink nuclear arsenals, or encouraging Russia's unsqueamish armed forces to smite the Islamic State (IS) terror network.

Mr Trump's crudely transactional instincts are having at least one salutary effect. He is forcing Western allies to make the case to him, from first principles, for the international order that has protected them since the second world war. Rather than the usual Atlanticist pieties about solidarity and burden-sharing, and windy promises to spend more on defence one day, NATO members, especially Poland and the Baltic states near Russia, are beefing up budgets. With Russian planes, ships and submarines testing NATO defences in the Baltic and North Seas, members have welcomed tanks and troops from America, Britain, Canada and other allies to their territory, with the latest arriving in January.

Germany, long a laggard on NATO spending, wants Team Trump to understand that, with Britain leaving the European Union, the Atlantic alliance is now the last institutional framework for co-operation, and that, because members train and plan together, they end up buying lots of American kit. In a head-spinning reversal, the French president, François Hollande, lectured America's president about NATO's "indispensable" nature in his first phone call to Mr Trump—50 years after his predecessor, Charles de Gaulle, withdrew France from military co-operation with the alliance, a Gallic walk-out only reversed in 2009.

At NATO headquarters in Brussels, bigwigs are working to craft arguments that might appeal to Mr Trump's interest-based worldview. The alliance's secretary-general, Jens Stoltenberg, is a former prime minister of Norway, so knows something about confronting wolves and bears. Interviewed at the alliance's utilitarian quarters—think linoleum floors and corridor signs reading: "No Classified Discussion In This Area"—Mr Stoltenberg notes that America is the only superpower with so many formal allies, calling that a source of strength which China and Russia lack. "America First does not mean America alone," he says. Mr Trump wants two things, above all, from NATO: more spending and more help with terrorism, and Mr Stoltenberg calls that reasonable. He stresses that defence cuts have mostly stopped, even if some big countries (eg, Germany) have a long way to go. He points to NATO missions to counter terrorism in Afghanistan and off the Horn of Africa, fly aerial surveillance planes over Iraq and Syria and train the Iraqi and other Arab armies. A new intelligence division will fly surveillance drones from Sicily.

The secretary-general believes that multinational alliances, far from entangling great powers in enraging, Lilliputian constraints, offer a thrifty form of deterrence, precisely because a small international force serves as a tripwire for action by many countries. As a young conscript he was one of only a modest force patrolling Norway's far northern border with the Soviet Union. But the point was that these were alliance forces: nobody doubted "for a second" that if Soviet forces turned up in the border county of Finnmark, all NATO would respond. Generally, grandees take comfort from James Mattis, the cerebral-but-fearsome former marine general chosen by Mr Trump as his defence secretary, who declared at his Senate confirmation hearing that "Nations with strong allies thrive, and those without them wither," and averred that Mr Putin is trying to "break" NATO.

More than one art of the deal

A second NATO bigwig longs to see Mr Trump convinced that it serves America's interests to have its first lines of defence far across the Atlantic. The official is mystified that the president might trust Russia to honour a deal that would exchange Crimea for help with IS. The same official especially fears a bad arms-control deal, noting the genius Russia has for drafting treaties that curb the West's weapons systems while leaving its preferred technologies untouched. Above all, this NATO bigwig is astonished that Mr Trump might think it shows ruthlessness to abandon allies, saying that Russians "respect strength and ensuring that your friends are defended." Amid cold-war nuclear tensions, America never recognised the Soviet seizure of the Baltic republics, Estonia, Latvia and Lithuania; to cede them now to some Putinesque sphere of influence would be "an expression of weakness", at a time when Russia is working hard to deny NATO access to the Baltic Sea with anti-ship missiles and other weapons. Great powers do not throw friends to the wolves. ■

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Argentina and Brazil

The Mauricio and Michel show

BUENOS AIRES AND SÃO PAULO

South America's biggest economies want to work more closely together. That will not be easy

PRICKLY nationalism is trending in the rich world, but in South America's two biggest countries the talk is of partnering up. On February 7th Mauricio Macri, Argentina's president (shown on the left), plans to visit his Brazilian counterpart, Michel Temer. They will promise to encourage trade and to improve a relationship that is frostier than it should be. There are grounds for hope, but also for scepticism.

For most of the 20th century Brazil and Argentina were more rivals than partners. In the 1970s they nearly embarked on a nuclear arms race; until the mid-1980s Brazil's military-strategy textbooks taught that the likeliest war was with its southern neighbour. Brazil's population and economy dwarf those of Argentina, though Argentines are richer (see chart on next page). That makes it hard to reproduce anything like the Franco-German collaboration that drew Europe together. When Brazil and Argentina agree, it is usually on nationalist ideology rather than on openness. That was the case in the 1950s under the autocrats Getúlio Vargas in Brazil and Juan Perón in Argentina; and during the 2000s, when both countries adopted variants of left-wing populism.

Next week's summiteers do not look at first glance like the sort to break the pattern of suspicion. Mr Macri was born into a family that made its fortune in Argentina's protected construction and car industries, though he espouses economic liberalism. Mr Temer's Party of the Brazilian Democratic Movement is friendly to business, which has traditionally resisted free trade.

But both leaders have strong reasons to advocate openness. They inherited economies in trouble. GDP shrank in both countries last year (by 3.3% in Brazil and by 1.8% in Argentina). The recession in Brazil, which buys a sixth of Argentina's exports, makes Argentina's worse: a 1% drop in Brazil's growth is thought to reduce growth in Argentina by 0.7% after two years.

To get out of their slumps, the presidents are undoing the mistakes of left-wing predecessors. After taking office in December 2015, Mr Macri eased currency controls, ended the publication of fake economic data and reached a deal with creditors to restore Argentina's access to capital markets, which it lost after a default in 2001. Mr Temer, who became president after his predecessor, Dilma Rousseff, was impeached last August, pushed through a 20-year freeze on government spending to shrink a massive budget deficit. Congress, due to return from recess on February 2nd, is to consider his proposal to reform the unaffordable pension system. Stockmarkets in Buenos Aires and São Paulo have rallied since the two leaders took office.

This consensus on pro-market pragmatism is "unprecedented", says Paulo Estivallet de Mesquita, who is in charge of Latin American affairs at Brazil's foreign ministry. Francisco Cabrera, Argentina's industry minister, agrees. "We are finally on the same wavelength," he says. Both presidents, the officials say, want deeper co-operation on everything from nuclear energy to fighting organised crime. Most of all, they want to revive Mercosur, a moribund regional trade block.

Mercosur began promisingly in 1991, with Paraguay and Uruguay as the two other founding members. By 1998 trade among the four countries doubled as a share of the total to around 20%. Mercosur became a customs union, with a common tariff policy, in 1994. But trade within the group remains hampered by exceptions and non-tariff barriers. A series of crises, including a Brazilian devaluation in 1999 and Argentina's default, made governments reluctant to remove them. Left-wing governments came to power, turning Mercosur into a "rhetorical project", says Rubens Barbosa, a Brazilian ex-diplomat. That became even truer in 2012, when the group admitted Hugo Chávez's Venezuela. Trade within Mercosur has shrunk in relative terms, to 13% of the total.

Mr Temer and Mr Macri want to remove barriers within the group and to strike trade deals beyond it. In December Mercosur suspended Venezuela for violating human-rights and trade standards, another sign of the two leaders' like-mindedness. That may help the group work better. Donald Trump's protectionism may offer an opportunity for deals with outsiders. Japan, a signatory of the Trans-Pacific Partnership, from which the United States has now withdrawn, says it is interested in a deal with Mercosur. The European Union has hinted that it would like to conclude a long-delayed agreement this year.

But the prospects for such pairings are worse than they look. Europe is an especially skittish partner. In October a trade deal between the EU and Canada nearly ▸▸

fell apart after seven years of talks.

Agreement within Mercosur may also be elusive. Recession makes Argentina's manufacturers more wary of heightened competition from Brazilian business. Brazilian firms are almost as nervous. Mercosur has made industries in both countries less competitive by shielding them from the rest of the world with high tariffs, says Lucas Ferraz, an economist at FGV, a university in São Paulo.

Mr Macri is unlikely to make offers on trade before mid-term elections in October, which he hopes will boost his coalition's position in congress. The political calendar in Argentina is "inopportune", admits a Brazilian diplomat. After the elections, he thinks, progress could speed up.

Even with the best intentions, Mr Temer and Mr Macri cannot overcome the awkwardness created by their size gap. Argentina will be forever wary of its giant neighbour; Brazil will never treat it as an equal. However gracefully the two presidents dance, they are likely to tread on each other's toes. ■

Technology in Cuba

Real virtuality

HAVANA

On the communist island, app stores pay rent

CUBANS, like citizens of most countries in the digital age, are familiar with app stores. But theirs have actual doors, windows and counters. Los Doctores del Celular, a mobile-phone repair shop a few blocks from Havana's Malecón seaside promenade, is one example. Inside, a Super Mario effigy, kitted out with lab coat and stethoscope, keeps vigil while technicians transfer apps to customers' smartphones via USB cables attached to the shop's computers. Although the United States' embargo on Cuba makes it hard to buy apps and other services online, "Cubans are quickly picking up on app culture," says Jorge-Luis Roque, a technician. A bundle of 60-70 apps costs $5-10. Customers delete the ones they don't want.

The bricks-and-mortar app store is an ingenious Cuban response to digital deprivation. The island has some 300 public Wi-Fi hotspots, up from none two years ago. But connections are slow and, especially by Cuban standards, expensive; they normally cost $1.50 an hour. Adhering to the American embargo, app publishers like Apple and Google block downloads in Cuba. Music lovers can browse the iTunes store, but cannot buy songs or apps; Cubans can get the free apps on Google Play, but not the ones that cost money.

Mr Roque and his colleagues compensate for such faulty connections with human ones. With relatives abroad and access to their credit cards, they can download apps using "virtual private networks", which can fool app publishers into thinking that they are communicating with, say, Miami. Los Doctores del Celular then sell these on to the shop's customers. The clients' phones come from relatives overseas, the black market or Revolico, a website that lists services and second-hand goods for sale.

Among the most popular apps are Facebook Messenger and WhatsApp, cheaper ways of staying in touch with families living abroad than texting or calling. "We have a very large population of app-literate grannies," says Mr Roque. Cubans like apps that require little memory or connectivity. Imo, a video and messaging app that can operate with low bandwidth, is a favourite. Students are customers for offline versions of Wikipedia and apps that specialise in biology, maths and other academic subjects. Taxi drivers rely on offline navigation apps like Maps.me.

Cubans are creators as well as consumers of apps. Isladentro, a directory of services offered by small businesses, is updated monthly and hand-delivered on USB sticks to 100 mobile-phone repair shops. The app's digital listings, which incorporate photos, reviews and maps, are a big improvement over promotional flyers, says Indhira Sotillo, who manages the listings. These were expensive and messy, and "we all ended up with little pieces of paper everywhere", she says.

Isladentro's imagery is crude by Retina Display standards: maps are low resolution and photos are compressed. That is because the data has to be stored on the phone rather than in the hard-to-reach cloud. Cuban-made apps are thus as thrifty with bytes as the locals are with cash. Isladentro's developers reduced the memory it occupies from 890 megabytes to 240, says Ms Sotillo.

Such expedients may be less necessary if data start to flow faster. Cuba's communist government is letting that happen, but cautiously. It says the Malecón will become a 6km-long (four-mile) Wi-Fi hotspot. In December it reached a deal with Google to put servers in Cuba. That should speed up connections to Google's services, which account for roughly half of Cuba's internet traffic. There is talk of introducing mobile data. That would make downloading apps easier, though it would not solve the problem of the embargo or the absence of local credit cards. Neither Cuba's government nor the Trump administration is in a hurry to free Cubans' access to data. Until they do, Los Doctores del Celular will remain a bricks-and-mortar app store. ■

Terrorism in Quebec City

A not-so-lone wolf

QUEBEC CITY

An attack on Muslims reveals Canada's dangerous right-wing fringe

TERRORIST attacks in Canada are rare. The worst of recent times came from an unexpected quarter. On January 29th Alexandre Bissonnette, a 27-year-old student, allegedly burst into the Islamic Cultural Centre in Quebec City and killed six Muslims at prayer. The victims included a university lecturer, a pharmacist and a halal butcher. More than a dozen other worshippers were wounded.

The attack came amid the hue and cry provoked by Donald Trump's order to ban citizens of some Muslim countries from the United States. Some people, both there and in Canada, thought that the perpetrator was a Muslim of some sort. In fact, according to his acquaintances, Mr Bissonnette is an anti-immigration "white supremacist" who supports Mr Trump. Appearing in court the day after the attack, he was charged with six counts of murder and five of attempted murder. He has not so far been charged with terrorism.

The murders have focused attention on Canada's racist fringe, an uncomfortable topic for a country that prides itself on its tolerance and diversity. Before the attack the prime minister, Justin Trudeau, was burnishing Canada's image by reaffirming its promise to welcome people fleeing persecution and war regardless of their faith. The slaughter in Quebec City, the beautiful and normally tranquil provincial capital, is a reminder that not all Canadians feel as he does. Although hate crimes fell overall from 2012 to 2014, those against Muslims more than doubled.

Extreme right-wing views seem to be especially common in Quebec, Canada's French-speaking province. *Radio poubelle* ("rubbish-bin radio"), as Quebeckers call shock radio, spreads the notion that the ▸▸

province is overrun with Muslims (they account for 3% of the population). In 2007 the small town of Hérouxville (Muslim population zero) enacted an absurd and provocative "code of conduct" that explicitly prohibited burning women alive or beating them to death, as if that were something Muslims in Canada commonly do. In 2013 the provincial government, led by the separatist Parti Québécois, advocated a charter of values that would have, among other things, forbidden public servants from wearing "conspicuous" religious symbols such as hijabs. The measure died when an election was called. After the Quebec City attack, the host of a show on FM93, a conservative Quebec radio station, reported, without confirmation, that an attacker had shouted "*Allahu akbar*!" ("God is great!")

The current Liberal premier, Philippe Couillard, has striven to contain what he calls "the devils in our society". But even he has had to bow to pressure to curb religious dress. He has presented a new bill to the provincial legislature that would ban anyone wearing a face veil from giving or receiving a public service.

Some Canadians suggest that the anti-Islamic feeling whipped up by Mr Trump inspired Mr Bissonnette. "I don't feel the new president in the States is helping any," said a woman at the vigil in Quebec City to mourn the victims. But the potential for such an attack was there before he took office. A paper by Richard Parent, a criminologist, and James Ellis, a scholar of terrorism, warned last year that Canada was ignoring "the domestic threat from lone-wolf right-wing terrorists".

The atrocity has led to soul-searching, even by people who helped stir animus against Muslims. The FM93 host admitted that he had focused too obsessively on the threat from radical Islam. Canada, perhaps, has learnt a lesson. ■

Bello | Rage against the bribes department

The Odebrecht scandal may mark a turning-point in Latin America's battle against corruption

PERCHED on a sandy hill overlooking Lima's oceanfront is a 37-metre-high statue of Christ, a crude copy of the one that looks majestically down on Rio de Janeiro. It was unveiled in 2011 by Alan García, then Peru's president. Now Peruvians see it as a monument to corruption. It was built with a donation of $800,000 from Odebrecht, Brazil's biggest construction company, which has admitted that it paid $29m in bribes to secure contracts in Peru under the three governments that preceded the current one.

In the largest anti-corruption settlement in history, reached in December, Odebrecht revealed to authorities in the United States, Brazil and Switzerland that over 15 years it had paid nearly $800m in bribes related to contracts for more than 100 construction and engineering projects in a dozen countries. In Brazil, Odebrecht was at the centre of a cartel that gouged Petrobras, the state-controlled oil company; its former boss, Marcelo Odebrecht, is serving a 19-year jail sentence. The settlement showed that in nine other Latin American countries the company paid a total of $388m in bribes to government officials and their associates.

To do so it set up a Division of Structured Operations—a "bribes department"—which directed the payments through a series of offshore shell companies. Reading between the lines of the settlement it is easy to identify at least two former presidents, a vice-president, several ministers and the bosses of two state oil companies as recipients. No wonder the region has been talking about little else (apart from Donald Trump and some extreme weather) since Christmas.

Governments and prosecutors have been stung into action. Peru's president, Pedro Pablo Kuczynski, has asked Odebrecht to withdraw from the country, where its contracts included one for a $7bn gas pipeline. A former deputy minister in Mr García's government has been arrested. A prosecutor is poised to issue an arrest warrant against Alejandro Toledo, an ex-president who bought several expensive houses after leaving office (like Mr García, he denies wrongdoing). In Colombia a former deputy transport minister has admitted to taking a $6.5m bribe. In the Dominican Republic (bribes of $92m), Ecuador ($33.5m) and Venezuela ($98m), authorities are moving slowly, or not at all. In Panama ($59m) the supreme court is stalling a case against Ricardo Martinelli, a former president who lives in Miami and alleges persecution by his successor.

Odebrecht was not alone. Other Brazilian construction companies employed similar methods. Corruption in public contracting is common globally, says José Ugaz, a Peruvian lawyer who heads Transparency International, a Berlin-based watchdog. But, he adds, there were some unique features in the Odebrecht scandal.

The Brazilian companies targeted the decision-makers, preparing the ground by paying for the services of Brazilian political gurus in election campaigns and making political donations as well as outright bribes. Their main method was to win contracts by making low bids and then corruptly secure big increases in costs through addenda—in some cases when the ink on the contract was barely dry. This applied especially to contracts involving public-private partnerships (PPPs), which have become fashionable in the region and are typically used for big, complex projects, from highways to hydroelectric schemes.

José Luis Guasch, formerly at the World Bank, has found that 78% of all transport PPPs in Latin America have been renegotiated, with an average of four addenda per contract and a cost increase of $30m per addendum. Thus, the cost of a road linking Brazil and Peru rose from $800m to $2.3bn through 22 addenda. Such contract changes can be "fertile ground for corruption", Mr Guasch says.

Governments have moved to tighten contracting rules. Chile, Colombia and Peru have all approved laws on PPPs that make it harder for contractors to renegotiate. More is needed. All contracts and requests for changes should be published online, urges Eduardo Engel, who headed an anti-corruption commission in Chile. And tender committees should draw members from outside infrastructure ministries.

There is a risk that the Odebrecht revelations will undermine faith in democracy and that long-overdue investments in transport infrastructure will suffer further delays. But not all is gloom. In Latin America, "we are in an era in which public opinion is playing a fundamental role" in fighting corruption, says Mr Ugaz. And that means that, this time, there is a good chance that other countries will follow Brazil in punishing it.

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Trade restrictions

African Queen

ON LAKE TANGANYIKA

What a century-old German ship says about trade in modern Africa

IT IS a little after 10pm when the world's oldest serving passenger ship makes her first stop. Rolling on a gentle swell, small wooden boats pull up alongside its riveted hull. Lights from the deck illuminate the packed vessels; ropes are flung up and tied to railings. Women in billowing wraps come on board with their suitcases, legs briefly flailing as they are pulled through the hatch. Men load enormous bags into a net hanging from a crane. In the other direction, boxes of gin, batteries, bags of clothes and, at one point, a sewing machine, are passed down perilously by hand. Miraculously, nothing and nobody falls into the black water.

So goes trade on Lake Tanganyika, the world's longest lake. The ship is the MV *Liemba*, brought to central Africa as the *Graf Goetzen* by German colonists in 1913. Originally built in Lower Saxony, she was transported in 5,000 boxes by rail to Kigoma on the north-eastern shore of the lake and reconstructed there. During the first world war she served as a troop transporter and gunboat until 1916. After several skirmishes, fearing capture by either the British or the Belgians, her crew scuttled her. In 1924 she was fished up again and renamed. Among other distinctions, she is thought to be the inspiration for the gunboat *Luisa* in C.S. Forester's novel, "The African Queen".

Over a century later, the *Liemba* still carries passengers from Kigoma to Mpulungu in Zambia and back. She remains one of the largest boats on any of Africa's lakes, just behind the MV *Victoria* further north. Operated by the Tanzanian government, the ship has become a vital link for people around the Great Lakes region of Africa, one of the continent's most densely populated areas, with tens of millions of people. Yet her importance to the regional economy is also indicative of the failure to spread investment in infrastructure away from coastal cities to the places where most Africans still live.

Apart from a few tourists, most of the roughly 300 passengers on the *Liemba* are traders. "Almost every person travelling has their cargo," says the captain, Titus Benjamin Mnyanyi. Middle-aged women buy third-class tickets for 34,000 Tanzanian shillings (about $15), stow their merchandise wherever they can and find spots to sleep on deck. On its way to Zambia, the ship stops at around a dozen places in Tanzania, where they sell their wares. On your correspondent's journey, the main cargo was tonnes of tiny dried fish and pineapples, which filled almost every space not occupied by a human.

Many of those on board want to make their fortunes. Among them is Fidelis Uzuka, a 38-year-old from a village near Kigoma. Having farmed ginger most of his life, he recently switched to trading it. He pays around 1,000 shillings per kilogram in Kigoma; in Lusaka, Zambia's capital, he can sell it for four times that. On the way back, he brings second-hand clothes. In a black notebook he diligently writes down the prices of different commodities at different places along the route. "I want to be a big businessman, like Donald Trump or Richard Branson," he says, before asking where he can buy books to help him learn how to make money.

Yet the passengers are not only vendors; they are also customers. As she moves through the darkness, the ship is a continuous festival. Downstairs, men at trestle tables do a roaring trade in cheap cigarettes, plastic packets of *konyagi* (a cheap Tanzanian spirit) and biscuits throughout the night. According to one crew member, there are prostitutes and drugdealers on board (your correspondent failed to prove ▸▸

this allegation, but the close attention of Zambian customs officials suggests they believe it too).

Normally the *Liemba* takes three days to reach Zambia. But like much trade in central Africa, there are often interruptions. Sometimes the ship is stranded by mechanical failures, forcing traders to take their wares onwards in small wooden boats instead. At other times, normal service has been disrupted by war. In 2015 thousands of Burundian refugees were moved from beaches just across the border in Tanzania south to Kigoma—600 crammed on the decks at a time. "It was easy to fit them," says Mwendesha Louloeka, one of the sailors. "They had almost nothing with them." In 1997 the ship repatriated thousands of Congolese who had fled the bloody war there.

What is the future for this floating temple of commerce? The vibrant *Liemba* is proof of the abilities of entrepreneurs—they have made this ship their own. But it is also testimony to the poverty of infrastructure in the region. Kigoma was envisaged by the German colonists as a major inland city; the province is indeed now home to over 2m people. Yet there has been almost no new investment since the Germans left after their defeat in 1917. The railway station is still among the grandest in east Africa, but the tracks are poorly maintained. There are no unbroken tarmac roads entering the city. Getting to Bujumbura in Burundi, the nearest big city, only a little over 100 miles away, takes six hours by bus.

This region could be rich. The soil around the lake is some of the most fertile in Africa; the lake is full of fish. From Mpulungu in Zambia a good road leads all the way to Lusaka, from where buses and lorries head to South Africa. Lake Tanganyika could link the manufacturers of southern Africa to the rapidly growing consumer markets of east Africa. Instead, in 2014 Zambia accounted for just 0.6% of Tanzania's imports. The Tazara railway line, built by Maoist China in the 1970s to connect the two countries, is another link that has fallen into disrepair.

According to the African Development Bank, inter-African trade made up just 16% of the continent's total trade in 2014. That figure has increased from 10% in 2004, but it is still low compared with other regions of the world. Among the bits of the continent that lose out worst are landlocked countries and areas such as Lake Tanganyika, which are far from both their capital cities and the sea. Poor infrastructure is not the only problem—bureaucracy and other trade barriers matter, too—but it is a significant one. According to a World Bank review, "landlocked developing countries, especially in Africa, bear exorbitant transport costs". Those aboard *Liemba* would doubtless agree. ■

Street vendors in Africa

An unfree trade

KAMPALA AND KIGALI

Cracking down on hardworking people

RUNNING away is part of life, explains Meddy Sserwadda, eyeing the road. Each morning he buys belts from a market in central Kampala, the capital of Uganda, selling them on a downtown street for a small profit. He works without a licence—the city government has stopped issuing them—and flees when enforcement officers approach. "They don't want us to make the city dirty," he says, crouched beside some fugitive mango-sellers. Officials have twice confiscated his goods. His cousin, who is also a street vendor, has spent time in prison.

For Mr Sserwadda, and many others in Africa, street vending is a means of survival. But city authorities see it as an eyesore, a nuisance and a threat. Those in Lagos, in Nigeria, try to ban it entirely with a thuggish unit called "Kick Against Indiscipline", which mostly seems to kick small traders. In Harare, the capital of Zimbabwe, they try to wash away vendors with water cannon. In Kampala, which launched a fresh crackdown in October, arrested traders are swiftly churned through a city court. Most cannot afford to hire a lawyer or pay fines of up to 600,000 shillings ($170). Prison sentences are as long as three months.

In Kigali, Rwanda's fastidious capital, a street vendor died in May after being beaten up by security officers, who were later jailed. Hundreds of others are detained without trial in so-called "transit centres", says Human Rights Watch, an American NGO. One shoe-seller says she was held for a month, not knowing when she would be released, and given one cup of maize a day. She rolls up her skirt to show where her leg was beaten with a stick. "They call us thieves," says another hawker, who recalls seeing street children as young as seven in detention. Rwandan officials deny abuse, insisting that the centres "rehabilitate" vendors and direct them to retraining.

Behind such repression lies a vision of the ideal city as a showcase for investment. Kigali aspires to be a manicured hub for finance and technology; its mayor has called vendors "an impediment to cleanliness". Many other governments see the urban poor as a threat to public order. There is hostility, too, from shopkeepers, who say that vendors dodge taxes and undercut their prices. "They're just disorganised people and they steal our customers," grumbles Rogers Lutaaya, who runs a clothes shop in Kampala.

That is only partly true. Vendors slot into complex supply chains, often obtaining their wares from formal suppliers and paying tax on purchases of stock. Most would prefer a market stall to trading on the streets. But new markets are often built in unattractive places, with prohibitive rents. One development in Kampala is half-empty, cut off from downtown shops by a cacophonous road. In this respect, Kigali does better: it has recently built 12 new markets, including one by the bus station, and waived rent and taxes for a year.

You can't do that here

The best schemes involve vendors in their design. In the post-apartheid revamp of Warwick Junction, a transport node in Durban, South Africa, traders were consulted on projects like a traditional-medicine market and purpose-built cubicles for cooking cows' heads. Vendors' groups also urge governments to recognise their rights in law (as India did in 2014). Street trade, they note, is central to urban life: it accounts for 12-24% of employment in the informal sector in a sample of African cities, says WIEGO, a network of researchers and workers' groups.

Arrests will not stop street vending, because there are not enough jobs: only a sixth of Africans under the age of 35 are in formal employment. Ask Agnes Nambowa, who has sold books in Kampala for 20 years. After a prison spell last year she went straight back to the streets, hawking titles like "Trump: think like a billionaire" and "Nice girls don't get rich". She is poor, she says, and has no choice. ■

Foreign currency in Nigeria

No dollars today

LAGOS

Why it is still hard to change money

DURING Muhammadu Buhari's stint as military ruler of Nigeria in the 1980s, Fela Kuti, a well-known Afrobeat musician, was locked up for the offence of possessing foreign currency, to the tune of £1,600. More than three decades later Mr Buhari is back in office, elected this time, and the issue of who gets access to foreign currency, and what they can do with it, remains as contentious as ever in Nigeria.

Last November officers of the State Security Service (SSS), the main domestic intelligence agency, arrested money-changers in cities across the country, in what was seen as a response to the tanking value of the naira on Nigeria's foreign-exchange markets. The central bank has for months tried to keep the naira stable at about 315 to the dollar, after supposedly floating it last June, but a shortage of foreign currency combined with high demand for dollars has caused the naira to lose as much as 38% of its value on the black market since then.

The intervention of the secret police has created in Africa's second-largest economy "an even blacker [ie more secretive] market," says Pabina Yinkere, a director of Vetiva Capital Management in the commercial capital, Lagos. The supply of dollars began drying up when the price of oil, Nigeria's main export, collapsed in 2014. The problem worsened in 2016 after militants, unhappy with the grinding poverty of Nigeria's main oil-producing region, started blowing up pipelines.

Nigeria is highly dependent on imports, with everything from the petrol in pumps to the rice in supermarkets coming from abroad. Importers need foreign currency to pay their invoices, but dollars, pounds and euros are hard to find. Banks theoretically sell dollars for around 315 naira each. But few branches have any to sell, or are willing to part with what they have.

Before the intervention of the SSS, dollars could be bought at money-changing bureaus for around 465 naira each. But with the SSS breathing down their necks, money-changers are now forced to accept no more than 400 naira for each of the few dollars they have. Many traders have dropped out of the dollar business entirely, says Abubakar Ruma, a leader of a group of currency-exchange operators in the capital, Abuja. Changers cannot make money if they sell greenbacks at the enforced rate.

The public has reacted similarly. People with foreign currency prefer to hold on to the bills they have in the hope that the rate will improve. That has starved the money-changers of cash, and the weekly dollar sales held by the central bank, says Mr Ruma, are not enough to ease the crunch. The raids by the SSS have not entirely banished the higher rates. Some money-changers will still buy dollars for 490 naira or above, from people they trust.

What to do? Higher interest rates would help attract foreign investors. A negotiated settlement with the militant groups would allow oil production to return to full capacity, bringing Nigeria back to its position as Africa's largest producer of crude. Most important, the central bank could also help by being more transparent about the naira's value. It claims to have floated the currency back in June, but few believe its value is truly free of interference and the persistence of a black market suggests the opposite. If investors could be sure of the naira's stability, they might start bringing in the dollars the country so sorely needs. ■

Jordan

Not much might in the Hashemites

AMMAN

Despite allies' hopes, the kingdom is curbing its regional ambitions

IF ONLY he knew which way to turn. Last week King Abdullah of Jordan went to Moscow to meet Vladimir Putin, the Russian president, to discuss how to stabilise Syria under the continued rule of Bashar al-Assad. This week he has been in Washington, DC, anxious to explore how Jordan might help President Donald Trump to implement his idea for carving up Syria into safe zones.

Playing great powers off against one another has long been a Hashemite trademark. King Abdullah's great-great-grandfather, the Sharif of Mecca, dallied with both the Ottoman and British empires, before going for British gold. Before the invasion of Iraq in 2003 King Abdullah received envoys from both Saddam Hussein and President George W. Bush, auctioning his backing to the highest bidder. Now, as funding from Saudi Arabia dries up, the king (via the Russians) is in contact with the Saudis' arch-rival, Iran, whose forces operate on his borders with Syria and Iraq. He once sounded the alarm over a "Shia crescent" extending Iran's influence to the Mediterranean; now that it is materialising he is coming to terms with it.

Such realism goes against advice from a think-tank in Washington, which last year called on him to create "Greater Jordan" by incorporating "elements of Iraq and Syria" into his kingdom. The region's ungoverned spaces would have a pro-Western monarch, argued the Washington Institute of Near East Policy, thus stemming Iran's westward advance. In return, Jordan would gain two major rivers, oilfields and large phosphates deposits.

But King Abdullah knows the dangers of overreach. Over the past century, the Hashemites called themselves Kings of the Arabs but lost two major capitals, Damascus and Baghdad, and Islam's three holiest places, Mecca, Medina and Jerusalem. The king's grandfather, Abdullah I, raged against his confinement to a desert kingdom like "a falcon in a canary's cage". But he lost half of Palestine, and his son, King Hussein, lost what remained. By contrast, the current king is the first monarch "with Jordanian, not regional ambitions", says Oraib Rantawi, a political analyst.

Take Syria. King Abdullah was the first Arab leader to urge Mr Assad to quit. With Saudi and Qatari largesse, he funnelled intelligence, weapons and cash to favoured rebels in Syria's south. But the fighting sent around a million refugees into Jordan, so priorities shifted from offensives against the regime to defending the border from global jihadists, many of Jordanian origin. With few exceptions, the rebels in Syria's "Southern Front" have held their fire against the regime for almost a year.

Some Jordanians still toy with the idea of deploying the Southern Front to create a sanitised belt 10km wide on Syria's side of the border, which might meet Mr Trump's demand for safe havens. It would offer protection from refugees and Islamic State, whose suicide-bombers have tried to ram Jordan's border four times since the summer, most recently last week.

But senior Jordanian generals suggest co-operation with Mr Assad's forces. Were the Southern Front to pull back from Nassib, a former border crossing that is now closed, Jordan could reopen its northern crossing. With the highway from north to south back in Mr Assad's hands, trade might again flow from Turkey via Jordan to the Gulf. Jordan's economy could then pro- ▸▸

fit from Syria's eventual reconstruction.

In Iraq, too, Jordan is weighing the aspirations of émigrés against relations with the existing regime. Rich Iraqis who decamped to Amman, the capital, after the American invasion of 2003 have helped turn it into one of the region's fastest-growing cities. Living in mansions, Sunni tribal sheikhs exiled from Anbar, Iraq's western province, broadcast appeals on their satellite networks to establish an *iqlim*, or autonomous region for Sunni Arabs, as the Kurds have done. Connected to Jordan, together they would build a Sunni bulwark against Iran's advance west. But Jordan's trade with Anbar pales in comparison with the potential of ties with Iraq as a whole. A bilateral agreement to build a pipeline from Basra's oilfields to Jordan's port of Aqaba promises to turn the kingdom into an energy hub.

On Palestine King Abdullah is most cautious of all. Palestinian nationalists shot his grandfather dead after he split Jerusalem with the Zionists in 1948. His father, Hussein, only just survived a Palestinian revolt in September 1970. Abdullah prefers to keep out of the fray. Jordan First, he tells the Palestinians who make up most of his population, rejecting a larger West Bank role. Better a falcon in a cage than a bird shot down in mid-flight. ■

Iraq

Mosul after Islamic State

TULLABAN

The hard work of restoration begins in the east of the city

LIBERATION has proved dangerous for the residents of Tullaban, a farming hamlet on the outskirts of Mosul. Last autumn, as the push began to wrest the city from Islamic State (IS), villagers returned home to find no sign of the jihadists who had seized it back in 2014. Nor, though, could they spot the booby traps and mines the IS fighters had laid as they fled, hidden in the doorways of houses and buried in nearby fields.

The villagers learned the hard way. "When the IS first came this way, we fled because we knew how they were beheading people," says Ali Jassem, 80, standing among houses flattened by air strikes and pockmarked with machinegun fire. "Then we came back, and four people were killed while going inside their homes."

Tullaban, which used to be on IS's front line, is now being cleared of landmines and booby traps by the Mines Advisory Group, a British charity dedicated to making post-conflict zones safe again. Although it still resembles a battlefield, both the hinterland of Mosul and eastern parts of the city itself are seeing life return to normal in areas freed from IS. It is also happening faster than most dared hope.

On January 15th 30 schools reopened in the east of the city after being cleared of booby traps by Iraqi security forces, allowing 16,000 children to start classes again. Some of them have had no education at all since IS took over Mosul, once Iraq's second-largest city, in June 2014. Others have been in IS-run madrassas where, besides studying the Koran, boys trained with weapons and girls did little more than cook and clean.

"The reopening of the schools has been by public demand," said Peter Hawkins, the senior official in Iraq for UNICEF, the UN children's fund. "For children it's a chance to have some structure back to their lives. For teachers, it's a chance to get back to work and earn salaries."

As well as seeing children in school uniform heading to class amid piles of rubble, Mr Hawkins, who has toured eastern Mosul, reports that shops and restaurants are open again. He has even seen a football match. At least 22,000 people have already returned to their homes, most bused in from the vast UN-run camps for displaced people that stretch across the surrounding hills.

The traffic is not all one way. When *The Economist* visited eastern Mosul's hinterland last week, new arrivals were still coming, including a bedraggled group of 30 men who had trekked for four days from IS-held territory. Overall, though, the exodus never reached the apocalyptic levels predicted. Before the offensive, which began its main phase in October, it was feared that up to 250,000 of east Mosul's 400,000 people would flee. The figure is nearer 180,000.

The situation contrasts with last year's operations to flush IS from Fallujah and Ramadi, west of Baghdad, which suffered much greater damage, and where many civilians still languished in camps six months after the cities were retaken. In Mosul, Mr Hawkins says, the Iraqi army has used gentler tactics, and encouraged civilians to stay in their homes rather than flee. The fact that so many houses remained occupied also made it harder for IS to booby-trap them—unlike what happened in villages like Tullaban, which was emptied of civilians. Nobody, though, thinks the end is in sight. For while eastern Mosul is now largely retaken, western Mosul, with around 750,000 civilians, remains largely in IS hands. For those returning to their homes, many difficult questions remain. Why did my neighbour stay in Mosul while I fled? Was he an IS sympathiser, and if so, should I let my children play with his? Mr Hawkins is promising counselling and education to minimise the inevitable sense of mistrust, hoping to ensure that children who were exposed to IS influence are not ostracised.

Yet if Fallujah and Ramadi are anything to go by, healing the wounds will be a job not just for aid agencies and politicians, but for more traditional actors like Iraq's tribes; in Ramadi and Fallujah tribal councils are still debating exactly what happened. If similar gatherings get under way around Mosul, there will be just as much to talk about. ■

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Scandal in France's presidential race

A wide open contest

PARIS

The furore over François Fillon's payments to his wife could cost him the presidency

"WE HAVE nothing to hide…I am afraid of nothing!" With indignant words and a clenched fist, François Fillon put on a muscular display of defiance at a campaign rally in Paris this week. Before a crowd of 15,000 flag-waving, mostly grey-haired supporters, the centre-right presidential candidate promised to make France the "greatest European power" within ten years, to put "liberty" at the heart of his campaign, and to declare a war on both poverty and "radical Islam". The event pointed to unity as well as force. Alain Juppé, the Republican primary candidate defeated by Mr Fillon, applauded his rival from the front row. But the choreography could not conceal an awkward fact: Mr Fillon's candidacy is in trouble.

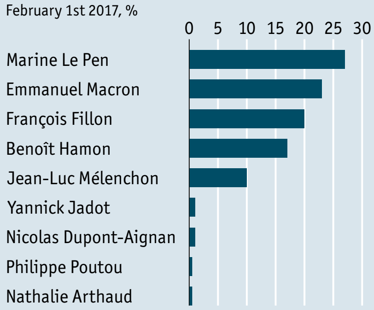
Just days previously, the former prime minister had been the favourite to win the two-round presidential election in April and May. But the decision on January 25th by judicial investigators to launch a preliminary inquiry into misuse of public funds by Mr Fillon, after revelations in a newspaper, shocked his supporters. His, after all, was the candidacy of probity and honour. One cannot lead France, he declared during the Republicans' primary last year, unless one is "beyond reproach". It turned out that Mr Fillon had employed his wife, Penelope, possibly from as far back as 1988, for a total pre-tax sum of over €800,000 ($863,000), as well as two of his children when they were law students. This is not illegal; one French deputy in five employs a relative. But the newspaper could find no trace that Mrs Fillon had done any work. And in an old video clip she said had never been her husband's assistant.

Declaring himself "scandalised" by the "misogyny" behind the allegations, and the victim of "slander", Mr Fillon argued that his wife had done a real job—"correcting speeches", constituency work and so forth. Investigators are also looking into pay she received from a publication for which she appeared to write little. It was all highly suspicious, fumed Mr Fillon, that such slurs should emerge only months before an election. Investigators this week summoned the couple for questioning, and searched Mr Fillon's parliamentary office. To show that he had nothing to hide, the candidate said he would stand down if he were put under formal investigation.

Anybody's race

France, voting intention in the first round of the presidential election

February 1st 2017, %



Source: ELABE

"Penelopegate" has rudely shaken the Fillon camp. His lieutenants have been dispatched to the airwaves and are preparing to counter fresh allegations if they arise. But in private those close to him recognise that Mr Fillon has a big problem. Polls are beginning to show him neck-and-neck with Emmanuel Macron, an independent centre-left candidate who is capturing cross-party enthusiasm. Some are thinking through what would happen if Mr Fillon had to step down. Mr Juppé has ruled out taking his place, but might be persuadable. Nicolas Sarkozy, the former president, would lack credibility after being roundly beaten in the primary. The party has no procedure for selecting a substitute.

For now, Mr Fillon remains defiant. "His image has been affected, but not yet his core support," says Bruno Jeanbart of OpinionWay, a polling group. Out in the draughty exhibition hall by the Paris ring road which served as a venue for Mr Fillon's rally, his supporters were divided. The faithful, including retired folk from northern France who had travelled to Paris, insisted it was all a political slur. Others were disappointed. "I was taken aback, because I didn't expect it from him," said Sylvianne Bessière, a retired air hostess: "But he's got the best programme, and is the only one who can sort the country out."

Mr Fillon's difficulties have turned an already uncertain election into one of the most unpredictable in recent history. French voters, it seems, are in no mood to settle into a stable pattern. Only seven points now separate the leading three candidates in first-round voting: Marine Le Pen of the populist Front National, Mr Macron and Mr Fillon (see chart). Each has a chance of making it into the second round. This is extraordinary: just six months ago, neither Mr Fillon nor Mr Macron was considered a ▸▸

credible contender by his own camp.

Such fluidity suggests that caution is also in order when it comes to the left, which elected Benoît Hamon as the Socialist Party's candidate on January 29th. A former backbench rebel, he crushed Manuel Valls, his former boss and ex-prime minister, in the primary run-off, with 59% of the vote. Mr Hamon remains an outsider, drawing roughly 15% in national polls. His promises to shorten the working week to 32 hours, legalise cannabis and finance a universal monthly income of €750 through a tax on robots were dismissed by his detractors—including Mr Valls—as Utopian reverie. Despondent Socialists have begun to defect to Mr Macron. Yet Mr Hamon's unexpected victory gives him that elusive political quality, momentum. And he appeals to metropolitan, white-collar voters who are worried about green issues, consumerism and the future of work.

Internal divisions and doubts about their candidates are now testing the unity of both the Socialists and the Republicans. These are the political families that have alternated in the presidency since the Fifth Republic was founded in 1958. French party politics has seldom appeared so unstable. And the chief beneficiaries right now are those who have identified themselves as political insurgents against the established party system: Mr Macron, and the populist Ms Le Pen. ■

Ukraine's intermittent war

Probing attack

Tanks for calling

As Russia and America talk, fighting flares in Donbas

THE timing was ominous. A day after the first, seemingly cordial telephone conversation between Donald Trump and Vladimir Putin, the residents of Avdiivka, a small town on the Ukrainian side of the conflict line with Russian-backed separatists, heard the echoes of heavy artillery fire. The conflict that Russia started in Ukraine in 2014 has been partly frozen over the past two years. But on January 29th it flared up with renewed force.

Three days later, on February 1st, the bodies of seven Ukrainian soldiers killed in the fighting were brought to Kiev. Maidan, the city square that was the site of the country's 2014 revolution, once again swelled with people. Social media were filled with messages of support for soldiers and calls to collect supplies for victims, along with videos of shelling by Russian Grad rockets. Ukrainian soldiers received text messages seemingly sent by the Russian side: "You are just meat to your commanders". Since then other Ukrainian positions along the front line have been attacked, and the death toll is rising.

Following the flare-up, international ceasefire monitors blamed "combined Russian-separatist forces" for starting the attacks. Ukrainian forces have been creeping forward into the "grey zone" in recent months, seizing positions in several small towns. The rebels might have felt it was an opportune moment to hit back.

Whoever started the fighting, its victims are the 16,000 civilians in Avdiivka, who for days were cut off from electricity in temperatures of -20°C, and those in the rebel-held territories, many of whom lack water. The violence underscores the difficulty of implementing the Minsk Two ceasefire agreement, signed in February 2015, which the two sides interpret differently. For Kiev and its western backers, the agreement is a path for Ukraine to reassert control over its east and close its border with Russia, followed by a decentralisation of power to its regions. Russia, however, sees the agreement as a way of retaining control over eastern Ukraine, keeping the border open and demanding that Kiev recognise Donbas as an autonomous region within Ukraine. This would give Russia permanent influence over Ukraine's future.

From Ukraine's point of view, the violence was a warning to its American and European allies, several of whom are considering lifting sanctions against Russia. "Who would dare talk about lifting the sanctions in such circumstances?" asked Petro Poroshenko, Ukraine's president, who cut short a visit to Germany to attend to the crisis. Mr Poroshenko later said he would call a national referendum on joining NATO—which Russia considers a red line and NATO itself does not want.

Doubting the Donald

Many Russia-watchers think Mr Putin may have stoked the conflict to test his new American counterpart. Mr Trump has promised better relations with Moscow. Mr Putin may have decided to probe his willingness to turn a blind eye to Russian actions in Ukraine, the two countries' main point of conflict. The Russian government says Ukraine was discussed in their telephone conversation.

In the past, significant escalations of fighting were quickly met by the White House or the State Department with strongly worded statements condemning Russian aggression and supporting Ukraine's territorial integrity. This time it took the State Department two days to say it was "deeply concerned"; it did not mention Russia. This response was duly noted in Moscow. "Washington does put the blame on the [separatist] republics, does not express support for Kiev and does not say a word about Russia's role," *Rossiiskaia Gazeta*, the official government newspaper, wrote jubilantly.

The Kremlin also noted the American failure to react to the news that Alexei Navalny, an opposition leader and anti-corruption campaigner, would be tried again on trumped-up charges. Mr Navalny pledged to run against Mr Putin in next year's presidential elections, but is now likely to observe Mr Putin's re-election from a prison cell. ■

Migrant entrepreneurs

Startup-Kultur

BERLIN

Almost half the new businesses in Germany are launched by immigrants

GERMANS are famous for hard work and efficiency, but not necessarily for entrepreneurialism. They are less likely to start a new business than Americans, Swedes or even the French (see chart). But the country's recent wave of immigration appears to be giving its startup rate a boost. In 2015, 44% of newly registered businesses in Germany were founded by people with foreign passports, up from just 13% in 2003. In all, about one-fifth of those engaged in entrepreneurial activity were born abroad.

That is likely to grow with the arrival of over a million refugees in the past two years. The number of self-employed people with a Middle Eastern background rose by almost two-thirds between 2005 and 2014, according to René Leicht and Stefan Berwing, researchers at the University of Mannheim. "There has been a marked increase in founding activity by people from Syria, Iraq and Afghanistan," says Maik Leonhardt of IHK Berlin, an association of small and medium enterprises.

Some refugees come to Germany already dreaming of running their own firm. Iyad Slik's family has a confectionery company in Syria, and when he arrived in Berlin three years ago he set out to recreate it. "We broke even for the first time last year," says Mr Slik. His mission to convert Germans to eating candied fruit and nougat squares stuffed with Syrian pistachios is succeeding: he already counts KaDeWe, a high-end department store, and the glitzy Hotel Adlon among his clients.

Others become entrepreneurs by default. Hussein Shaker, a computer programmer, did not plan to set up a business when he came to Germany: "I just wanted a job in tech." Stuck in a call centre, Mr Shaker realised that he was not the only one among his Syrian friends working beneath their qualifications. Together with partners from Berlin's startup scene, he set up a website for refugees, MigrantHire, which currently matches 13,000 job-seekers with about 2,000 open positions.

Entrepreneurship among immigrants stems partly from difficulty gaining access to the regular labour market. Many start-ups in the past decade were launched by eastern Europeans whose countries had been admitted to the European Union but who did not yet enjoy full working rights in other EU states. Self-employment offers better prospects for ambitious immigrants, says Mr Leicht: "Their incomes rise faster, they tend to do things more in line with their qualification and discrimination is less of a problem." Applicants with foreign-sounding names find it harder to get job interviews with German firms. In a survey of migrant entrepreneurs by KfW, a German development bank, a third said they saw no other way to make a living.

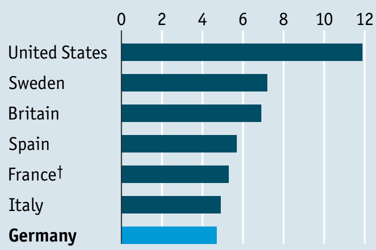
Entrepreneurship is certainly not easy in Germany: the World Bank ranks it a dismal 114th in the world for ease of starting a business. Integration programmes in job centres mostly direct immigrants into language classes and regular employment rather than encouraging them to do their own thing. And navigating the bureaucracy can be hard. "There are so many rules and legal issues that nobody tells you about," says Mr Shaker. Indeed, Germans themselves have become more reluctant to become entrepreneurs, especially with the unemployment rate low. The number of self-employed natives fell by 3% from 2005 to 2015.

One reason immigrants are more enthusiastic about start-ups is that they are, by nature or necessity, risk-takers. For the many who have fled civil war, crossed the Mediterranean and walked across much of Europe, dealing with German bureaucracy and obtaining a line of credit hardly seem daunting. ■

Where to start

Total early-stage entrepreneurial activity rate*

%, 2015



Source: Global Entrepreneurship Monitor

*Share of population aged 18-64 who are involved in a startup

†2014

Russian history online

Networking revolution

MOSCOW

A social-media project reanimates the world of 1917

IN LATE January Tsar Nicholas II posted a status update from his residence near Petrograd: "The frost got stronger again. I didn't stroll for long." Vladimir Lenin, in exile in Zurich, wrote on a friend's wall, musing on war and pacifism. Anna Akhmatova posted her latest verses. Leon Trotsky checked in from New York, where, he writes, "the aesthetic theory of cubism rules on the streets, and the moral philosophy of the dollar in the hearts".

As the centenary of Russia's revolutions approaches, tens of thousands of Russians have been consuming these bits of the past through Project 1917, an "edutainment" initiative that recreates the fateful year in the form of a social network. Posts draw from historical archives, letters and diaries. Users can access a stand-alone site or subscribe to updates on Facebook and VKontakte, the Russian equivalent; an English-language version will launch this month. The project is the brainchild of Mikhail Zygar, the former head of Dozhd ("Rain"), a liberal television network.

The network immerses its users in the daily minutiae of the period. A table displays "current" exchange rates and the prices of meat and grain. A widget notes the weather in Petrograd, as St Petersburg was then called, and Moscow (-24°C and -21°C at midnight on February 1). Clips from newsreels and excerpts from newspapers offer a window onto a world at war. Announcements advertise exhibitions and performances by Kandinsky, Diaghilev, Mayakovsky and Stanislavsky. "To feel the era, you have to forget about how it ended," says Kirill Solovyev, a historian at the Russian Academy of Sciences, a consultant on the project.

To watch this all transpire in real time is to experience people's inability to grasp the history they are living. The tsar records banal details of his daily routine—breakfasts, meetings, walks—like a 17th-century monarch trying to inhabit the modernist age. Lenin plots revolution from Zurich, while doubting he will live to see it. Many can sense that change is coming, and want to hasten it along. But none imagines the enormity of what actually unfolded.

In today's Russia, perceptions of 1917 are muddled. For 70 years the October Revolution served as the founding Soviet myth. Then Boris Yeltsin rejected the communist legacy. Vladimir Putin often refers favourably to the Soviet era—and to that of the tsars. In general Mr Putin is allergic to revolutions, whether in Ukraine, Syria or elsewhere.

This has left the developers of Project 1917 a bit of ideological space. Apart from some activity at the Russian Historical Society, a body headed by the director of Russia's foreign intelligence service, and at the Russian Orthodox Church, the memory of 1917 has been left mostly free of top-down interference. "There's no official line," says Mr Zygar.

Business in authoritarian Turkey

Tigers in the snow

KAYSERI

Anatolia's commercial elite is feeling the chill of the purges

THE snow on Mount Erciyes sparkles in the early afternoon sun. The skiing on this volcano nearly 4,000 metres high is among the best in Turkey. At the bottom of one slope, a group of secular Turks dance and drink beer outside a new hotel. On the other, alcohol-free, side of the mountain, local families and Arab tourists drink tea. The entrance to a nearby mosque is littered with ski boots; young women in headscarves pelt each other with snowballs.

Down the mountain in Kayseri, the view is considerably bleaker. Not long ago, this industrial city was touted as the birthplace of the Anatolian Tigers, a generation of conservative businessmen who helped create Turkey's economic boom in the 2000s. Today many of the Tigers are behind bars in the mass arrests that followed an attempted coup last July. The boom is over. Exports from the region have fallen by at least 4% over the past year. Investment has dried up. For the local economy to recover, says Mahmut Hicyilmaz, head of Kayseri's chamber of commerce, "our industrialists and our investors need a sense of security."

They do not have it. Roughly 40,000 people have been arrested across Turkey since the summer, and an increasing number are businessmen, from construction magnates to owners of chains of baklava stores. Their crime, say prosecutors, was to have bankrolled the Gulen movement, a religious sect accused of masterminding the coup. Armed with emergency powers, the government of President Recep Tayyip Erdogan says it has taken over more than 800 companies worth a combined $10bn since July. A court in Istanbul recently confiscated the assets of dozens of writers and journalists arrested because of suspected Gulenist sympathies. Officials say they are fighting the financing of terrorism. Critics call it state-sanctioned plunder.

A binge of purges

In Kayseri, scores of entrepreneurs—including the heads of Boydak Holding, the region's biggest employer—have been arrested for financing Gulenist banks, schools and foundations. Boydak, which owns three of Turkey's biggest furniture companies, has been seized by the state. More than 60 businessmen face terrorism-related charges. Some have fled abroad. Mr Hicyilmaz himself was detained for over two weeks last August. The worst-kept secret in town, says a local shopkeeper, "is that nearly everyone here was in business with the [Gulenists] at one point or another." The other open secret is that they were once encouraged to so by Mr Erdogan's government. The ruling Justice and Development (AK) party had been the Gulenist movement's biggest cheerleader for nearly a decade. Their alliance collapsed in 2013 after AK accused Gulenists inside the bureaucracy of engineering a corruption scandal that involved some of Mr Erdogan's closest associates.

At the sprawling industrial zone outside Kayseri, business appears to go on as usual. Employees at one Boydak factory say they have not been affected by the takeover. At a number of other companies seized by the state, however, production has stalled. "These seizures are catastrophic," says Seyfettin Gursel, the head of Betam, an economic think-tank in Istanbul. "There's no definitive court decision, and no legal process." Officials say that owners will get their companies back if they are cleared of terrorism charges, but analysts fear most firms will be auctioned to Mr Erdogan's loyalists.

Though the purge has homed in on alleged Gulenists, it has spread uncertainty through the economy. Ulker, a food giant, saw its shares plummet after a pro-government columnist suggested it may have ties to the movement. One of the country's biggest conglomerates, the Dogan group, suffered a similar fate after police detained several of its executives. Emergency rule is eroding belief in property rights and the rule of law, says Ozgur Altug, chief economist at BC Partners in Istanbul, a brokerage. Businesses are reluctant to work with new suppliers. "I might want to make a deal with you, but I don't know if the government will seize your assets the next day," says Mr Altug.

All this puts additional pressure on an economy already weakened by terrorist attacks, the war in neighbouring Syria and growing corporate debt (see page 58). GDP in the third quarter of 2016 was down 1.8% from a year earlier, though it is thought to have rebounded modestly in the fourth. The lira has lost about a fifth of its value against the dollar since November. That makes it harder for Turkish companies to service the dollar-denominated debts with which they are laden. The central bank could defend the lira by raising rates, but Mr Erdogan has pressured it to keep them low, forcing it to resort to more complex and less effective mechanisms. Foreign investment has fallen by nearly half since 2015.

The political backdrop is not reassuring. On January 21st parliament adopted a block of constitutional amendments intended to cement Mr Erdogan's grip over the country. The changes would dismantle Turkey's parliamentary system by abolishing the office of prime minister, transforming Mr Erdogan's 1,100-room palace into the centre of all executive power, and allowing the president to handpick ministers and MPs. The entire package will be put to a referendum in April.

It is not clear when the government will begin auctioning off seized firms. The risk is that the economy may gradually come to resemble Russia's, where political loyalty is the price for keeping a slice of the pie. "It is like watching a piece of snow roll down a mountain," says a veteran civil servant ousted in one of the purges. "You think it won't hit you, until you realise it's becoming an avalanche." ■

Fewer moguls on the slopes

Charlemagne | Silent partner

Norway's deal with the EU still holds lessons for Britain

NORWAY'S peculiar relationship with the European Union—it abides by most EU rules but has little say in writing them—might be a democratic outrage, a diplomatic relic and an international oddity, but it once worked out well for Torild Skogsholm. In 2003 Ms Skogsholm was invited to join her fellow European transport ministers aboard a cruise ship in the Aegean (Greece held the rotating EU presidency at the time). Asked to leave the room when the ministers began to draw up legislative proposals, she had little choice but to sun herself on the ship's deck. The tan she earned, she says, was the envy of her friends in Oslo.

Britain's ministers may be almost as sun-starved as their Norwegian cousins, but they will not be aping their approach to the EU. Through its membership of the European Economic Area (EEA), which includes two tiddlers, Iceland and Liechtenstein, Norway follows most single-market rules drawn up in Brussels and must accept the free movement of EU workers. This was enough for Theresa May, Britain's prime minister, to rule out the Norwegian model for her country's post-Brexit relations with the EU. After all, Britain voted last June to take back control from unaccountable EU institutions. Why leave, if only to fall back in line?

As powerful as this political logic seems now, it has not yet encountered economic reality. The British debate is taking place in a "bubble", says Ulf Sverdrup, who in 2012 oversaw "Outside and Inside", a comprehensive review of Norway's relations with the EU. The report implies that, once Britain begins negotiations with the EU on a post-Brexit settlement, it will have to reckon with uncomfortable trade-offs between sovereignty and prosperity.

First, to do business with the single market—by far Britain's biggest trading partner—firms will need to abide by EU rules. A promised "Great Repeal Bill" will, in fact, incorporate EU law into British statutes to ensure regulatory continuity. But Mrs May has vowed that Britain will not be subject to rulings from the European Court of Justice once it leaves the EU. Without any supranational overseer, how can investors or exporters be sure that British standards will remain harmonised with those in Europe?

Norway's deal with the EU works in part because the EEA is a "dynamic" agreement, meaning it accommodates changes in European law. (By contrast, Switzerland's "static" arrangements are fiddly to maintain, and an irritant in Brussels.) If that reduces the Stortinget (parliament) to rubber-stamping legislation handed down from the EU, and forces Norwegian diplomats to find back-channel ways to lobby in Brussels, it also assures businesses that they will not find themselves out of step with the single market. It also reduces demands on Norwegian civil servants.

Yet even the capacious EEA has proved inadequate. Norwegians have twice voted against EU membership, on sovereignty grounds. But since the last referendum, in 1994, the relationship has grown like a *lappeteppet* (patchwork quilt). Norway now has over 75 agreements with the EU, most of them signed at Oslo's behest. When the EU created the passport-free Schengen zone, for example, Norway had to join to avoid a 1,000-mile hard border with Sweden. It has signed up to agencies that foster co-operation in anti-terrorism, research and defence. Pressed by Brussels, it pays whopping grants to support research projects and civil society in eastern Europe; its per-head payments to the EU approach those of Britain. It joins EU-starred military missions abroad and accepts refugees according to formulae crunched in Brussels. And, notes Jarle Trondal at the University of Oslo, even parts of the economy excluded from the EEA, such as fisheries and farming, have been exposed to the chill winds of EU competition law.

Here is the second lesson for Britain. Mrs May, a former home secretary, has said she will seek co-operation with the EU on security and foreign-policy matters; some of her *consiglieri* think Britain's clout in these areas might even help the government secure a better trade deal. But winning approval even for this may prove tough. Mrs May still bears the scars of her battle, in 2014, with hardliners in her Conservative Party over Britain staying in the European Arrest Warrant system. The Brexit negotiations will throw up many more such instances. Will MPs be prepared to swallow them?

You and whose EEArmy?

Britain is not Norway, of course. It has 12 times the population, historic bonds with countries across the globe, strong armed forces, a more diversified economy and extensive trade links (44% of British exports go to the EU, against more than three-quarters of Norway's). It also hosts Europe's largest financial centre; ministers hope that the Brexit deal will allow City firms to maintain friction-free operations inside the single market. Britain will hardly go into the negotiating chamber naked.

But the country is also plugged into cross-continental value chains that would leave its firms exposed if British and European standards were to diverge. Some in Britain, says Mr Sverdrup, appear locked into an archaic view of trade in which tariffs are the only measure of ability to export. But non-tariff barriers can prove a lot more damaging. Ask the Norwegian businesses who grouch at the six to nine months it can take to translate EU regulations into Norwegian law.

There is a final lesson for Britain. Norwegians like the EEA arrangement, and few wish to reopen the membership debate. This is partly because Norway has grown rich on its oil and gas; one study finds that a rise of one percentage-point in unemployment triggers a seven-point spurt in support for full EU membership. But it also suggests that voters may prize formal sovereignty more than the actual sort. Britain was carried to the EU's exit door on a call to take back control, and its parliamentarians will balk at any deal that seems to withhold it. But its leaders must weigh their demands against the need to ensure Britain continues to prosper. It will not be an easy balance to strike. ■

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Negotiating post-Brexit deals

Trading places

With a whole world to do deals with, where should Britain go first?

WANTED: chief trade-negotiator for middle-sized country soon to be cast adrift in the world economy.

This "exciting" new post has just been advertised by Britain's Department for International Trade (DIT), which is offering the successful candidate a salary greater than that of the prime minister. The size of the pay packet suggests the magnitude of the task. The appointee will be expected to help to secure dozens of free-trade deals for Britain, with both its former partners in the European Union and others around the world, after the country leaves the EU in 2019. Having started last July with just 50-odd trade negotiators, the DIT is now up to about 200.

The government is investing a lot of political capital in the DIT's ability to strike deals to compensate for the loss of EU membership, which gives Britain barrier-free access to the EU's single market as well as trade agreements with 53 other countries and trading blocs around the world. Brexiteers argue that, unchained from the protectionist EU, Britain can become "one of the firmest advocates for free trade anywhere in the world", as Theresa May puts it. This is the message the prime minister took to Donald Trump on January 27th.

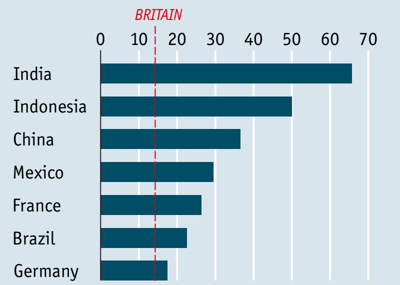
Reaching agreements with the EU, and then America, appears to be the government's priority. Where then should it look to do deals in the post-Brexit world?

The best place to start, most trade economists agree, is with the countries that already have deals with the EU. Britain is a party to all of these; when it leaves the EU it will at least have a template from which to draw up its own fresh bilateral agreements. Doing this with as little disruption as possible would be best for business, argues Ben Digby of the Confederation of British Industry, a lobby group.

Not every country will roll over for Britain, however. Take Indonesia, South-East Asia's largest economy, which later this month will receive Liam Fox, Britain's trade secretary. Indonesia is already drawing up a trade agreement with the EU. Thomas Lembong, head of Indonesia's investment board and a former trade minister, says that he has already agreed with British officials that Indonesia's eventual deal with the EU could simply be tailored a bit to suit Britain. But, he warns, "Of course the UK would be in a much weaker bargaining position outside the EU, so we would expect much more favourable terms of trade against the UK post-Brexit."

Not at your service

Services trade restrictiveness index
100=most restrictive, selected countries, 2011 or latest



Source: World Bank

Other countries will take a similar view. However, argues Jim Rollo, a former trade adviser to the British government, Britain has some cards to play. One reason that trade deals with the EU take so long to negotiate (18 years and counting in the case of Mercosur, a South American bloc) is that European agriculture is strongly protected. Once outside the EU, Britain could abolish the EU external tariff on many food imports and gain concessions in return. For example, the EU subjects oranges to a complex formula of tariffs designed to protect Spanish growers, the world's main exporters. Britain spends about £135m ($170m) a year on oranges but grows none itself, so could eliminate all tariffs on citrus fruits without undermining its farmers.

Some of the countries that have already expressed interest in striking trade deals with Britain, such as Australia and New Zealand, have their own agricultural exports in mind. But there will be some awkward trade-offs. Australia will want to export more beef to Britain, and New Zealand more lamb. Britain's own farmers could be squeezed by this: on February 1st the rural affairs secretary in the Welsh Assembly warned that a deal with New Zealand could "absolutely destroy" the Welsh lamb industry. And loosening regulations on genetically modified crops, something American farmers would like to export to Britain, might provoke complaints at home from farmers and consumers alike.

The point of making such concessions would be for Britain to gain access to foreign markets in things that it excels at sell- ▸▸

ing. Services, particularly banking and related professions like accountancy, are among the exports that Britain is keenest to tout, says Shanker Singham, a trade economist at the Legatum Institute, a think-tank. In 2015 Britain exported £225bn-worth of services (constituting 44% of all its exports) and imported just £138bn, whereas in goods it ran a sizeable deficit. Britain might therefore want to target countries with growing middle classes and still-weak services sectors, such as India and China, as well as Indonesia.

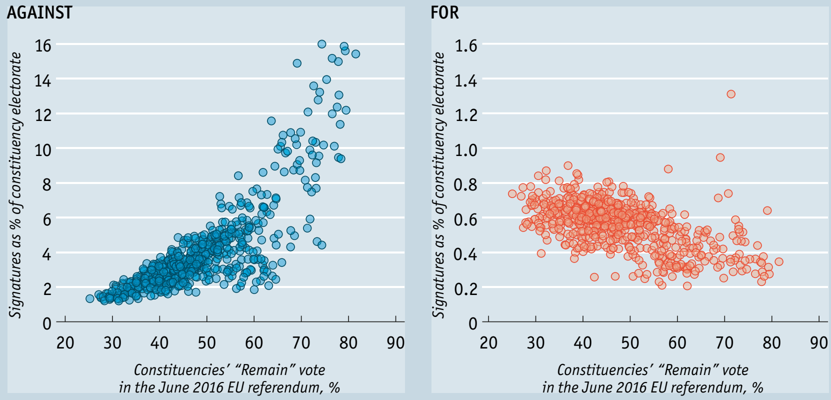
Insurance, for instance, where Britain is strong, has enormous potential for growth. India currently accounts for about 1.6% of all insurance premiums and 2.2% of life insurance premiums, despite being home to about 18% of the world's population.

In many countries, however, services are among the most protected industries. Often this is for political reasons as well as regulatory ones. Analysis by the World Bank shows that even within the EU, many countries are more closed than Britain. The likes of India will be hard to crack (see chart on previous page), and offering access to Britain's agricultural market may not help as it is relatively small.

The new chief negotiator will be busy. The freedom to sign trade deals with any country offers a world of potential. But even replacing the deals that Britain will lose on dropping out of the EU will take many years, and new opportunities may be harder to realise than they look. Welcome to the in-tray. ■

Welcome to Britain

E-petitions **against** and **for** a state visit by Donald Trump*



Sources: House of Commons; *The Economist*

*To February 2nd 2017

Euroscepticism and Trumpism

Mr Brexit's homecoming

The prospect of a state visit exposes Britain's varied political geography

"THERESA the appeaser," read one placard brandished outside Downing Street in a demonstration on January 30th. "Free Melania!" demanded another. Theresa May's decision to offer a state visit to Donald Trump this summer has upset many in Britain. Such invitations are not extended to all presidents and involve staying with the monarch. A citizens' petition posted on Parliament's website on January 29th urges the government to cancel Mr Trump's visit, since the "embarrassment to Her Majesty the Queen" would be unacceptable. By February 2nd it had attracted 1.8m signatories—easily enough to require MPs to debate the matter on February 20th, though the government has already said it will take no notice. A rival petition, supporting the visit, had attracted about 250,000 names.

Comparisons between the forces that propelled Donald Trump into the White House and Britain out of the European Union have been overdone. Although Mr Trump, who has Scottish roots, has called himself "Mr Brexit", most of the Britons who voted to Leave would not support him. The debates and issues involved were different; the racial dimension was less pronounced in Britain. Yet there are affinities, as the petitions show.

Signatories must supply a postcode. This makes it possible to see where support for a cause is strongest. The overlap with Brexit is clear: places that didn't like Brexit don't like Mr Trump (see chart). The most signatories are in Remain-voting cities like Brighton, Bristol and Cambridge, all with large populations of university-educated, white-collar residents. Meanwhile, signatories of the pro-Trump petition are concentrated in Brexiteer bastions: Boston, Clacton and Grimsby, for example.

Despite Mr Trump's apparent unpopularity in Britain, many seem resigned to the need to embrace him. A YouGov poll published on February 1st found that 49% of Britons support Mr Trump's state visit, compared with 36% who oppose it. That suggests that a big chunk of the public may share the government's belief that the Brexit vote has changed things (in this case: Britain needs a trade deal, so Mr Trump must be courted).

It is a view that is present in Parliament, too, albeit in a different form. On January 31st MPs held their first debate on whether to trigger Article 50, the legal route to Brexit, after the Supreme Court ruled that the government needed Parliament's permission to withdraw from the EU. Many spoke against leaving the union—Ken Clarke, a Tory grandee, wondered how likely it was that Britain would tumble down a rabbit hole and "emerge in a wonderland" where world leaders ("nice men like President Trump and President Erdogan") were queuing up to strike trade deals—but the mood was one of resignation.

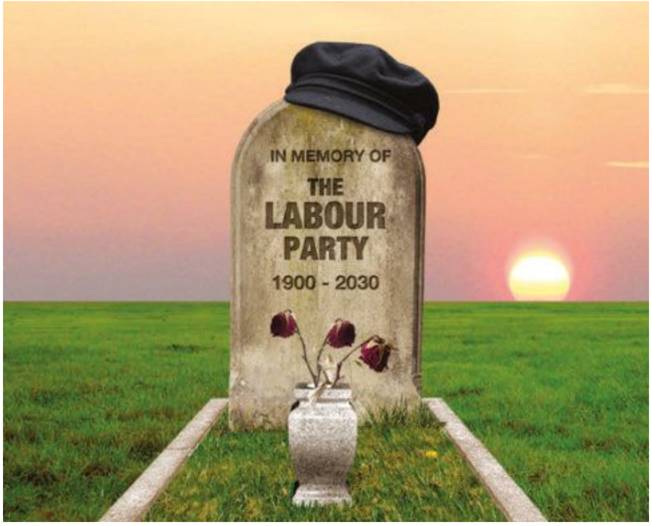
Despite the worst fears of Brexiteers, there is no plot to overturn the result of the referendum. Some two-thirds of MPs campaigned to stay in the EU. Yet on February 1st they voted by 498 to 114 to honour the referendum and invoke Article 50. The Scottish National Party and Liberal Democrats opposed the bill; a fifth of Labour MPs, including several front-benchers, defied party orders and voted against it. Some will try to add amendments in the committee stages before the bill is passed, probably in early March, but no significant one is likely to pass. MPs such as Mr Clarke, like those who signed the petition and protested against Mr Trump's visit, put up a valiant last stand. But that is all it was. ■

Half Scottish, wholly unwelcome

Correction: A chart in last week's story on local-government finances ("Running on empty") mislabelled total spending as decline in spending. Sorry. We have corrected the chart online.

Bagehot | A dispatch from 2030

How the slow death of the Labour Party might happen



"CAN anyone work this thing?" Paul Nuttall barks, jabbing the touch screen. He rues the day his aides talked him into travelling by self-driving car. "It will make you look prime ministerial," they said. Bollocks. It just makes him look like a hypocrite after all those speeches about the evils of job-killing robots. This robot just drove him from London to Stoke without crashing—is functioning air-conditioning too much to ask? It is an unusually hot April day. Mr Nuttall grimaces as he spots his signature tweed jacket and flat cap on the seat next to him; shortly he will have to put them on for a photo with constituents.

Or perhaps his perspiration is just nerves. For the leader of the UK Independence Party (UKIP), and now leader of the opposition, has much to be nervous about. The 2030 election is weeks away. He could end up as prime minister, at the helm of a UKIP-Conservative coalition. How far he has come since 2016, that fateful year in which Britain voted to leave the EU and he was elected UKIP leader. Woozy with campaign tiredness and with a few minutes to go before he arrives at Stoke's marketplace, a dilapidated Victorian pavilion now overshadowed by a colossal Independence Day monument to Brexit, he closes his eyes and recalls the first time he stumped there.

That was way back in January 2017. Tristram Hunt, the local Labour MP, had just resigned to run the Victoria and Albert Museum. Mr Nuttall, a former academic born into a working-class family in Liverpool, seized the moment. His authoritarian social views, anti-EU purism and attacks on Jeremy Corbyn's far-left, London-centric Labour Party charmed the pro-Brexit town of former pottery and steel workers. At the by-election on February 23rd it made him its first non-Labour MP since 1950.

His campaign coincided with a development that would enable him to turn this one gain (UKIP's first, defections excepted) into the 131 seats his party now holds. Horrified by the polling in places like Stoke, Mr Corbyn obliged Labour MPs to vote for Brexit when it was put to Parliament in February 2017. The move appalled his left-wing backers: once-supportive journalists like Owen Jones and George Monbiot slated him; loyal front-benchers resigned; some 2,000 members of the Grassroots Labour group signed an angry letter. Even the Canary, a slavishly Corbynista website, attacked its man. In subsequent months, as Theresa May's talks in Brussels came to little, the chorus of dissatisfaction in Labour mounted.

The final straw came in early 2019 when expensive Labour billboards went up around the country bearing a message from "Jemery Cobryn". This was one unforced error too many. Union leaders and shadow-cabinet die-hards filed in to tell Mr Corbyn that he no longer had their support. Demoralised and exhausted, Labour's leader resigned, bequeathing a record-low 19% poll standing to Emily Thornberry, the former shadow foreign secretary who since early 2017 had trodden a subtly less pro-Brexit path than her boss.

Thanks to the distorting effect of Britain's first-past-the-post electoral system, Labour's 20% vote share on May 7th 2020 gave it 155 seats of the 600 available. The Liberal Democrats, targeting Mrs Thornberry's cosmopolitan base by calling for a referendum on rejoining the EU, took 23 seats on 15%. UKIP, eating into Labour's working-class strongholds, took 17% of votes and 18 seats. "This is a revolution!" Nigel Farage, Mr Nuttall's predecessor, told reporters on a visit to London. (Privately the UKIP leader wished that Secretary of State Farage had stayed in Washington.)

Appalled by their party's decline, the few remaining moderate Labour MPs quit and formed a new party based on "En Marche!", the movement that had propelled the centrist Emmanuel Macron to France's presidency in May 2017. "On The Move!" (OTM!) was bolstered by a series of defections by liberal Tories fed up with Mrs May's hard Brexit. It went on to win a series of sensational by-election victories in big cities and well-off suburbs. An electoral pact with the Liberal Democrats became a formal alliance, then a merger. A seminal moment was the first of three live debates hosted by Facebook in April 2025, when Mr Nuttall and Jess Phillips, the plain-spoken former Labour MP now leading OTM!, together dismantled Mrs Thornberry and Mrs May.

The subsequent election would be the nail in Labour's coffin. In 2025 the party ceded most of its metropolitan seats to OTM!, now endorsed by several centrist unions and most Labour grandees. With inequality rising and wages stagnant, the post-industrial heartlands switched as one to UKIP, which campaigned for "real" immigration cuts, the renegotiation of recent trade deals and a referendum on reinstating the death penalty. Mrs Thornberry resigned and her party, now on 43 seats, became the fifth-largest in the Commons after the Tories, UKIP, OTM! and the Scottish National Party. It fell to Mr Nuttall to interrogate Mrs May across the dispatch box.

Going gentle into that good night

Five more years on, Labour's death is moments away. Polls suggest UKIP will come first in the 2030 election, narrowly followed by the Tories and, just behind them, OTM!. Mrs Phillips says Britain must rejoin the European single market; she should be able to form a government backed by the Tories and Scottish Nationalists if she can persuade Labour to stand down its candidates. If she cannot then UKIP will probably come first and be invited by King William to form a government, supported by the Tories.

"How long should I wait before I invite President Trump to London?" Mr Nuttall ponders to himself. "Is seven days too soon? And should I call her Mrs President or Ivanka?" As his car sweeps onto Stoke's marketplace, his phone begins to ring. He answers: "Yes. Labour have done what? What did Phillips offer them? Nothing? Jesus. OK." He hangs up, swears under his breath, and opens the car door to a wall of cheers. ■

Young people and democracy

Not turning out

TEL AVIV

Across the rich world, millennials are ever less likely to vote

THE life story of Alex Orlyuk does not seem destined to lead to political apathy. Born in the Soviet Union to a family scarred by the Holocaust, he moved at the age of six to Tel Aviv, where he finished school and military service. He follows politics and prizes democracy. He thinks his government should do more to make peace with Palestinians, separate religion and state, and cut inequality. And yet, now 28 and eligible to vote in the past four general elections, he has never cast a ballot.

His abstention, he says, is "a political statement" on the sorry state of Israel's politics. He does not think any of its myriad parties is likely to bring about the change he wants. Many other young Israelis share his disaffection. Just 58% of under-35s, and just 41% of under-25s, voted in the general election of 2013, compared with 88% of over-55s. No other rich country has a bigger gap in turnout between under-25s and over-55s (see chart).

Though Israeli politics is atypical—steeped in questions of war, peace, religious identity and the relationship with Palestinians—the voting behaviour of its young is nevertheless all of a pattern with the rest of the rich world. In Britain and Poland less than half of under-25s voted in their country's most recent general election. Two-thirds of Swiss millennials stayed at home on election day in 2015, as did four-fifths of American ones in the congressional election in 2014. Although turnout has been declining across the rich world, it has fallen fastest among the young. According to Martin Wattenberg of the University of California, Irvine, the gap in turnout between young and old in many places resembles the racial gap in the American South in the early 1960s, when state governments routinely suppressed the black vote.

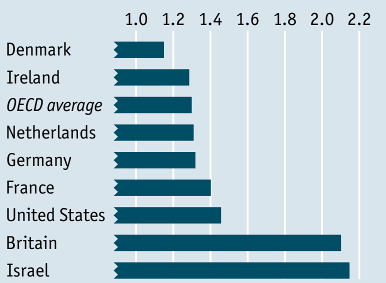
Demographic trends further weaken the political voice of the young. In America's election in 1972, the first in which 18-year-olds could vote, around a fifth of adults were under 25. By 2010 that share was one in eight. Under-25s are on track to make up just a tenth of American adults by mid-century. The young will have dwindled from a pivotal voting bloc into a peripheral one.

Wasted on the young

Ratio of turnout, old* registered voters over young†

1=equal turnout

Latest election for legislature, 2011-13



Source: OECD *Aged 55 and over †18- to 24-year-olds

That raises the worrying possibility that today's record-low youth turnout presages a permanent shift. Voting habits are formed surprisingly early—in a person's first two elections, says Michael Bruter of the London School of Economics. If future generations, discouraged by their fading influence, never adopt the voting habit, turnout will fall further, weakening the legitimacy of elected governments.

Millennials are not the first young generation to be accused of shirking their civic duty. And they are more interested in ideas and causes than they are given credit for. They are better educated than past generations, more likely to go on a protest or to become vegetarian, and less keen on drugs and alcohol. But they have lost many of the habits that inclined their parents to vote.

In Britain only three in five of under-25s watch the news on television, compared with nine in ten of over-55s. Young people are also less likely to read newspapers, or listen to the news on the radio. Each year around a third of British 19-year-olds move house; the average American moves four times between 18 and 30. People who have children and own a home feel more attached to their communities and more concerned about how they are run. But youngsters are settling down later than their parents did.

The biggest shift, however, is not in circumstances but in attitudes. Millennials do not see voting as a duty, and therefore do not feel morally obliged to do it, says Rob Ford of Manchester University. Rather, they regard it as the duty of politicians to woo them. They see parties not as movements deserving of loyalty, but as brands ▸▸

they can choose between or ignore. Millennials are accustomed to tailoring their world to their preferences, customising the music they listen to and the news they consume. A system that demands they vote for an all-or-nothing bundle of election promises looks uninviting by comparison. Although the number of young Americans espousing classic liberal causes is growing, only a quarter of 18- to 33-year-olds describe themselves as "Democrats". Half say they are independent, compared with just a third of those aged 69 and over, according to the Pew Research Centre.

And millennials are also the group least likely to be swayed by political promises. They are far less likely than the baby-boom generation (born between 1946 and the mid-1960s) or Generation X (born in the mid-1960s to late 1970s) to trust others to tell the truth, says Bobby Duffy of IPSOS Mori, a pollster. They take "authenticity" as a sign of virtue and trustworthiness, as illustrated by their enthusiasm for, say, Justin Trudeau, Canada's telegenic premier. But in the absence of personally appealing leaders, mistrust can shade into cynicism about democracy itself. Almost a quarter of young Australians recently told pollsters that "it doesn't matter what kind of government we have". A report last year found that 72% of Americans born before the second world war thought it "essential" to live in a country that was governed democratically. Less than a third of those born in the 1980s agreed.

The lack of trust accompanies a breakdown in communication between politicians and the young. In 1967 around a quarter of both young and old voters in America had previously made contact with a political official. For the elderly, the rate had almost doubled by 2004; for the young, it remained flat at 23%. Parties have responded accordingly: in 2012 they contacted three-fifths of older voters, but only 15% of younger ones. According to a poll weeks before last year's presidential election by the Centre for Information & Research on Civic Learning and Engagement at Tufts University (CIRCLE), despite the money sloshing around American politics only 30% of millennials reported having been contacted by one of the campaigns. And when parties do contact youngsters, it is often with a message crafted for voters in general, not tailored to them. Such efforts, says Mr Bruter, can be counter-productive.

Many disillusioned youngsters regard refusing to vote as a way to express dissatisfaction with the choices on offer. But abstention traps them in a cycle of neglect and alienation. Politicians know that the elderly are more likely to vote, and tailor their policies accordingly. Young people, seeing a system that offers them little, are even more likely to tune out, which gives parties more reason to ignore them. Some parties disregard the young completely: in the Netherlands 50PLUS, which campaigns almost exclusively on pensioners' issues, is polling in double figures.

Even parties without any such overt focus on old people increasingly favour them when setting policies. Young workers pay taxes toward health-care and pension schemes that are unlikely to be equally generous by the time they retire. Australians aged over 65 pay no tax on income under A$32,279 ($24,508); younger workers start paying tax at A$20,542. In Britain free bus passes, television licences and energy subsidies for pensioners have survived government cutbacks; housing assistance for the young has not. The young across western Europe are more likely to hold a favourable opinion of the European Union, but it is their elders, who look upon it with greater scepticism, who hold sway with governments. Britain's recent vote to leave the EU depended heavily on retired people's votes; youngsters voted overwhelmingly to stay.

Lessons for life

Those fretting about the future of democracy have been searching for ways to get more young people to vote. The most obvious would be to make voting compulsory, as it is in Australia, Belgium, Brazil and many other countries. Barack Obama has said such a move would be "transformative" for America, boosting the voices of the young and the poor. But Mr Bruter warns that such a move would artificially boost turnout without dealing with the underlying causes. The priority, he says, should be to inspire a feeling among young people "that the system listens to you and reacts to you", which in turn would strengthen political commitment.

One place to build such a belief is in school. Teenagers who experience democracy first-hand during their studies are more likely to vote afterwards. Student elections make young people feel they have the power to shape the institutions around them, says Jan Germen Janmaat of University College London. Civic-education curriculums which involve open discussions and debates are better at fostering political engagement in later life than classes dedicated to imparting facts about government institutions, he says. Yet schools and governments, wary of accusations of politicising the classroom, may shy away from such programmes.

Another option would be to allow people to vote even younger. In many countries, voting habits are formed during a particularly unsettled period of young people's lives: the few years after leaving school. Argentina, Austria and other countries are trying to ingrain voting habits earlier by lowering the minimum age to 16. This lets young people cast their first votes while still in school and living with their parents. In Austria, the only European country to let 16- and 17-year-olds vote nationwide, they have proved more likely than 18- to 20-year-olds to turn out in the first election for which they qualify to vote.

Yet another approach is to remove obstacles to voting that are most likely to trip up the young. America has many laws banning registration in the month before an election; these disproportionately affect young people, who tend to tune in late to campaigns, says Kei Kawashima-Ginsberg of CIRCLE. A solution used in some other countries, including Sweden and Chile, is to put people on the electoral roll automatically when they turn 18. Also important is to make sure that those who have moved and forgotten to update their details are not caught out on election day; since young people move more, they are more likely to be affected. Some American states are experimenting with "portable" voter registration, whereby a change of address with any government institution is transferred to the electoral register.

Waiting for a hero

As millennials find fewer reasons to vote, motivating them to do so is becoming dangerously dependent on individual politicians and single issues. In Canada just 37% of 18- to 24-year-olds voted in the parliamentary election in 2008, and 39% in 2011. In 2015 the "Trudeau effect" saw the youth vote rise sharply, to 57%. Mr Orlyuk fondly recalls Yitzhak Rabin, a former Israeli prime minister who was assassinated when Mr Orlyuk was seven—for "trying to make a change" by making peace with Palestinians. "I'm still waiting for another Rabin to come along. Then I'll vote," he says. In the meantime politicians will find his opinions and interests—and those of other young people—all too easy to ignore. ■

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Snapchat's future

Snap to it

SAN FRANCISCO

The messaging app has quickly become a cultural sensation. Building it into a lasting business will take longer

WHEN Snapchat first became popular in 2013, many thought the messaging app would disappear almost as quickly as its vanishing messages. Instead, it has become one of the most intriguing internet firms to emerge in years. When Snap, Snapchat's parent company, goes public at an expected valuation of $20bn-25bn—the IPO is expected in March—its market debut will be the most closely watched since Alibaba, a Chinese e-commerce giant, floated in 2014. Snap's offering documents may be filed publicly as soon as this week.

Snapchat has captivated youngsters in the West with its quickly disappearing content and playful features. It appears to have connected with youth more successfully than older rivals such as Facebook (or its messaging service, WhatsApp). Users share digitally enhanced photos and videos of themselves vomiting rainbows and morphing their faces into animal masks. Around 41% of Americans aged 18 to 34 use the ephemeral messaging service every month, and 150m people globally spend time on it every day.

Older grown-ups should pay attention too. Snapchat is experimenting with new technologies, such as augmented reality (AR) and wearable devices. A large share of people who have used AR will have experienced it on Snapchat, where users can overlay computer-generated images on photos and videos (see page 64).

The firm's IPO prospectus is expected to describe not an internet or communications company but a "camera company". Snapchat has prospered from access to the camera on every smartphone, and now it wants to sell hardware as well. Its new sunglasses, called Spectacles, sell for $130 and enable users to record video from their exact line of sight. They have caught the attention of analysts, who are impressed by the glasses' ambition, functionality and clean design.

How well it fares as a public company will also serve as a litmus test of whether it is possible to prosper in the shadow of digital behemoths like Facebook and Google. Snapchat has a different outlook. Facebook creates permanent records of users' lives; Snapchat offers liberating impermanence. On most social-media sites, people post about their achievements to a huge circle of acquaintances; Snapchat's users share images of themselves looking silly with smaller groups of friends.

Rainbows, streaks, and unicorn faces

Snapchat started in 2011 as Picaboo. It was created by three members of a fraternity at Stanford University: Reggie Brown, Bobby Murphy and Evan Spiegel (now Snap's chief executive). The app, which they later renamed, was not an overnight sensation that crashed the internet, as Thefacebook did at Harvard. It lay virtually undiscovered for some time, until high-school girls discovered it and started using the app to send (sometimes risqué) messages.

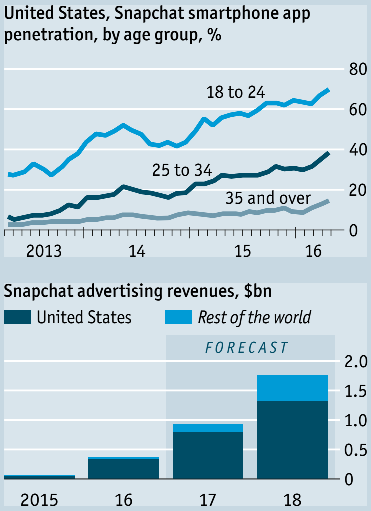
Mr Spiegel (snapped) has proven himself to be creative in devising new features for Snapchat's app and in imagining how it might evolve. At first it was a one-to-one messaging function for people to send disappearing "snaps" to one another. Three years ago Mr Spiegel launched a one-to-many broadcast function, called "stories", where people can string together images and videos and share them with all their friends at once. In 2015 it launched "Discover", where professional publishers offer a selection of disappearing articles and videos tailored to millennials (*The Economist* publishes on Discover). These features offer elements of scarcity and urgency that bring people back repeatedly.

Snapchat has innovated in other ways, too. It shows users how many snaps they have sent and received since joining, and they try to keep this score high. It invented "streaks" that keep track of how many consecutive days friends have sent messages back and forth. When Braden Allen, a 16-year-old in Dallas whose tally of sent and received snaps stands at around 170,000, needed a break from Snapchat to study, he gave his login information to a friend to keep sending on his behalf.

Lenses are another distinctive feature. When people take selfies, they can choose to alter their appearance, becoming an animal, switching faces with a friend or doing other fantastical things with the app's facial-recognition technology. Snapchat has quietly become the most-used augmented reality product in the world, says Ben Thompson of Stratechery, a research firm.

Although Snap encourages users to be silly on its app, it hopes to be taken seriously as a business. It will need to decide what approach it should take when using information about users to target ads. Mr Spiegel has called the practice "creepy" in the ▸▸

Winning streak



Sources: comScore; eMarketer

past. Yet Snap may need to share more data about its users; Mr Spiegel has indicated that he may be willing to do this.

The company has started to allow advertising in between users' stories and in the midst of publishers' articles on Discover. Brands can also buy sponsored lenses. For example, Taco Bell, a fast-food chain, paid for a lens that allowed users to change their faces into tacos. These promotions can be expensive, at around $550,000-800,000 for a lens that is available across America for a day, and can take some months to prepare. Snap insists on keeping some creative control, and can veto projects it thinks look too much like basic advertising. That has irked some brands in the past.

Snapchat is nowhere near earning the sort of ad revenues that Google and Facebook bring in. Those two scoop 58% of digital advertising in America and last year claimed nearly all of the market's growth. One of the world's largest advertising agencies spent $60m on Snapchat in 2016, compared with $1bn on Facebook. The same agency expects to spend $170m on Snapchat this year. Snap could have around $1bn of revenue in 2017, three times its total sales in 2016. Advertisers certainly welcome the prospect of having an alternative to the Facebook-Google duopoly, says Chris Vollmer of PWC, a consultancy.

Yet there are questions over how large Snapchat's user base can become, and whether it can support the high stockmarket valuation that is talked of. The app has yet to establish that it has strong appeal for older users, for example. In emerging markets it costs more to use lots of data on smartphones, and Snapchat's data-intensive app is less widely used. Brian Wieser, an internet analyst, reckons that Snapchat is an "important niche player" but that it will never achieve the scale of Facebook. It doesn't have to target more than a billion daily users to be a valuable company, but Mr Spiegel will need to be careful not oversell the app's potential reach, as Twitter did when it went public in 2013 promising to attract "the largest audience in the world".

He has so far focused on Western markets, whose users are most valuable to advertisers, in contrast to Facebook and Twitter, which emphasise their global reach. He is expected to point to high user engagement with Snapchat, rather than relentless user growth, as the gauge investors should watch. This will require a shift in thinking for stockmarket investors, who have been trained by Facebook, Twitter, LinkedIn and several other internet firms to demand fast-growing audiences.

Snap's profit margins in its various business lines may also disappoint: they are unlikely to be as generous as those of Google and Facebook, which both fulfil a lot of their ad orders using automated programmes. Because its ads tend more often to be individually designed, it relies on a large, human salesforce. Selling also takes more time, as it does in television.

Mr Spiegel will also need to prove his ability to lead. Many of his boosters compare him to the late Steve Jobs for his creative, perfectionist vision of products. He may resemble Mr Jobs in more negative ways, too. He is secretive and controls information tightly. No one but Mr Spiegel—not even the board and other top executives—knows all the important details of the firm's strategy and future plans. He is off-limits to most employees and travels between Snap's buildings in a black Range Rover with a security detail.

Some early backers also privately express concern that the talent pool behind him is not as experienced as they would like. Adult supervision will come from Michael Lynton, a seasoned entertainment executive, who is resigning from running the film studio of Japan's Sony to serve as Snap's chairman. But there are few like him at the company.

The competition against Facebook and Google (which owns YouTube, an online-video site, against which Snapchat will directly compete for ad dollars) is unlikely to let up. Facebook tried to buy Snapchat for $3bn in 2013, and has since then copied many of its popular features. Last summer Instagram, which is owned by Facebook, launched its own "stories" feature; its parent company is now testing the idea of rolling out this feature on its own social network. Usage of Snapchat stories has declined significantly since Instagram stories began. That could shake the faith of some Snapolytes, who believed that Snapchat had sufficient allure to keep its young users away from Facebook's properties and those of other internet firms.

The public offering stands as evidence that Snap wants to stay independent. But Facebook or Google could still buy it. "That is why I would not short the stock," says one hedge-funder, who is sceptical about the high valuation it is likely to receive. Mr Spiegel must know that his firm, as one of the only real threats to the two giants, would be a prize for either of them.

If Snap wants to survive as an independent firm, he may need to make some smart acquisitions of his own, as Facebook did by buying Instagram and WhatsApp. One opportunity may be visual search. Snapchat's users are using their cameras to capture the world around them. When they point their smartphones at objects, they could be served with advertising. Only Mr Spiegel knows the plan. But in the highly concentrated internet ecosystem, companies increasingly must eat or risk being eaten. The coming years will show whether Snap is predator or prey. ■

ExxonMobil

Upstream with half a paddle

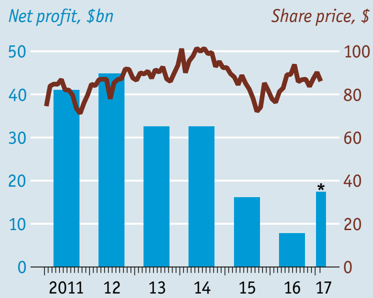
The world's biggest private oil company used to be peerless. That has changed

WITH an institutional culture that lies somewhere between the marines and the boy scouts, ExxonMobil tends to avoid personality cults. Even so, it is surprising how little is known about Darren Woods, the chief executive who last month succeeded Rex Tillerson, America's new secretary of state. Mr Woods's Wikipedia biography is a few lines long. Rather than reveal the year of his birth, ExxonMobil just says he is 52. Never mind: the most significant fact about him is that he comes from the refining and chemicals side of the business, which hums along so efficiently that ExxonMobil is widely considered the world's best "integrated" oil company. Yet it is upstream—the exploration and production part—where his hardest tasks lie.

On January 31st the company reported

Rex Mundi no longer

ExxonMobil



Sources: Bloomberg; Thomson Reuters *Forecast another year of plunging profits, which have buffeted its share price since 2014 (see chart on previous page). It earned less in a year than it used to earn in a quarter, and also less than Exxon made before its $80bn merger with Mobil in 1999. Profits among its "Big Oil" peers have likewise been clobbered by falling oil prices over the past two and a half years. It is also not alone in having to borrow heavily to meet its dividend and investment obligations; last year it lost its coveted AAA credit rating.

Even so, it was a surprise that it took a $2bn hit on the value of some natural-gas assets in America; in the past it has avoided such write-downs. In coming weeks, it is expected to remove up to 4.6bn barrels of North American crude from its 25bn barrels of proved reserves, because they are too costly to produce profitably. That will be yet another rare occurrence.

It will add to a sense that ExxonMobil is struggling to find low-cost sources of oil production to prepare it for a world of potential oversupply. That impression has led its shares to lag behind those of Chevron, its biggest American rival, by 20% in the past year, as well as those of European peers, Royal Dutch Shell, BP and Total. Lysle Brinker, head of oil-company research at IHS Energy, a consultancy, says that, although historically ExxonMobil's shares have traded at a higher premium to the value of its assets than its big rivals, in the past year "Chevron has overtaken it".

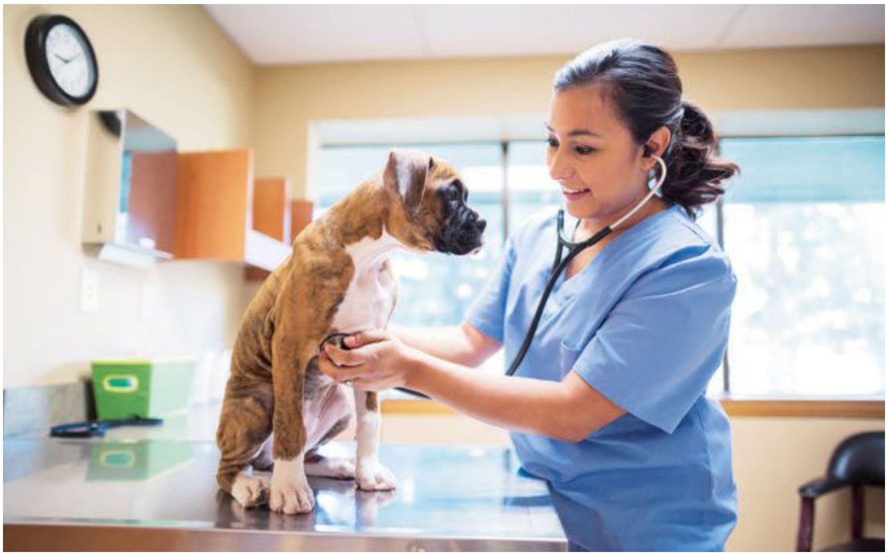
In an effort to redress the problem, the company's first deal in the Woods era has been a $6.6bn stock-and-cash purchase aimed at more than doubling its output in the Permian basin in Texas and New Mexico, to 350,000 barrels a day from 140,000. ExxonMobil hopes that acquiring more shale deposits will boost the proportion of oil and gas in its portfolio that is relatively quick and inexpensive to produce, compared with more costly and complex projects in places like the Russian Arctic. A potential boon is a bumper discovery in the oceans off Guyana, in South America.

Chevron has been far luckier. It clung onto legacy oilfields in the Permian that go back to the 1920s, and has 2m acres there, compared with the 250,000 recently bought by ExxonMobil. It has fared better from shale oil, whereas ExxonMobil bet big on shale gas via a $31bn merger in 2010 with XTO Energy. Since then gas assets have become even less valuable than oil ones, leaving ExxonMobil struggling to make amends.

An alternative for Mr Woods would be to do deals in the Persian Gulf, where oil is also cheap to produce but where there are rising competitive and geopolitical pressures. Mr Brinker notes that state-owned oil companies are nowadays offering less lucrative joint ventures to Western firms. A looming privatisation is likely to make Saudi Aramco, the only oil company that is bigger than ExxonMobil, into an even stronger competitor.

Adding to the challenges, Mr Woods takes over the company at a time when climate change is raising questions about future demand for fossil fuels. Environmental activists and increasing numbers of investors are demanding more transparency. On February 1st the firm appointed Susan Avery, an atmospheric scientist who formerly advised the UN, to its board. Some dismissed this as a publicity stunt. But it could be a bold move to shape its thinking on climate change.

One danger is that with its former boss standing shoulder to shoulder with Donald Trump, the firm reverts to its habit of insisting that it knows best. Many will be disheartened that, under pressure from companies including ExxonMobil, Republicans in Congress were this week planning to scrap a rule, aimed at reducing corruption in oil-rich countries, that forces firms to publish all payments to foreign governments. There is no reason to doubt ExxonMobil's adherence to what it terms its "culture of integrity". But it is increasingly important for oil firms not just to behave like good global citizens, but to be seen to do so, too. ■



Pet health care

Furry profitable

Mars's expansion in animal health is likely to bring rewards

AT THE 42,000-square-foot clinic in Hollywood that is owned by VCA, an animal-hospital chain, you may find a Pomeranian on a course of stem-cell therapy or a Shih Tzu having a hip replacement. There is even an underwater treadmill for cats. As pets are treated more and more like members of the family, so they are getting more health care. That also means they are racking up bigger vet bills for their owners.

That is the backdrop to the purchase in January of VCA by Mars, a firm best known for selling chocolate and sweets, for $9.1bn. Analysts whistled at the 31% premium Mars offered on VCA's share price at the time, but they also agreed that the deal reflects the industry's vitality. Spending on animal clinic visits in America has increased from a total of $13.7bn in 2012 to almost $16bn last year.

The deal is not as out of character for Mars as it may appear. Sales of chocolate are declining. The company is second only to Nestlé in the market for pet food in America, but competition from sellers on Amazon has sent the firm towards animal health. It was in 2007 that Mars bought Banfield Pet Hospital, then VCA's largest rival. Since then it has steadily expanded in the field. With the VCA deal, it will own 1,900 veterinary clinics in America and Canada, more than four times as many as National Veterinary Associates, the nearest competitor.

The success of such groups is due to the fact that "anything you see in human medicine is likely to be applied to dogs and cats", says John Mannhaupt of Brakke Consulting. The average vet used to be a generalist, offering everything from a bottle of pills to a quick death. The modern graduate is a specialist, whether in oncology or any other of the 40 fields listed by the American Veterinary Medical Association.

Diagnostic testing is a particularly profitable field. Veterinary clinics have invested in new equipment, from CT scanners to on-site MRI machines. A cat with toothache used to be anaesthetised before a vet could peer inside its mouth, but now a scan costing anywhere between $40 and $400 does the job instead. Mars, many believe, was keen on VCA's diagnostic laboratories, which are superior to those of Banfield and which run blood tests, and other sorts, for more than half of America's 24,000 or so veterinary clinics.

Most owners will buy the diagnostic tests. If it is bad news, many will go on and pay for the next stage of expensive treatments. Yet for some in the field of animal health, it is all too much. Lately accusations have mounted that VCA and Banfield are foisting unnecessary treatments on animals. Over-vaccination seems to be a particular bugbear. Banfield says it has reduced the frequency with which it administers core vaccines, and that it follows industry guidelines.

Technically, it remains illegal in many states for corporations to own veterinary practices, to prevent pets being over-treated for the sake of profits. But there is a way to structure ownership to deal with that. And although treatment options for pets now mirror those in human hospitals, the risks of getting things wrong do not. In law pets count as property, and usually have a small market value. Medical malpractice suits are hardly worth the bother, and are rare—another reason why Mars's strategy promises healthy returns. ■

Logistics firms

Boxed in

LEIPZIG

The return of borders poses a challenge to the soaring parcel-delivery business

DURING the day, Leipzig's airport is quiet. It is at night that the airfield comes to life. Next to the runway a yellow warehouse serves as the global sorting hub for DHL, a delivery firm owned by Deutsche Post of Germany. A huge extension, which opened in October, means it can sort 150,000 parcels each hour, says Ken Allen, DHL's CEO. It was built as business soared. But the express-delivery industry faces a new challenge: the return of trade barriers due to the protectionist bent of Donald Trump and because of Brexit.

The slower-moving shipping and air-cargo business has long been in the doldrums as a result of slow overall growth in trade in recent years. Yet the rise of cross-border e-commerce has still meant booming business for express-delivery firms. On January 31st UPS revealed record revenues for the fourth quarter of 2016; FedEx and DHL are expected to report similarly buoyant results next month. Since 2008 half of the increase in express-delivery volumes has come from shoppers buying items online from another country.

Falling trade barriers have greatly helped them. When DHL and FedEx were getting going, in the 1970s, there was little demand for international express deliveries. Packages often got stuck in customs for weeks and were heavily taxed. The expansion of free-trade areas, lower tariffs and the internet brought years of growth. But after Mr Trump's threats to raise tariffs on goods from China and Mexico, together with the indication last month from Theresa May, Britain's prime minister, that the country will leave the EU's customs union, there are widespread fears that the favourable tailwinds enjoyed by the industry for decades are gone. "It's all a real nightmare," groans David Jinks of ParcelHero, a British parcel broker which works with DHL, FedEx and UPS.

Start with Brexit. More physical border checks between Britain and Europe would do little direct damage. Most packages arriving in Britain have already been checked for drugs and dangerous items. Goods from outside the EU go through customs 95% of the time without any inspection or delay.

Instead, post-Brexit costs will probably come from long wrangles over which of 19,000 customs codes should be applied to a consignment. As an example of what could happen, Halloween costumes from China often get stuck at Britain's border while customs officials work out whether they are toys or children's clothes, which attract different duties. Such complexity would force delivery firms to put up their prices to customers, Mr Jinks says. Sending an item from Britain to Switzerland (outside the EU) costs 150% more than it does to Italy (inside the EU).

The most severe impact on business would come from higher tariffs, which would hurt demand for cross-border imports and deliveries in favour of local goods. This is where Mr Trump's threats come into focus. A trade war would hit the massive volume of consignments that DHL's, FedEx's and UPS's planes carry every day in and out of America.

For the moment, a customs exemption exists for packages worth under $800. This means that higher tariffs on a Chinese watch imported in bulk into the United States, for instance, could be avoided by an American ordering direct from Alibaba, a Chinese retailer, for delivery direct to their home. But if Mr Trump is serious about cutting imports, he could get rid of this exemption. It was only last March that Barack Obama increased it to $800 from the previous $200. If it were lowered or eliminated by executive order, logistics-industry people would really panic.

They are putting a brave face on things. DHL's Mr Allen has emphasised that "globalisation is here to stay", whatever Mr Trump does. UPS's boss, David Abney, hopes the president is not really against trade agreements. Even more telling are the actions of Fred Smith, FedEx's founder and CEO. Last week, he quietly gave up running the firm day-to-day to spend more time campaigning for free trade. ■

Consumer electronics

Screen shocker

SAN FRANCISCO

Television manufacturers may have been cheating on energy-efficiency tests

VOLKSWAGEN, a German carmaker, has been disgraced for designing clever software that allowed it to cheat on emissions tests for diesel cars. A different scandal, with shades of the VW affair, has been building up in America's television market. South Korea's Samsung and LG, along with Vizio, a Californian firm, stand accused of misrepresenting the energy efficiency of large-screen sets. Together, they sell over half of all TVs in America.

In September 2016 the Natural Resources Defence Council (NRDC), an environmental group, published research on the energy consumption of TVs, showing that those made by Samsung, LG and Vizio performed far better during short govern-

Plug and pay

ment tests than they did the rest of the time. Some TVs consumed double the amount of energy suggested by manufacturers' marketing bumpf. America's Department of Energy (DOE) has also conducted tests of its own that have turned up big inconsistencies.

Not all TV-makers are at fault: the NRDC found no difference in energy-consumption levels for TVs made by Sony and Philips. But class-action lawsuits have already been filed against the three companies highlighted by the tests—the latest was lodged against Samsung in New York on January 30th. The industry is now waiting to see whether regulators will take action.

There seem to be two main reasons for the sharp contrast between what TVs do during the government's tests and during normal viewing. Televisions made by Samsung and LG (but not Vizio) appear to recognise the test clip that the American government uses to rate energy consumption and to advise consumers on how much it will cost to operate the set over a whole year. The DOE's ten-minute test clip has a lot of motion and scene changes in short succession, with each clip lasting only 2.3 seconds before flashing to a new one (most TV content is made up of scenes that last more than double that length). During these tests the TVs' backlight dims, resulting in substantial energy savings. For the rest of the time, during typical viewing conditions, the backlight stays bright.

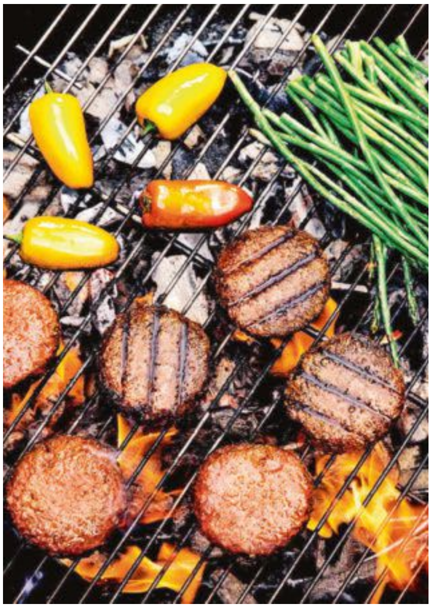
A kind explanation is that the manufacturers have been "teaching to the test" and simply did not understand the inconsistency in energy consumption during the test compared with normal use, says Noah Horowitz of the NRDC. Another explanation is that the TV manufacturers may have been trying to outwit regulators to make their products' energy consumption appear low to consumers.

A second reason for the discrepancy is that Samsung, LG and Vizio TVs all disabled energy-saving features without warning whenever a user changed the picture setting. On certain TVs made by LG, for example, the only setting in which energy-saving features functioned was in "Auto Power Save" mode. Selecting another setting, including "standard", disabled the energy-saving feature without notification.

LG has updated its software so that changing display settings will not disable energy-saving features without warning. The firm disputes any suggestion that it and others were "bending the rules", says John Taylor, a spokesman for LG. Vizio also denied wrongdoing. Samsung has not commented on the NRDC's findings.

America's Federal Trade Commission (FTC), which protects consumers, has the power to require repayment of profits from the sale of any TVs that misled customers. At least one former FTC official reckons the case deserves action. The DOE says it is considering whether it needs to modernise its test so that it becomes harder to game. The European Commission, which uses the same test as the DOE, is looking into the three manufacturers' products as well.

How much regulatory attention the case gets may depend on how the political mood evolves. A Republican-controlled Congress could even try to unwind the energy requirements for all consumer appliances. One bill, introduced in January by Michael Burgess, a congressman from Texas, would prohibit the DOE from enforcing existing energy-efficiency standards or setting new ones. For consumers that would be an unwelcome channel change. ■



Food technology

Plant and two veg

Alternatives to animal products are slowly moving towards the table

MOST people like to eat meat. As they grow richer they eat more of it. For individuals, that is good. Meat is nutritious. In particular, it packs much more protein per kilogram than plants do. But animals have to eat plants to put on weight—so much so that feeding livestock accounts for about a third of harvested grain. Farm animals consume 8% of the world's water supply, too. And they produce around 15% of unnatural greenhouse-gas emissions. More farm animals, then, could mean more environmental trouble.

Some consumers, particularly in the rich West, get this. And that has created a business opportunity. Though unwilling to go the whole hog, as it were, and adopt a vegetarian approach to diet, they are keen on food that looks and tastes as if it has come from farm animals, but hasn't.

The simplest way to satisfy this demand is to concentrate on substitutes for familiar products. "Meat" made directly from plants, rather than indirectly, via an animal's metabolism, is already on sale for the table and barbecue. Impossible Foods, a Californian firm, has deconstructed hamburgers, to work out what gives them their texture and flavour—and then either found or grown botanical equivalents to these. It launched its plant-based burger in a number of upmarket restaurants in America last year. Beyond Meat, another plant-based hopeful, has compounded from legumes something that tastes like chicken. This has been on sale since 2012. Last year, its "beef" patty (pictured) reached the shelves of several stores belonging to the Whole Foods Market chain.

For those who really want to eat steak while saving the planet, a second approach may be more promising. This is "clean", or cultured, meat—made by taking animal cells and growing them in a factory to form strips of muscle. Steak is not yet on the menu, but burgers and meatballs may soon be. The field leader is Mosa Meat, a Dutch firm staffed by scientists. The first burger it made, in 2013, cost around $300,000. By 2020, it hopes, the price of making them will have come down to about $11. Close behind Mosa, Memphis Meats, an American startup, is looking at the meatball rather than the burger market. Between 2013 and 2015 it managed to bring its costs down a hundredfold—though even then a single meatball would have set you back $1,200.

Milk, too, is in the sights of the new no-animal farmers. Perfect Day, a startup based in Berkeley, California, makes "milk" that has the same nutritional value and taste as traditional, dairy-based sources. It does so by engineering the relevant cattle genes into yeast cells, and growing those in fermentation tanks.

And there is one more novel source of meaty protein that does not involve farm animals—at least, farm animals of the conventional sort. This is insects. Grasshoppers, for example, are around 70% protein. Insects do have to be fed. But, being cold-blooded, they convert more food into body mass than warm-blooded mammals do and, being boneless, more of that body-mass is edible. Per edible gram, they need only a twelfth of the food that cattle require—and even only half as much as pigs.

Here, the problem is marketing. Around 2bn people eat insects already, but few of them are Westerners. Changing that could be a hard sell. Grind the bugs up and use them as ingredients, though, and your customers might find them more palatable. Hargol FoodTech, an Israeli startup, plans to do just that. Locustburgers, anybody? ■

Smartphones in China

Upstarts on top

DONGGUAN

How OPPO and Vivo are beating Apple, Xiaomi and the gang

DONGGUAN, a southerly Chinese city near Hong Kong, is better known for cranking out cheap trinkets than for producing high-end equipment of any kind. And yet, amid the grit and grime is a gleaming low-rise factory producing some 50m smartphones a year for OPPO, a firm started by China's BBK Electronics but which is now run independently.

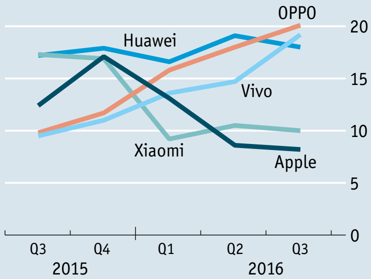
Inside, as well as the usual assembly lines and serried workers, the factory has dozens of staff in quality engineering and testing, conducting 130 different tests on OPPO's phones before they are released to the market. Such zealous pursuit of quality would be expected of factories that produce phones for Apple—the world-class facilities run by Taiwan's Foxconn in nearby Shenzhen house similar teams. But it is unusual at a firm that makes relatively inexpensive handsets for the local market.

OPPO, and its sister firm, Vivo, also a child of BBK, started out in 2004 and 2009 respectively, making cheap and cheerful phones like plenty of other obscure Chinese manufacturers. They probably didn't even register on Apple's radar. Xiaomi was the Chinese handset-maker to watch; urban sophisticates, enticed by viral marketing, flocked to its slick devices. But in June 2016 OPPO's R9, which costs around $400, overtook the iPhone, which is priced at twice that, as China's best-selling handset. Vivo, which targets younger consumers with lower prices, is also surging.

The two brands' achievements are remarkable. Two years ago they were struggling to join China's top five smartphone-makers; now they are among the biggest five globally. One out of every three smartphones sold in China in the third quarter of 2016 carried one of their brands; in 2012 their combined share was below 3%.

That should give Apple pause. Tim Cook, its boss, predicted in 2013 that China would become his firm's biggest market. But iPhone sales there have stagnated (see chart). In the third quarter its market share fell to 7.1%, down from 11.4% a year earlier.

Xiaomi has even more reason to fret. About six years ago it bet on an "asset-light" strategy, meaning it relied almost entirely on selling its phones online. This worked brilliantly when the overall market for smartphones was growing, and the richest cities, with the largest number of tech-aware consumers, were booming. Xiaomi was once valued at some $46bn, but its fortunes in China have plunged.



Opportunity rings
China, biggest smartphone vendors by shipments
Source: IDC

That is chiefly due to the fact that growth has shifted sharply to the rising middle classes in smaller cities. Consumers there are less experienced with smartphones than their fancier cousins in Beijing and Shanghai, and are wary of buying them online. They want to touch and compare handsets. OPPO and Vivo spotted this difference early. OPPO in particular shot to the top because it invested heavily in bricks-and-mortar retail distribution in lower-tier cities. Today the firm's phones are sold at some 200,000 retail outlets across the mainland, which gives its salesmen the chance to coddle customers and nudge them to buy pricier phones.

At first, OPPO's strategy was masterminded by Duan Yongping, founder of BBK, who began by selling basic electronics. He is known in China as "Duanfett", a play on Warren Buffett, because of his financial acumen and also his admiration for Mr Buffett (he paid over $600,000 at an auction to have lunch with him in 2007). Mr Duan has since retired, but still influences the firms' cultures.

It took discipline not to be waylaid by the striking (though short-lived) success of Xiaomi's hype-fuelled internet strategy. Many other companies tried to copy it. From 2011 to 2013, insiders say, OPPO looked hard at expanding its online sales channels, but decided against it. Sky Li, managing director of OPPO's international mobile business, says the reason lies in her firm's long-held adherence to the philosophy of *ben fen*—loosely translated, sticking to one's knitting.

Instead, OPPO became still more expert at incentivising its physical retailers. It has shown itself willing to share some of its profits with local stores. It uses a sophisticated system of subsidies that vary by model and season. One retailer in a small town in Sichuan says that although he sells many brands of smartphones, OPPO's generous subsidies make him extra-eager to peddle its wares.

That has its costs, of course: OPPO does not disclose the size of its total subsidies nor its profit margin, which may be low compared with other smartphone makers. Fat profits are hard to come by in China's giant smartphone market. Because it is simple for firms to outsource almost every aspect of phonemaking, from designing components and chipsets to contract manufacturing, the barrier to entry is low (the physical networks that OPPO and Vivo have built will be far harder to replicate than an online presence). Teeming firms means vicious price competition, especially for cheaper phones. The price of a Chinese smartphone may drop to as little as $50, analysts reckon.

Pressures at home explain why Chinese firms are also looking abroad. In the fourth quarter of 2016, Xiaomi and Vivo were vying with each other behind Samsung in the race for second place in India's smartphone market. Huawei, a local telecoms-equipment giant that ranks third in the domestic market, already makes two-fifths of its sales outside China; Shao Yang of its consumer-business group says this share will rise to three-fifths within five years. OPPO is already a force in India, and is in second place in South-East Asia behind Samsung. It has opened a new marketing centre in Cairo to spearhead expansion in Africa and the Middle East.

Kevin Wang of IHS Markit, a research firm, nonetheless reckons that a round of consolidation must be on its way. Within five years, he reckons, most of the 50 or so local Chinese phone manufacturers will be gone. If OPPO and Vivo can stay at the summit, that would be nearly as surprising as the dizzying speed of their ascent. ■

Schumpeter | Silicon Valiant

Technology firms' stand on immigration will draw attention to their hypocrisies

EARLY in 2016 Schumpeter went to a dinner with one of Silicon Valley's luminaries, a man of towering intelligence and negligible humility. Asked about the upcoming election, he scoffed: it didn't matter who America's president was. Politics had become irrelevant, he said. Technology firms, and their leaders, would carry on fashioning brilliant products and generally carrying out God's work on Earth, regardless of who occupied the White House. Cue smirks and more Hawaiian Kampachi all round.

Now Silicon Valley has thrust itself into a presidential stink. Technology groups were the first among big firms to slam Donald Trump's executive order of January 27th, which temporarily bans people from seven mainly-Muslim countries in the Middle East from entering America. Tim Cook, Apple's boss, criticised it to employees. Mark Zuckerberg at Facebook said he was "concerned". Sundar Pichai, CEO of Google, told staff he was "upset" on the day of the order, and a day later the firm's co-founder, Sergey Brin, was spotted among hundreds of protesters at San Francisco airport.

Just a month earlier all these technology firms and more had paid tribute at Trump Tower, their leaders laughing for the cameras while Mr Trump promised: "I'm here to help you folks." The honeymoon has now abruptly ended because immigrants are so important to the technology industry. But the sector's liberal tendencies—it has few of the instinctive Republicans who populate most boardrooms—also play a part.

Attracting hyper-brainy people from around the world is at the heart of the tech business model. Mr Brin was born in Moscow, Mr Pichai in Tamil Nadu and Satya Nadella, the head of Microsoft, in Hyderabad. The biological father of the late Steve Jobs was a Syrian who moved to America, a journey that as of this week would be impossible. Half of all the American startups that are worth more than $1bn were founded by migrants. Many of the engineers at tech firms were born abroad, too. In Cupertino, a posh suburb in Silicon Valley, half the population is foreign-born.

The industry has long supported immigration, therefore. But taking a vocal stand on political subjects has not been its habit, and by entering the fray it will draw attention to its own hypocrisies. For decades tech bosses have pushed a convenient double-speak to explain their firms' rise. Their dazzling products are the creations of their leaders. The resulting fortunes are these visionaries' just reward. But the economic and social consequences of the industry's output, not all of them good, are no one's responsibility. Instead, the industry argues, they are the result of unavoidable shifts in technology, in turn responding to society's broad demands. This logic has allowed tech firms to avoid responsibility for the stolen or bilious content that they publish and for the jobs that their algorithms help eliminate—to say nothing of their own oligopolistic market shares. Silicon Valley boasts of its own might and shrugs at its own impotence both at once.

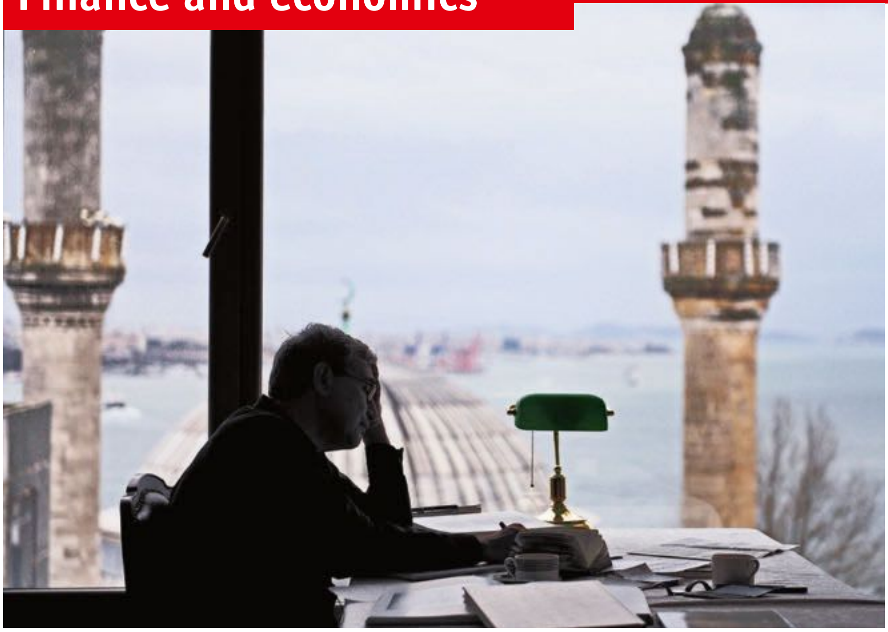
The election campaign underlined that this trick is by now exhausted. It is obvious to all that technology firms are political beasts. Politicians rely on Twitter and Facebook messages, social-media advertising and data mining. Tech platforms are used to disseminate fake news. And tech firms are prominent actors in the economic debate that drives populism. The job losses in manufacturing that infuriate Americans have resulted far more from decades of technological advance than from globalisation. The piles of uninvested cash stashed unpatriotically abroad, which Mr Trump now wants to bring home, belong chiefly to technology firms. The low share of American profits that is reinvested partly reflects the heft of Silicon Valley. For every dollar of cash the tech industry makes, it reinvests 24 cents; that compares with 50 cents for other non-financial firms. Growing inequality is partly the result of its concentrated ownership, with a small group of individuals taking a big share of a giant stream of profits.

In the weeks since November 8th, the technology industry has started to come clean. Google and Facebook have announced measures to try to tackle fake news. In January Mr Zuckerberg said he would travel to 30 American states this year to meet ordinary Americans and hear how globalisation and technology have affected them. Mr Nadella is talking publicly about the effects of artificial intelligence on employment. Others have chosen to make their mark by helping the new government. Elon Musk, the head of Tesla, an electric-car firm, and Travis Kalanick, of Uber, have both become advisers to the president (this week they promised to confront him about his stance on immigration).

Swipe for the next ethical dilemma

Coming out of the closet as among the most important actors in American society boosts technology bosses. So does standing up for their beliefs in things like immigration. It is more intellectually honest. It goes down well with employees. And it is probably popular with customers, too. Most consumer-facing technology firms have user bases that are skewed towards the young and non-Americans, both groups that dislike Mr Trump. After taxis went on strike at JFK airport in New York in protest against the travel ban, Uber came under fire for not boycotting the airport, too, and the hashtag "#DeleteUber" went viral.

Yet tech firms still have an awfully long way to go. Often they define virtue as what they judge to be in their business interests. Last year, Mr Cook dismissed a demand by the European Union to pay more tax as "political crap". In December Apple agreed to a state request to ban the *New York Times*'s app in China, where the firm makes just over a fifth of its sales. Mr Zuckerberg fits the same pattern: he says he wants to give away 99% of his fortune and that he believes in the ideal of free expression, but his firm paid a tax rate of just 6% over the past half-decade, and he has toadied up to China's censors, too. Oligopolistic, hubristic and ruthless to its core, Silicon Valley is no beacon of moral leadership. ■



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Emerging markets

Pop-up markets

ISTANBUL

Emerging-market worries have abated. Except in Turkey

THE Syrian consulate in Istanbul's elegant Nisantasi quarter is a busy spot. Men huddle outside in the cold, waiting for their turn to slip through the building's ornate doors. The rest of the neighbourhood is, however, unusually subdued. A string of terrorist attacks in the city and an attempted coup in July, followed by a purge of suspected sympathisers, has dampened spirits. "After a bomb goes off, no one goes out. A week is lost," says one shopkeeper.

Besides war next door and terror at home, Turkey's economy has been rocked by political upheaval farther afield: the lira has plummeted by over 15% against the dollar since America's election on November 8th. Many tenants cannot now afford Nisantasi's rents, often priced in foreign currency. Even the childhood home of Orhan Pamuk, Turkey's best-known novelist (pictured), has a "for rent" sign on the door.

Back in November, Turkey had a lot of company in its economic misery. Other emerging markets also reacted badly to America's election result, prompting talk of a "Trump tantrum" to match the "taper tantrum" after May 2013, when America's Federal Reserve began musing about reducing its pace of asset purchases.

In recent weeks, however, the fortunes of emerging markets have parted ways. South Africa's rand has recouped most of its post-election losses against the dollar. India's and Indonesia's currencies are both within 2% of their pre-Trump parities. Brazil's real, which weakened by 8% against the greenback in the first few days after the election, is now stronger than it was before it. Only Mexico's peso, still down by about 10%, has rivalled the lira's decline.

The markets may have concluded that Mr Trump's policies, intended to put America first, will set some emerging economies further back than others. Consider four potential dangers: a stronger dollar; trade wars; immigration curbs; and a tax holiday that prompts American firms to repatriate foreign profits. Russia is greatly vulnerable to none of these risks, according to Nomura, a bank. Mexico is highly exposed to all of them. Other economies fall somewhere between the two (see table).

What about Turkey? At first glance, it would seem to have little to fear. It is not highly vulnerable to a trade war, the repatriation of profits or curbs on migrant workers. After a fiscal and financial crisis in 2001, Turkey has also repaired its public finances, reformed the banking system, tamed inflation and floated the lira.

But although Turkey has learnt a lot from its past, it has learnt rather less from its peers. The experience of other emerging economies over the past 20 years shows that current-account deficits can be as treacherous as fiscal deficits. It also shows that financing such a gap with long-term foreign direct investment is better than relying on "hot money". The record also suggests that if the money has to be hot, it is better that it take the form of equity, rather than debt. And if it has to be debt, better that it is denominated in the country's own currency, not someone else's.

For all its strengths, Turkey has not abided by these rules of thumb. Its persistent current-account deficit (estimated to exceed 4% of GDP in 2016) has left it with short-term external debt amounting to over $100bn at the end of November (84% of which is denominated in foreign currencies). That is roughly equal to its entire stock of foreign-currency reserves (worth less than $98bn at the end of November). Mexico's reserves, in contrast, are roughly twice its short-term external debt, according to the IMF.

These external debts and deficits leave Turkey vulnerable to the withdrawal of foreign capital. To prevent it may require higher interest rates, but the central bank ▸▸

Trump trauma

Vulnerabilities to Trump-administration policies, selected countries

Risk	Brazil	China	India	Mexico	Russia	South Africa	Turkey
Stronger dollar	●	●	–	●	–	●	●
Trade war	–	●	–	●	–	–	–
Immigration curbs	–	–	●	●	–	–	–
Profit repatriation	–	–		●	–	●	–

Source: Nomura

has so far tightened only tentatively. Instead of simply raising its "benchmark" rate—the one-week repo rate—it has stopped offering repo auctions altogether. That has forced banks to borrow at its higher overnight lending rate (which it raised by 0.75 percentage points on January 24th) or the even higher rates offered at its "late" liquidity window.

To some economists, the lack of simplicity in the central bank's policy suggests a lack of conviction. They worry that, despite its statutory independence, it is reluctant to antagonise Turkey's increasingly powerful president, Recep Tayyip Erdogan, who has fulminated against the "interest-rate lobby" and demanded lower borrowing costs. Mr Erdogan would rather defend the currency by drawing on Turkey's deep reserves of patriotism, urging Turks to convert their dollars into lira "if you love this country". One barber told a local television station he would offer a free cut to anyone who converted $300.

If neither central bankers nor barbers stop the lira's fall, it may be Turkey's creditors in line for a haircut. On January 27th Fitch, a ratings agency, cut Turkey's foreign-currency credit rating to junk, citing the country's exposure to foreign debt and the erosion of checks and balances on its president. The agency thinks more loans (especially to tourism and energy companies) may require restructuring, but it believes Turkey's banks have enough capital to withstand "moderate shocks".

The other risk posed by a falling currency is rising prices. Turkey has a long history of high inflation, forcing Mr Erdogan to remove six zeroes from the currency in 2005. (Some Turks still say "billion" when they mean "thousand".) Historically, a 10% fall in the lira translates into a 1.5% rise in prices, which would further jeopardise the central bank's efforts to bring inflation down from 8.5% to its target of 5%. Its own economists argue that the inflationary impact of a weak currency may be offset by the weak economy.

They could be right. Next to the Syrian consulate is a brightly painted store (the "Pop-Up Shop"), offering nothing but consumer imports, from cereals to cosmetics, so the neighbourhood's well-heeled residents may satisfy esoteric tastes acquired abroad. Its eclectic range includes Brut aftershave, Jack Daniel's barbecue sauce, Tide detergent and peach-flavoured amino acids. The falling lira has pushed their costs up, but they have still been forced to cut their prices for the benefit of their financially straitened customers. The shop manager has written off 2017 as a lost year. "We've had enough," his father complains, tugging the collar of his coat, a Turkish gesture roughly akin to throwing up your hands in exasperation. But at least their rent, which the father quotes in billions not thousands, is priced in lira. ■

The Indian economy

Rupees for nothing

MUMBAI

India is taking the idea of a universal basic income seriously, if not literally

NOVEMBER 8th was not just the day of Donald Trump's election. It was also when Indians found out most banknotes would lose all value unless promptly exchanged. Ever since, many have expected their patience in enduring the ensuing chaos to be rewarded in some way. Might scrapped cash unredeemed by presumed tax-dodgers be recycled into a lump-sum payment to each and every citizen? Or would the annual budget, presented on February 1st, be full of giveaways ahead of a string of state elections? In the event, the budget was restrained to the point of dullness. But the government's closely-watched "economic survey", released the previous day, hinted at a much bigger giveaway in the works: a universal basic income (UBI) payable to every single Indian.

The idea of a cash payment made to citizens irrespective of their wealth is centuries old. It has become newly fashionable in some rich countries, among both left-wing thinkers (who like its redistributive aspects) and their right-wing foes (who think it results in a less meddlesome state). The idea has had its fans in India: a small UBI scheme was launched as a pilot in the state of Madhya Pradesh in 2010.

Its inclusion in the annual survey, a breeding ground for policies that was drafted by the government's chief economic adviser, Arvind Subramanian, gives a new focus for fans of the measure (and its opponents). A UBI is usually discussed in abstract terms. There is now a proposed amount: 7,620 rupees ($113) a year. Equivalent to less than a month's pay at the minimum wage in a city, it is well short of what anyone might need to lead a life of leisure. But it would cut absolute poverty from 22% to less than 0.5%.

Mr Subramanian also provides an outline of how it would be paid for. Crucially, the money would largely come from recycling funds from around 950 existing welfare schemes, including those that offer subsidised food, water, fertiliser and much else besides. Altogether these add up to roughly the 5% of GDP he thinks his version of UBI would cost. Starting such a programme from scratch would take up around half the central government's annual budget, such is the pitiful state of direct-tax collection in India.

The pros of UBI are clear: India is keen in theory to help its poor, but not very good at it in practice. Much of its welfare subsidies ends up in the hands of the relatively rich, who are more likely to make use of air-conditioned trains or cooking gas—or able to bribe the bureaucrats in charge of deciding who deserves subsidies. In-kind benefits are pilfered by middlemen who would find it harder to get at payments made to beneficiaries' bank accounts.

Mr Subramanian acknowledges that managing the transition to a new system would be difficult. In much of India, citizens have to travel at least 3km (2 miles) to ▸▸

Basic needs

get to a bank. Digital payments are still a minority pursuit. One advantage of the proliferation of welfare schemes is that if one of them fails to pay out, others might.

Another obstacle is that a fair few billionaires would also benefit from a truly universal UBI. Telling an illiterate farmer that a food-in-kind scheme he has used for decades is being scrapped to finance a programme that will put him on par with Mukesh Ambani, a tycoon who lives in a 27-storey house, will not be a vote-winner. In truth, Mr Subramanian's proposal stops a little short of true universality: for his sums to add up, take-up must be limited to just 75% of Indians. That means either a return to flawed means-testing, or a hope that the better-off will voluntarily opt out.

Implementing a UBI would be easier in India in one important way: getting the money to recipients. Well over 1bn Indians now have biometric identification cards, known as Aadhaar. The system can handle money, usually by diverting incoming payments to a bank account linked to an Aadhar number. A blast of cash to all citizens enrolled in the scheme would be a feasible way to distribute the money—though that would mean everyone got money, including the conspicuously rich.

It will take time before 1.3bn Indians receive such a transfer. Keen as Mr Subramanian is, he concludes that UBI is "a powerful idea whose time even if not ripe for implementation is ripe for serious discussion." For now the government is focused on meeting its long-held 3% deficit target, which it expects to miss by just 0.2 percentage points next year, and on the aftermath of "demonetisation". But the idea will not go away. It may seem folly in a country home to over a quarter of the world's truly poor to give people money for nothing. But it would be a swift, efficient way to make it home to far fewer of them. ■

Buttonwood | A taxing problem

A proposed reform could be bad news for junk bonds

ONE reason why the American equity market has rallied since the election of Donald Trump is the hope that taxes on corporate profits will be cut. But that measure has to be paid for, and analysts are only just starting to figure out where the burden might fall.

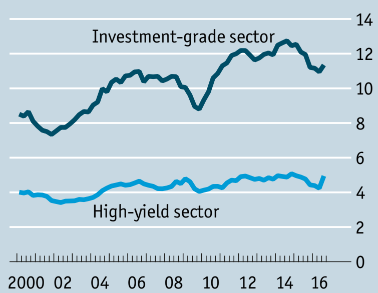
The initial focus has been on the idea of border-adjustment taxes. But another way of raising revenue is to remove companies' right to deduct their interest expenses from their taxable income. That proviso has been in place since 1918, when it was introduced to help firms struggling with the impact of the first world war—evidence that tax breaks, once granted, are hard to remove.

Allowing interest payments, but not dividends, to be deducted from corporate profits before tax is paid is a huge distortion to the system. It is a perk worth around 11% of the value of corporate assets. It has tended to encourage companies to take on more debt. By doing so, it may make the economy more risky at the margin: in a recession, highly-indebted companies are likely to go bust more quickly, whereas companies with lots of equity capital can ride out the storm. As a result, this newspaper has favoured the abolition of the deductibility rule.

The revenue gains to the American government would be large—around 1.6% of GDP as of 2013 (in 2007, when interest rates were higher, it would have been 4.3%). Robert Pozen of Harvard Business School has calculated that removing interest deductibility would allow the corporate-tax rate to be cut to 15%, from 35%. A cut that large seems unlikely, however, given another proposal that companies should be immediately allowed to write off their capital investment against tax, a measure that would reduce tax revenue.

Take cover

US non-financial interest-rate cover ratio*



Source: Citigroup *Pre-tax profits divided by interest

The effect on the corporate world would not be uniform. Some companies have a lot more debt, and thus a lot more to lose, than others. Matt King at Citigroup has done some calculations on the winners and losers, on the assumption that the corporate-tax rate is cut to 20%. On that basis, companies with an interest coverage ratio (pre-tax profits divided by interest) of more than 2.4 would be better off.

But few companies actually pay the full 35% tax rate; the average effective tax rate is around 27%, Citigroup says. On this basis, Mr King reckons that only companies with interest cover of more than four times would gain. The effect would be good news for the strongest firms (those judged investment-grade by the rating agencies) and bad news for companies in the high-yield, or "junk", sector (see chart). This would include many companies financed or owned by private-equity firms.

Whether this shift would make the system safer in the short term also depends on the broader aims of the Trump agenda. "If we are in fact heading into an environment of better growth and less regulation, this should drive more debt issuance in the near term, not less," say analysts at Morgan Stanley, a bank. "Even if the tax shield goes away, the cost of debt is still relatively low versus historical levels."

Another issue is that America would be the only country eliminating the interest subsidy. Companies would still have the incentive to borrow in other countries that allowed them to deduct interest payments against tax. So companies could issue bonds in locations with high corporate-tax rates, and then use the proceeds to buy back bonds issued in America. This could result in even lower bond yields on investment-grade bonds in the American markets as investors chase a dwindling supply of them.

The upshot could be a sharp divide in the bond market, with investment-grade yields falling and junk-bond yields rising, as investors worry about the ability of the latter to service their debts without the tax benefit. The gap, or spread, between the two would rise as a result (at the moment, spreads are four percentage points, quite low by historical standards). If this took place in an atmosphere of generally rising bond yields, because inflation and economic growth are picking up, then it would be hard for riskier companies to refinance their debts.

The number of defaults has already been rising, largely because of the impact of lower oil prices on the energy industry. The default rate on junk bonds was 5% in the 12 months to January 2017, having been under 2% at the start of 2015. In 2016, 2.6 times as many bonds were downgraded by S&P Global Ratings as were upgraded. Besides pointing to the high credit valuations, Morgan Stanley also notes that "uncertainty has rarely been higher in this cycle". It could be a dangerous time to fiddle with the tax code.

Economist.com/blogs/buttonwood

Trade deals

Trying For Anything

The biggest global trade deal in decades shows why getting agreement is so hard

IN THE wee hours of December 7th 2013, after weeks of haggling, exhausted trade representatives stood to applaud. Agreement had been reached on the first trade deal in the history of the World Trade Organisation (WTO). No longer could it be accused of being a talking shop, crimped by consensus. "For the first time in our history, the WTO has truly delivered," said Roberto Azevêdo, the body's chief. The deal is tantalisingly close to coming into force, needing just two more national ratifications. Chad, Jordan, Kuwait and Rwanda are competing to take it over the line.

In theory, the Trade Facilitation Agreement (TFA) is a beacon of hope on the trade landscape. It was unanimously agreed to by rich and poor countries. If fully implemented, it could have an even bigger impact than slashing all tariffs. It is an example of a win-win deal, in which peer pressure pokes governments into making life easier and more prosperous.

The agreement shies away from slashing subsidies or toppling tariffs, and instead hacks at the thicket of regulatory trade barriers. The red tape is stickiest in poorer countries; in sub-Saharan Africa exporters must endure nearly 200 hours of inspections, regulations and paperwork. Richer countries face only 15 (see chart).

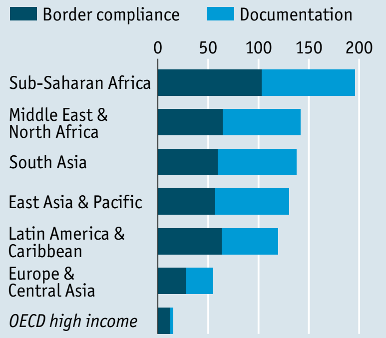
The TFA is supposed to surmount these hurdles by, for example, setting standards, streamlining processes and squeezing fees. This would cut trade costs by as much as 15% in poorer countries. It also enforces greater transparency. Export-led growth is tricky if people do not know how to export. A study by Evdokia Moïsé and Silvia Sorescu of the OECD found that better information could cut trade costs by 1.7% in low-income countries.

Step back a bit, however, and the TFA looks rather bedraggled. It rose out of the ashes of the Doha round, the last big attempt at a global trade deal, as the least controversial item. Grand trade deals, never very high on governments' agendas, have in recent decades aimed more at locking in existing practice than at winning important new concessions. The TFA reflects curtailed ambition, after plans for agreements in areas such as intellectual property and trade in services were abandoned.

Its cuddly inclusivity comes at a cost. Poorer countries have flexibility over which standards they will put in place immediately, which they need time for—and which they need money for. Some bits of

Paper trail

Average time to process exports, 2016, hours



Source: World Bank

the agreement are exhortations rather than rules. Implementation may be slow. A study published in December 2016 noted that even when regional trade agreements include trade-facilitation provisions, they are not always put into effect. A committee will oversee implementation, but insiders doubt how much pressure non-compliant governments will really face.

Eight months after Mr Azevêdo triumphantly hailed the WTO's success in brokering its first deal, India very nearly scuppered it, holding it hostage over an unrelated argument about agricultural subsidies. (WTO wonks still smart at the memory.) Eventually, America thrashed out a compromise in a side-agreement. So the TFA's history highlights the belligerence of some governments; and, alarmingly for those following the pronouncements on trade of the new Trump administration, the importance of American leadership. ■

The Ethiopia Commodity Exchange

High-tech, low impact

ADDIS ABABA

A state-of-the-art exchange struggles with the basics

ON THE walls of the Ethiopia Commodity Exchange (ECX) in Addis Ababa, the capital, hang glossy black-and-white photographs of provincial market towns and rustic life. For the merchants and brokers striding across its high-tech trading floor they serve as a reminder that the ECX, sub-Saharan Africa's most modern commodity exchange outside Johannesburg, exists for a simple, practical purpose: to transform Ethiopian agriculture.

It has some way to go. By connecting smallholder farmers to global markets, the exchange, launched with a fanfare in 2008, was supposed to help reduce hunger. The hope was it would reduce price volatility and incentivise farmers to plant crops. But staple foods such as haricot beans today account for less than 10% of its trade. Its annual turnover—worth about $1bn—is dominated instead by two export crops, coffee and sesame seeds. In 2015, despite a dire drought, Ethiopia did avoid famine, but the ECX played little role: its maize and wheat contracts had lapsed by then because of concerns that exports would jeopardise domestic food supplies. Cutting out middlemen seems not to have done much for smallholders: studies suggest that the share of international prices received by coffee farmers has barely budged over the past decade. Exporters complain about government price-meddling.

The ECX's founder, Eleni Gabre-Madhin, who left the exchange in 2012, worries that momentum has been lost. The exchange remains restricted to simple spot-trading. Futures contracts, which help traders manage price fluctuations, were supposed to be introduced within five years, but are still some way off.

In July 2015 the ECX did, however, introduce electronic transactions, now used for almost all trades. Bespoke software is built in-house by Ethiopian engineers. Payments the day after purchase are guaranteed. The ECX can also boast never to have seen a default, in a country known for suicides by indebted farmers whose buyers have welshed. Ethiopia has shown that it is possible for an exchange to prompt the physical infrastructure of commodities markets: the ECX oversaw a burst in warehouse construction.

Fledgling exchanges dotted around Africa often visit Addis Ababa to study the ECX. But experts doubt it is a helpful model. The government made it viable by mandating that almost all trade in coffee and some other commodities go through the exchange. This might not be possible elsewhere. A monopoly imposed by fiat makes it more like a state marketing board than an exchange, says Thomas Jayne, an economist at Michigan State University.

Another model might be the Agricultural Commodity Exchange for Africa in Malawi, which was set up privately in 2006 at the request of an association of smallholder farmers. But its volumes remain low. And its concentration on staple foods such as maize and soya leaves it vulnerable to the sort of government interventions that can sink exchanges. Trading in staples tends to be politically sensitive in times of food scarcity.

Setting up national exchanges may be the wrong approach. The Johannesburg Stock Exchange plans to introduce a regional contract for Zambian white maize later this year. For lucrative export crops like coffee, well-established offshore exchanges may make more sense than starting from scratch at home. Better a functioning exchange somewhere else than a disappointing one on the doorstep. ■

Asset management

Ctrl alt-beta

Funds mimicking simple hedge-fund strategies gain in popularity

INVESTORS love to complain about hedge funds, which have delivered measly returns for the past several years and are notorious for their high fees. Yet so far, most have stuck with them. One reason is that the hedge funds' mission—to provide returns uncorrelated with overall market performance—has been hard to replicate. But a fast-growing hedge-fund-like product, known as the "alternative beta" fund, allows investors much cheaper access to a similar style of investment.

"Alt-beta", as it is usually called, is a bit of a misnomer. The word "beta" is typically used to mean broad market returns, which can be bought into through index-tracking funds. "Alpha" is the term used to describe the premium added by a skilled fund manager. The idea driving both "alt-beta" funds and longer-established "smart-beta" ones, is that, just as "beta" can be distinguished from "alpha", so returns can be ascribed to identifiable, predictable factors. One example is the "value" effect: ie, that undervalued companies tend to outperform the market.

Smart-beta and alt-beta funds are close cousins, but differ in their methods and in their outcomes. Both aim to automate asset selection, for example by using rules-based algorithms rather than human managers. But whereas smart-beta funds simply pick and buy assets, and hence ride the market along with other asset managers, alt-beta funds use hedge-fund tactics in search of uncorrelated returns. These include betting against (ie, "shorting") assets and using derivatives.

Compared with hedge funds, alt-beta funds are dirt cheap. They typically charge as little as 0.75-1% a year, compared with 2% annually and 20% of profits for a typical hedge fund. Perhaps unsurprisingly, they have grown fast: according to estimates from JPMorgan Chase, assets managed by alt-beta funds have increased from $2bn in 2010 to around $70bn at the end of 2016 (still nugatory compared with the $3trn in hedge funds).

A range of firms are getting into the alt-beta business: big asset managers, investment banks and funds of hedge funds. So, indeed, are hedge funds themselves. Hedge funds tend to like esoteric, niche investments which are by definition in short supply. But they also invest in mainstream, liquid assets. Taking those positions, repackaging them as alt-beta funds, and selling them on to investors offers them another source of business.

Indeed, hedge funds may not feel too threatened by the alt-beta trend. The cost and complexity of setting up the infrastructure to short assets or trade in derivatives are high barriers to entry. Moreover, alt-beta funds can be volatile. Simon Savage, director of alternative beta at Man Group, a listed provider of hedge funds, says this is to be expected: alt-beta funds are essentially "very simplified hedge funds", without as much emphasis on mitigating risks.

Such funds may offer cheaper access than hedge funds do to certain commoditised risks. But they may also end up producing lower risk-adjusted returns, making them unappealing on their own. Most investors seem, for now, to use alt-beta funds as a complement to hedge funds, rather than as an alternative. Hedgies are not out of a job yet. ■

Custodian services

Quis custodiet?

NEW YORK

A trillion-dollar switch highlights the ignored core of the banking system

NO ACTOR has ever sat nude in a bathtub to explain the intricacies of the bank-custody business, as Margot Robbie did for mortgage-backed securities in "The Big Short", a successful film. The blame lies with the custody business's virtues, not its flaws.

Instead of the 2% fees Ms Robbie mentions for offloading rubbishy securities onto suckers, bank-custody fees are tallied in hundredths of a percentage point. Custody bankers are generally neither glamorous nor crooked. They are accountants and software engineers catering to well-informed clients: the owners and managers of huge amounts of financial assets. The services they offer include: holding, valuing and transferring securities; receiving interest and dividends; and providing notice of corporate actions. The business grows with the financial markets, but more slowly. Years of almost seamless and scandal-free performance have made the business well-nigh invisible. But not quite.

Custody has habitually been "sticky": the loss of a large account is unusual. But on January 25th BlackRock, a gargantuan asset manager, announced that it was moving custody assets worth $1trn from State Street to JPMorgan Chase. State Street's shares dropped by 7%, or roughly double the percentage of assets lost. In a business that relies on economies of scale, marginal assets have disproportionate value since they provide revenue without much extra cost.

Custodians are like utilities, providing critical infrastructure. The three biggest are State Street, BNY Mellon, and JPMorgan Chase, each overseeing more than $20trn in assets. Next is Citigroup with $15trn. When many custodian-bank executives started work, their jobs entailed the meticulous counting of mountains of paper securities. Now these banks have to invest fortunes in computing power. State Street spent over $1.1bn on hardware in 2016, and was probably matched by the two other giants, says Brian Kleinhanzl of KBW, a research firm.

These investments matter. State Street and BNY Mellon do not have the same breadth of businesses as JPMorgan Chase and Citigroup, but they are designated "systemically important institutions" because it is absolutely essential that their systems work. They hold and price trillions in assets; a glitch could create havoc. Some temporary outages have happened, but nothing persistent. The occasional scandal has also emerged. Several custodians have settled charges of pocketing excessive amounts from foreign-exchange dealings. But this has, so far, caused minimal disruption.

By dint of their position, the custody banks also have extraordinary access to information. They know which markets are efficient, how money is flowing, the value of their customers' holdings and what form they take. That information is, slowly, becoming a valuable product in itself. Their work may never be explained by a woman in a tub, but when the financial world is on fire, they may be able to tell her how hot the water is.

Free exchange | Better than a wall

Understanding NAFTA, a disappointing but under-appreciated trade deal

THE North American Free Trade Agreement (NAFTA) has long been a populist punchbag. In the American presidential campaign of 1992, Ross Perot—an oddball Texas billionaire and independent candidate—claimed to hear a "giant sucking sound" as Mexico prepared to hoover up American jobs. Since its enactment, right-wing conspiracy theorists have speculated that NAFTA is merely a first step towards "North American Union", and the swapping of the almighty dollar for the "amero". Donald Trump, who plans to renegotiate (or scrap) the deal, mined a rich vein of anti-NAFTA sentiment during his campaign, calling it "the single worst trade deal ever approved in this country". Even NAFTA's cheerleaders (a more reticent bunch) might concede that the deal has fallen short of their expectations. But it is in none of the signatories' interests to rip it up or roll it back.

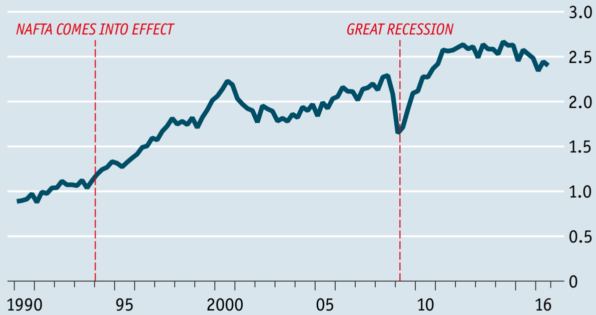
America and Canada opened talks on a free-trade area with Mexico in 1990, shortly after securing their own bilateral deal, and it was bringing in Mexico that proved so contentious in America. When NAFTA took effect in 1994, it eliminated tariffs on more than half of its members' industrial products. Over the next 15 years the deal eliminated tariffs on all industrial and agricultural goods. (The three economies would have further liberalised trade within the Trans-Pacific Partnership, which Mr Trump scotched in one of his first acts as president.)

Americans hoped lower trade barriers would foster growth in cross-border supply chains—a "Factory North America"—to rival those in Europe and Asia. By moving parts of their supply chains to Mexico, where labour costs were low, American firms reckoned they could cut costs and improve their global competitiveness. American consumers might also benefit from cheaper goods. For its part, Mexico sought improved access to America's massive market, and sturdier positions for its firms within those North American supply chains. Both countries hoped the deal would boost Mexico's economy, raising living standards and stanching the flow of migrants northward.

NAFTA was no disaster. Two decades on, North America is more economically integrated. Trade between America and Mexico has risen from 1.3% of combined GDP in 1994 to 2.5% in 2015 (see chart). Mexico's real income per person, on a purchasing-power-parity basis, has risen from about $10,000 in 1994 to $19,000. The number of Mexicans migrating to America has fallen from about half a million a year to almost none. And yet the deal has disappointed in many ways. Mexican incomes are no higher, as a share of those in America, than they were in 1994. (Chinese incomes rose from about 6% of those in America to 27% during that time.) Estimates suggest that the deal left Americans as a whole a bit better off. But the gains have proved too small, and too unevenly distributed, to spare it continued criticism.

A great purring sound

United States-Mexico merchandise trade, as % of combined GDP



Sources: US International Trade Commission; Haver Analytics

The sniping is unfair. Unexpected shocks prevented the deal from reaching its full potential. Both the peso crisis of 1994-95 and the global financial crisis dealt blows to trade between the two countries. So did the American border controls introduced after the attacks of September 11th 2001, which raised the cost of moving goods and people. The rapid, disruptive growth of China also interfered with North American integration. The Chinese economy, accounting for more than 13% of global exports and around 25% of global manufacturing value-added, exerts an irresistible pull on global supply chains.

Nor is NAFTA chiefly responsible for the woes of the American worker. In a recent essay Brad DeLong, an economic historian at the University of California, Berkeley, reckoned NAFTA might be blamed for net job losses of the order of 0.1% of the American labour force—fewer jobs than the American economy adds in a typical month. Even without NAFTA, manufacturing jobs would have dwindled. The strong dollar and better transport and communications technology made it more attractive to produce abroad. Automation hastened the persistent long-term decline in industrial employment that is familiar in all rich economies—even in export powerhouses such as Germany.

Beggar my neighbour

Most important, the failure to agree a trade deal with Mexico would not have altered North American geography. Mexico shares a 3,200km-long border with the world's largest economy. It is almost inevitable that America will be Mexico's largest trading partner (America currently accounts for more than 70% of Mexican exports and more than 50% of its imports). Deep familial and cultural ties across the border shrink the distance between them even more. Mexico cannot help but be critically dependent on its neighbour's economy. And America unquestionably benefits when Mexico, which has the world's tenth-largest population and 15th-biggest economy, is more prosperous.

A richer Mexico would buy more American goods and services and provide more ideas, talent and innovation. It would also be better placed to manage migration, and a stronger diplomatic partner. Eliminating tariffs on Mexico would not instantly transform it into Canada, but the notion that higher trade costs between the two economies would serve American interests better is, at best, short-sighted. No wall can insulate America against events to its south, and Americans' own well-being is intimately linked to the welfare of their around 125m Mexican neighbours.

It is hard to blame Americans for seeing globalisation as a zero-sum affair. Stagnant pay, rising inequality and government complacency as industrial regions suffered long-term decline have obscured the benefits of trade and created fertile ground for populists. As a result Americans feel let down by NAFTA. Yet NAFTA has itself been let down by American leaders, who neither made the case that higher living standards are a positive-sum game, nor allowed the benefits of growth to be broadly shared. If the upshot is the disintegration of the North American economy, those on both sides of the Rio Grande will be worse off. ■

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Augmented reality

Better than real

Replacing the actual world with a virtual one is a neat trick. Combining the two could be more useful

SCIENCE fiction both predicts the future and influences the scientists and technologists who work to bring that future about. Mobile phones, to take a famous example, are essentially real-life versions of the hand-held communicators wielded by Captain Kirk and his crewmates in the original series of "Star Trek". The clamshell models of the mid-2000s even take design cues directly from those fictional devices.

If companies ranging from giants like Microsoft and Google to newcomers like Magic Leap and Meta have their way, the next thing to leap from fiction to fact will be augmented reality (AR). AR is a sci-fi staple, from Arnold Schwarzenegger's heads-up display in the "Terminator" films to the holographic computer screens that Tom Cruise slings around as a futuristic policeman in "Minority Report".

AR is a close cousin to virtual reality (VR). There is, though, a crucial difference between them: the near-opposite meanings they ascribe to the term "reality". VR aims to drop users into a convincing, but artificial, world. AR, by contrast, supplements the real world by laying useful or entertaining computer-generated data over it. Such an overlay might be a map annotated with directions, or a reminder about a meeting, or even a virtual alien with a ray gun, ripe for blasting. Despite the hype and prominence given recently to VR, people tend to spend more time in real realities than computer-generated ones. AR thus has techies licking their lips in anticipation of a giant new market. Digi-Capital, a firm of analysts in California, reckons that of the $108 billion a year which it predicts will be spent by 2021 on VR and AR combined, AR will take three-quarters.

Improving on the world

Like many science-fictional technologies, AR is in fact already here—just unevenly distributed. An early version was the heads-up displays that began to be fitted to jet fighters in the 1950s. These projected information such as compass headings, altitude and banking angles onto the cockpit canopy. Such displays occasionally turn up in cars, too. But only now, as computers have shrunk enough and become sufficiently powerful, has it become possible to give people a similar sort of experience as they go about their daily lives.

Last year, for instance, the world was briefly entranced by an AR smartphone game called Pokémon Go. Players had to wander the world collecting virtual monsters that were, thanks to their phones' cameras, drawn over a phone's-eye view of a building's lobby or a stand of trees. Apps such as Snapchat, which features image filters that permit users to take pictures of themselves and others wearing computer-generated rabbit ears or elaborate virtual make-up, are another example.

There are less frivolous uses, too. Google's Translate app employs computer vision, automatic translation and a smartphone's camera to show an image of the world that has text, such as items on menus and street signs, interpreted into any of several dozen languages.

Apps like Snapchat and Translate rely on machine-vision algorithms to work their magic. Snapchat is designed to detect faces. This works well enough, but means that the bunny ears can be applied only to heads. Translate, similarly, looks for text in the world upon which to work its magic. But smartphone-makers have bigger plans.

At the end of last year Google and Lenovo, a Chinese hardware manufacturer, unveiled the Phab 2 Pro, the first phone to implement a piece of Google technology called Tango. The idea is that, by giving the phone an extra set of sensors, it can detect the shape of the world around it. Using information from infra-red detectors, a wide-angle lens and a "time-of-flight" camera (which measures how long pulses of light take to reflect off the phone's surroundings) Tango is able to build up a three-dimensional image of those surroundings. Armed with all this, a Tango-enabled phone can model a house, an office or any other space, and then use that model as a canvas upon which to draw things. ▶▶

To give an idea of what is possible, Google has written apps that would be impossible on Tango-less phones. "Measure", for instance, overlays a virtual tape measure on the phone's screen. Point it at a door, and it will tell you how wide and high that portal is. Point it at a bed, and you get the bed's dimensions—letting you work out whether it will fit through the door. Another Tango app is the oddly spelled "Woorld", which lets users fill their living rooms with virtual flowers, houses and rocket ships, all of which will interact appropriately with the scenery. Place the rocket behind a television, for instance, and the set will block your view of it.

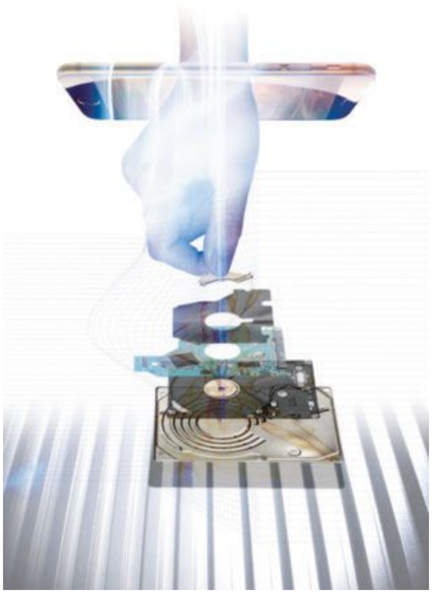
Through a pair of glasses, virtually

The effect Tango gives is impressive, but the technology is still in its early stages. Building 3D models of the world is computationally demanding, and quickly drains even the Phab 2 Pro's beefy battery. The models themselves quickly use up the phone's data-storage capacity. And the touchscreen of a phone is a clumsy way of communicating with the software. Some enthusiasts of augmented reality therefore think that the technology will not take off properly until smartphones can be abandoned in favour of smart spectacles that can superimpose images on whatever their wearers happen to be looking at.

Such glasses do exist. So far, though, they have made a bigger impact on the workplace than in the home. Companies such as Ubimax, in Germany, or Vuzix, in New York, make AR spectacles that include cameras and sensors, and which use a projector mounted on the frame to place what looks like a small, two-dimensional screen into one corner of the wearer's vision.

Used in warehouses, for instance, that screen—in combination with technology which tracks workers and parcels—can give an employee instructions on where to go, the fastest route to get there and what to pick up when he arrives, all the while leaving both of his hands free to move boxes around. Ubimax reckons that could bring a 25% improvement in efficiency. At a conference in London in October, Boeing, a big American aeroplane-maker, described how it was using AR glasses to give workers in its factories step-by-step instructions on how to assemble components, as well as to check that the job had been done properly. The result, said Paul Davies of Boeing's research division, is faster work with fewer mistakes.

The one serious attempt to offer individual consumers such technology did not, though, go well. Like Vuzix's and Ubimax's products, Google's "Glass", unveiled in 2013, was a pair of spectacles with a small projector mounted on one arm. The idea was, in effect, to create a wearable smartphone that would let its user make calls, read e-mails, see maps and use the Glass's built-in GPS to navigate, all the while leaving his hands free for other tasks.



The problem was not with the users. Google's "Glass Explorers"—those willing to pay $1,500 for early access to the hardware—seemed happy enough. But, often, those they interacted with were not. Glass Explorers quickly attracted the nickname "Glassholes" from those annoyed by their proclivity to glance at e-mails in the middle of a conversation, or worried that the device let wearers record everything going on around them. (Some restaurants banned Glass users on privacy grounds.) Google stopped making Glass early in 2015, although it is working on a new version aimed at businesses instead of individuals.

Other firms have more limited ambitions, but may do better for that. RideOn, for instance, is an Israeli outfit founded by three engineers with experience in designing heads-up displays for aircraft. It will soon start selling augmented-reality ski goggles. The idea is to turn skiing into a video game, by showing users routes, letting them time runs, compete with their friends, shoot footage and the like.

Some companies are building much more capable displays. Instead of 2D images, they propose to create augmented reality in three dimensions. In March 2016 Microsoft began making early versions of a headset called the HoloLens available to software developers around the world. Unlike the AR glasses produced by Vuzix and Ubimax, or Google's Glass, the HoloLens can draw 3D images that appear to exist in the real world. Users can walk around a virtual motorbike, for instance, to inspect it from behind, or place virtual ornaments on real tables or shelves.

It is, in other words, like a Tango-enabled smartphone—only much more capable. The device's cameras, derived from the Kinect (an accessory originally developed for Microsoft's Xbox 360 games console), scan the world around it. Those cameras generate such a flood of information that Microsoft has had to design a special chip to process all the incoming data. Armed with that understanding, and with the ability to track the position of its user's head, the machine can tailor its graphics accordingly: making a virtual motorbike appear to be standing on a real floor, for instance. The same cameras let the wearer interact with the machine via voice commands, by making gestures in mid-air, or by tracking precisely where he is looking.

Unlike VR headsets, which must be connected to either a PC or a smartphone to work, the HoloLens is a self-contained computer that needs no accessories. Users view the world through a pair of thick, transparent lenses. A pair of projectors feed light into the top of these lenses. Three optical waveguides (one each for red, green and blue light—the primary colours from which others can be created) funnel that light down the lenses before bending it through 90° and into the user's eyes.

By overlaying its images onto the real world, the HoloLens headset turns reality into a computer monitor. A window containing a Skype call can be placed onto an office wall, disappearing when the user looks away and returning when he looks back at it. A computerised calendar can be placed on the desk (or the ceiling, if you prefer). All this information can be seen without having to cut yourself off completely from the outside world, as a VR headset would require.

Some of the first demonstrations of the HoloLens involved games. In one, users blasted aliens that took cover behind their living-room sofas. In a second, they played with blocks from Minecraft, a sort of virtual Lego, on their living-room tables. More recent apps have focused on business and training. One such, developed in collaboration with Case Western Reserve University, in Cleveland, projects a human body into the room to help with the teaching of anatomy. A wave of the hands can add muscles to the skeleton, or bring the heart out of the chest to examine it more closely.

Augmenting the enterprise

The HoloLens can be used collaboratively, as well. Another demo has someone being instructed how to repair a light-switch by someone else, who is employing video-conferencing software in another room to do so. The guide can see what the HoloLens user sees, and can draw on top of his field of view—putting circles around objects of interest or highlighting the correct tool in a box. ThyssenKrupp, a German engineering firm, is experimenting with giving the devices to its lift repairmen. Should anyone encounter a particularly difficult job, he can call head office for specialist advice. Users can also connect to each other and see the same augmented reality (in true science-fiction style, other users appear as golden, androgynous, vaguely Art Deco-looking figures).

Aecom, an international firm of architects and engineers, is already using the HoloLens to help design buildings. Modern building projects can be very complicated, says John Endicott, one of Aecom's executive directors—to the point where even experienced designers have trouble keeping everything in their heads.

In 2016 the firm designed buildings around the Serpentine art gallery, in London. Mr Endicott observes that, "the roofs of these things had very complex geometry. We simply couldn't check it on a 2D screen, but the HoloLens let us all review it together." Trimble, an American engineering firm, helped Aecom develop the system. "We're also finding it has applications in everything from mining to agriculture to facilities management," says Aviad Almagor, the director of Trimble's "mixed reality" programme. "You can do things like track assets [such as miners, lorries or equipment] as they move round a 3D model of a mine, in real time."

The HoloLens is far from perfect, however. The AR magic happens in only a small slice of a user's view (some have likened it to looking in on the computer-generated world through a letterbox). Though the headset is light (weighing around 600g) and comfortable, it is bulky and not exactly fashionable. And using the gesture-tracking system to interact with the illusions the headset generates can feel clunky and awkward. It is not yet on general sale, but when it is (Microsoft has given no firm date) its price tag—also unknown, though the versions sold to software developers go for at least $3,000—is likely to make it a business-only proposition.

Microsoft is not the only firm working on advanced AR headsets. One rival is Meta, in San Mateo, California. Compared with Microsoft this firm is a tiddler, having raised only $73m in funding so far. But its engineers promise a much wider field of view than the HoloLens's. Microsoft's product can track a few hand gestures. Meta's is designed to keep a constant eye on exactly what a user's hands are up to, letting him "handle" virtual objects simply by picking them up and rotating them.

Another potential rival, Osterhout Design Group, in San Francisco, which makes AR glasses for industrial and medical companies, has announced two products aimed at individuals. Though less technically capable than the HoloLens, both are sleeker than their rival. Microsoft's best-known competitor in this area, though, is Magic Leap, a firm founded in Florida in 2010, which has attracted $1.4 billion in investment from companies such as Google and Ali Baba, China's biggest online retailer, as well as plenty of attention for its snazzy promotional videos. It has kept its technological cards close to its chest—to the point where some sceptics think that its technology has been oversold. But the demos it has released show images much clearer and crisper than those Microsoft can manage with the HoloLens.

Curb your enthusiasm

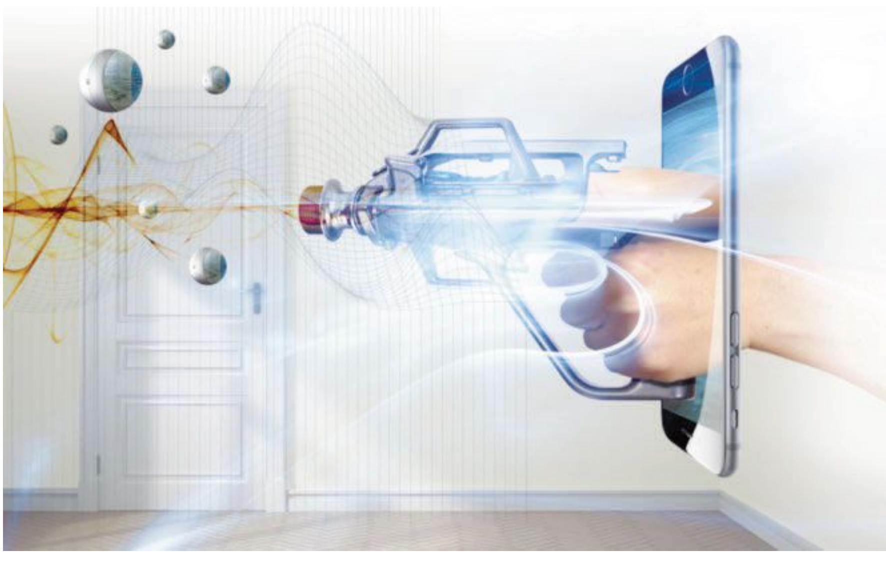
For all the hype, AR is still at an early stage, especially as a consumer technology. Forecasts of markets worth squillions by the end of the decade should be taken with a good deal of salt, especially since virtual reality, AR's close and even-more-hyped cousin, has so far proved a bit of a damp squib. No VR headset-maker has yet released official sales figures, but the numbers that have trickled out look modest.

In October 2016 Cher Wang, chairwoman of HTC, a Taiwanese consumer-electronics company, told 87870 News, a Chinese website, that her firm had sold 140,000 of its Vive headsets since their launch the previous April. (By way of comparison, Apple sells more than 870,000 iPhones a day.) In November SuperData, a market-research firm in New York, described VR as "the biggest loser" in the American shopping season around Thanksgiving, and cut its sales forecasts for Sony's PlayStation VR headset in 2016 from 2.6m to 750,000. Even among keen techies, enthusiasm for VR seems limited. A survey by Steam, an online shop that dominates the market for PC gaming, found that just 0.38% of its customers owned a VR headset in December, a number unchanged from the previous month.

If AR is not to go the same way, it will have to be made easier to use. That probably means consumer versions will be adapted for peoples' phones. As Tim Merel, Digi-Capital's boss, points out, phones are a known quantity that people are comfortable with. They have become, for many, their default computing device. Their existing app stores offer developers an easy way to sell software, and their business model—in which the cost of the hardware is often subsidised by network operators, who recoup this investment with fees and rental charges as they go along—could help draw some of the financial sting of the initial outlay a customer must make. On the other hand, a phone's screen is small and fiddly, and holding it up every time you want to use an AR app could become tedious.

Headsets such as the HoloLens offer a way around this problem. Those currently in development will cost thousands of dollars and look more than a little silly. For now, that will limit their uptake to companies, which can afford the hardware and are less worried about the aesthetics. But the hope is that the mix of sensors and computing power needed to run AR can be shrunk to the point where, as Mark Zuckerberg, Facebook's boss, put it at a show for developers last April: "we're going to have what look like normal-looking glasses that can do both virtual and augmented reality." Others want to go further still. Samsung and Apple, for instance, are exploring the idea of AR-enabled contact lenses.

For now, such devices remain far away. Those in the computing industry like to talk of an "iPhone moment", when a well-crafted product launches, almost single-handedly, a new phase of the computing revolution. But such moments are the culmination of years of research into, and development of, many different technologies. The iPhone was not the first smartphone. No self-respecting salaryman of the mid-2000s was without a BlackBerry, and the basic idea can trace its ancestry back at least as far as the hand-held personal digital assistants of the 1990s. None of the present approaches to AR seems likely to change the world as the iPhone did. But those behind them hope that, one day, a combination of them will. ■



Books and arts

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India

Conviction politicians

A penchant for criminality is an electoral asset in the world's biggest democracy

> **When Crime Pays: Money and Muscle in Indian Politics.** By Milan Vaishnav. *Yale University Press; 410 pages; $40. To be published in Britain in March; £25*

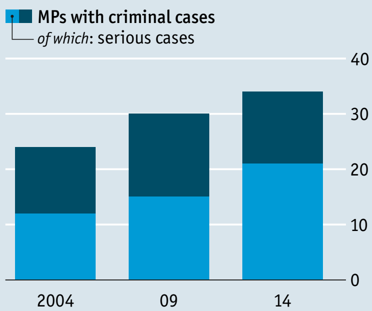
ALL politicians are crooks. At least, that is what a lot of people think in a lot of countries. One assumes it is a reproach. But not in India. Indian politicians who have been charged with or convicted of serious misdeeds are three times as likely to win parliamentary elections as those who have not. In "When Crime Pays: Money and Muscle in Indian Politics" Milan Vaishnav of the Carnegie Endowment for International Peace meticulously tracks the remarkable political success of India's accused murderers, blackmailers, thieves and kidnappers. Having been a symptom of India's dysfunctional politics, the felons are metastasising into its cause.

Sadly, this is not a book about some small, shady corner of Indian politics: 34% of the members of parliament (MPs) in the Lok Sabha (lower house) have criminal charges filed against them; and the figure is rising (see chart). Some of the raps are peccadillos, such as rioting or unlawful assembly—par for the course in India's raucous local politics. But over a fifth of MPs are in the dock for serious crimes, often facing reams of charges for anything from theft to intimidation and worse. (Because the Indian judicial system has a backlog of 31m cases, even serious crimes can take a decade or more to try, so few politicians have been convicted.) One can walk just about the whole way from Mumbai to Kolkata without stepping foot outside a constituency whose MP isn't facing a charge.

Mr Vaishnav dissects both the reasons why the goons want to get elected and why the electorate seems to be so fond of them. Their desire for office is relatively new. After independence in 1947 thugs used to bribe politicians to stay out of trouble and to secure lucrative state concessions such as mining rights. It helped that candidates from the dominant Congress party were sure to win a seat and then stay there. From the 1980s, as Congress started to fade as a political force, bribing its local representative became less of a sure thing for local crooks. So in the same way that a carmaker might start manufacturing its own tyres if it finds that outside suppliers are unreliable, Mr Vaishnav argues that the dons promoted themselves into holding office, thus providing their own political cover.

Charging on

India, share of Lok Sabha MPs with pending criminal cases, by election year, %



Source: Association for Democratic Reforms

What is more surprising is that the supply of willing criminals-cum-politicians was met with eager demand from voters. Over the past three general elections, a candidate with a rap sheet of serious charges has had an 18% chance of winning his or her race, compared with 6% for a "clean" rival. Mr Vaishnav dispels the conventional wisdom that crooks win because they can get voters to focus on caste or some other sectarian allegiance, thus overlooking their criminality. If anything, the more serious the charge, the bigger the electoral boost, as politicians well know.

As so often happens in India, poverty plays a part. India is almost unique in having adopted universal suffrage while it was still very poor. The upshot has been that underdeveloped institutions fail to deliver what citizens vote for. Getting the state to perform its most basic functions—building a school, disbursing a subsidy, repaving a road—is a job that can require banging a few heads together. Sometimes literally. Who better to represent needy constituents in these tricky situations than someone who "knows how to get things done"? If the system doesn't work for you, a thuggish MP can be a powerful ally.

Political parties, along with woefully inadequate campaign-finance rules, have helped the rise of the thug-candidate. Campaigns are hugely expensive. Voters need to be wooed with goodies—anything ▸▸

from hooch to jewels, bikes, bricks and straight-up cash will do. Criminals fill party coffers rather than drain them, and so are tolerated.

"When Crime Pays" can be grimly amusing. In 2008 government whips desperate to avoid parliamentary defeat sprung six MPs out of prison for a few days to get them to cast their votes, never mind the 100-odd cases of kidnapping, arson, murder and so on that the MPs faced between them. Some of the gangster-statesmen are straight out of Bollywood films. A fan of a local politician at one point explains that his man "is not a murderer. He merely manages murder." Spare a thought for the libel lawyers at Yale University Press, Mr Vaishnav's brave publisher.

If his book has a defect, it is that the author seeks only to answer the questions for which he has data. This academic diligence is laudable, but it narrows the scope of his survey to just one corner of India's political moral depths: there is precious little about corruption in office, for example, beyond pointing out that MPs leave office vastly richer than when they came in. Perhaps inevitably in a case where the problems are so deeply entrenched, the book offers few solutions.

But Mr Vaishnav does spell out the perils of India's elevation of lawbreakers to lawmakers. Constituencies represented by crooks suffer economically. A bigger cost is in the legitimacy of the public sphere as a whole when even MPs can flout the rule of law so brazenly. The prime minister, Narendra Modi, has pledged to clean up the system, for example by recently scrapping large-denomination bank notes, which he thinks contribute to corruption. One presumes that the 13 alleged lawbreaking MPs he appointed to his first cabinet (eight of them facing serious criminal charges) all supported the move. ■

Johnson | The giant shoulders of English

The advantages of a scholarly lingua franca should not mean abandoning all other languages

"EVERYONE who matters speaks English." So say many in Britain and America. In fact, a lot of people do not. But in some domains, this crude approximation is true: in globalised enterprises the world's single scholarly language is increasingly indispensable. Among those global enterprises is science, in which more and more work is being done in English. This is not always good.

A scientific lingua franca has advantages. A few moments imagining scientists toiling away in different countries unaware of each other's successes and failures is enough to show that. For centuries, Latin allowed the Copernicuses, Keplers and Newtons of Europe to stand, in Newton's words, "on the shoulders of giants" who had preceded them. With the rise of European vernaculars as "serious" languages, an educated person was expected to read several; German was a leading language of science.

Now, non-Anglophone scientists learn English; English-speaking scientists hardly bother with other languages at all. The rise in perceived need for more STEM subjects (science, technology, engineering and maths) has made schools squeeze anything that looks dispensable, and in the English-speaking world that includes foreign languages. Legislators in Florida have even proposed letting schoolchildren learn a computer language to satisfy schools' foreign-language requirements.

Three scientists have raised an alarm about English-only science in a paper in PLOS *Biology*, a journal. Tatsuya Amano, Juan González-Varo and William Sutherland looked at fields where local knowledge matters, such as ecology and conservation. They found that 64.4% of papers on Google Scholar mentioning "conservation" or "biodiversity" were in English. The second most common language, Spanish, was far behind, with 12.6%.

Monolingual ghettos are bad for science. In 2004, work on the transfer of H5N1 flu from birds to pigs languished unread in Chinese while critical time was lost. In the study's sample, only half of Spanish-language papers and a third of those in Japanese even had abstracts in English. Those that did, unsurprisingly, were more likely to be published in prestigious, peer-reviewed journals. But the bird-flu case shows that that hardly includes all the science that matters. Some good scientists still can't write in English.

The solution is not to replace English, but to encourage multilingualism wherever practical, and require it when needed. This can be an advantage for non-native English-speakers. Studies have shown that writing and thinking in a second language can encourage a deliberate mode of thinking. Working in your native language encourages the fluid kind. A bilingual person can have the best of both.

Multilingualism is needed in other ways. In disciplines including psychology, biology and medicine, university-based researchers will work with subjects (patients, for example) and data-gatherers (say, remote experts in local flora and fauna) in other languages. The bilingual scientist who can later write all this up in English has a competitive advantage.

More and more young scientists will speak English as a matter of course. They should ensure that clear English abstracts and keywords from their papers are available; this may be more important than the original abstract itself. But Anglophone scholars and institutions can also play a role. Where work is of particular importance to a particular country or region, they too should make sure that abstracts and keywords are available in relevant languages. Groups of scholars can share the cost of full high-quality translations.

Changing practices takes time. Until then, some technological tools can help. Machine translation (MT) has improved in recent years. And specialised MT systems—say, those designed specifically to handle texts in a field like ecology—are far more accurate than general systems that are designed for all kinds of text (like those that are free online). Building such systems is getting cheaper and easier. If scientists could support the development of such MT systems for their fields, they could increasingly get usable gists of abstracts instantly, and find out which work might be worth full translation.

The alternative is a future in which all work is done in English. In such a world, other languages would fail to develop the kinds of technical vocabulary and expressions needed for science. They would be used socially and at home, but not for serious work. That would be a shame.

Statistics

Nullius in verba

A Field Guide to Lies and Statistics. By Daniel Levitin. *Dutton; 292 pages; $28. Viking; £14.99*

PEOPLE take in five times as much information each day as they did in the mid-1980s. With all these data sloshing around it is easy to feel lost. One politician uses a statistic to back up her argument; a newspaper uses another fact to refute it; an economist uses a third to prove them both wrong. In "A Field Guide to Lies and Statistics" Daniel Levitin, an American neuroscientist, shows the reader how to find a way through all this numerical confusion.

A book about statistics can easily be boring. Fortunately, Mr Levitin is the perfect guide. Before becoming an academic he used to work as a stand-up comedian. Drawing on those skills Mr Levitin peppers his book with wisecracks. He uses the phrase "on average, humans have one testicle" to make the point that the mean can be a misleading description of a population. He goes off on interesting tangents, granting the reader some light relief from detailed analysis of sampling and probabilities. Only occasionally is his hokey style annoying.

Using plenty of examples, Mr Levitin shows how easily statistics can lead people astray. Take the following assertion, which on a quick skim might seem perfectly reasonable: "In the 35 years since marijuana laws stopped being enforced in California, the number of marijuana smokers has doubled every year." One will soon realise that this must be nonsense; even with only one smoker to begin with, after doubling every year for 35 years there would be more than 17bn of them. Mr Levitin repeatedly throws these statistical curveballs at his readers, training them to adopt a take-nobody's-word-for-it attitude. It is an effective pedagogical technique.

Smoking out the potheads

Some statistics turn out to be plain wrong, but more commonly they mislead. Yet this is hard to spot: numbers appear objective and apolitical. A favourite of academics and journalists, when analysing trends, is to "rebase" their figures to 100 so as to back up the argument that they wish to make. For instance, starting a chart of American GDP growth in 2009, when the country was in recession, tricks the reader into thinking that over the long term the economy is stronger than it really is. "[K]eep in mind that experts can be biased without even realising it," Mr Levitin reminds people.

A basic understanding of statistical theory helps the reader cope with the onslaught of information. Mr Levitin patiently explains the difference between a percentage change and a percentage-point change, a common source of confusion. When a journalist describes a statistical result as "significant", this rarely carries the same meaning as when a statistician says it. The journalist may mean that the fact is interesting. The statistician usually means that there is a 95% probability that the result has not occurred by chance. (Whether it is interesting or not is another matter.)

Some readers may find Mr Levitin's book worthy but naive. The problem with certain populist politicians is not that they mislabel an x-axis here or fail to specify a control group there. Rather they deliberately promulgate blatant lies which play to voters' irrationalities and insecurities. Yet if everyone could adopt the level of healthy statistical scepticism that Mr Levitin would like, political debate would be in much better shape. This book is an indispensable trainer. ■

The law in America

Whose rules, whose law

A book on law professors illuminates the bitterly contested ideas behind the fight for the Supreme Court and the founding principles of America

Law Professors: Three Centuries of Shaping American Law. By Stephen B. Presser. *West Academic Publishing; 486 pages; $48*

CONTROVERSY is raging over Donald Trump's decision to appoint Neil Gorsuch to the Supreme Court. Within hours, accusations were being made about the candidate's political affiliations, about whether he is in the legal mainstream and whether he could protect the "enshrined rights of all Americans".

The idea of "rights", "mainstream" and even the role of the Supreme Court in determining these are not as enshrined as advocates of various positions contend. They never have been. Many ideas abound about the role of the court within America's political system, the principles it should uphold and even the definition of a ubiquitous term, "rule of law". Some of these debates trace their roots back to the early 18th century, before America was even established.

If the fight has become more heated, it is because the authority of the judiciary in America, notably its ability "to legislate"—to expand the reach of law and find new, unstated (and possibly unintended) rights—has been a pivotal feature of politics since the 1950s. "Law Professors: Three Centuries of Shaping American Law", a well-timed book by Stephen Presser, a professor at Northwestern University, traces how this emerged.

The book is organised around the intellectual biographies of 29 individuals, including one Barack Obama, who spent 12 years as a senior lecturer at the University of Chicago before taking an eight-year tour as America's president. "There is no country on Earth in which law professors have played a more prominent role," writes Mr Presser, a statement that neither lawyers nor politicians in any camp would dispute.

The natural audience for this book is academics, members of the bar and law students. For these last in particular, it may become essential reading. Law professors like putting their students through the hoops by asking them bewildering questions; Mr Presser's book does a good job of distilling what is actually being taught. Given the timing of the book, though, its greatest value may lie in the way it explains why potential candidates are so often described, by different interested parties, as being ignorant, bigots or temperamentally unsuited to the task at hand.

"Our two major political parties now understand the rule of law very differently," Mr Presser writes. Should it be based on precedent and written statutes (basically the Republican approach) or should it be ▸▸

discretionary and allowed to incorporate values and external information (the Democrats' view). Within this schism is a struggle over whether the judiciary's role is to enforce laws as they were written or to see law as a flexible instrument to achieve objectives, many of which are passionately supported—and passionately opposed.

That law professors became pivotal players in this drama was never inevitable. As in Britain, in America's earliest days legal training came through apprenticeships. This was augmented by a few intellectually ambitious outside authorities who found their way to universities. One of the earliest law professors, Joseph Story, simultaneously taught at Harvard, served as a justice on the Supreme Court, wrote treatises instructing judges and lawyers on the law and ran a bank (which may have been perceived at the time as an added benefit rather than a conflict of interest).

In his spare time, Story hosted Alexis de Tocqueville during his trip to America, and is thought to have been a key influence in de Tocqueville's assertion that lawyers served as America's aristocracy, and "constitute a sort of privileged body in the scale of intellect", who serve as "the most powerful existing security against the excesses of democracy". These lines are often repeated—less so a subsequent passage, noting that beyond their virtues, they, "like most other men, are governed by their private interests, and especially by the interests of the moment".

These three sentiments: that the study of the law is the preserve of lawyers, who are the intellectual elite; that they serve as a deterrent against the failures of democracy; and that they may be compromised, if not flawed, in their approach, are dominant themes throughout Mr Presser's book. In practice, Story was one of many prominent Americans who tried to distil law from cases that were largely but not exclusively British, reflecting differences such as lack of a monarchy. Although this was a formidable task, it was limited to determining what were, in fact, the rules of law.

The pedagogical approach was formalised in the late 19th century by Christopher Columbus Langdell, a dean of Harvard Law School, who developed what became the practice of deciphering a vast number of appellate decisions to understand what were perceived to be scientific principles and logic. But even as this approach to legal training became common, intellectually the fact that the law could be discerned through its history was never entirely satisfactory to its most ambitious practitioners. In response to a casebook on contracts compiled by Langdell, Oliver Wendell Holmes, yet another professor at Harvard Law School and a Supreme Court justice, wrote, "The Life of the Law is not logic, but experience." Even if the same rules were invoked, over time they served different purposes, in Holmes's view.

Mot juste

It is this premise of a flexible law that became the animating force in law schools and ultimately in American courts and policy, largely through a series of movements that Mr Presser describes with as much precision as this somewhat murky procession allows. Among the most important was "legal realism", which, as Holmes's statement suggests, examined what judges actually did, rather than the rules of law, and encouraged them to incorporate research from social sciences in making their decisions. This was adopted by the Supreme Court under Earl Warren after the second world war and played a huge factor in many of its most notable decisions, including *Brown v Board of Education* in 1954, which concluded that segregation was unconstitutional, not because of segregation itself but rather because of testimony drawn from research about the psychological harm that segregation imposed.

The notion of the court as a mechanism for going beyond statutes and past decisions to define justice opened up a wide field of study in the latter half of the 20th century. Among the many professors to shape the judicial system during that time were Ronald Dworkin, a professor at New York University and Oxford, who argued that law must be debated on the basis of moral concepts rather than rules; Richard Posner, a senior lecturer at the University of Chicago and a federal judge, who has been called the single most cited legal authority largely because of his development of cost-benefit analysis; and, conversely, Cass Sunstein, also of Chicago, then Harvard, then the Obama administration, who concluded that the failure of people to act rationally justifies judicial and governmental intervention.

Mr Obama too spent many years at Chicago, but Mr Presser writes that his views were established while he was a student at Harvard when another movement, "critical legal studies", was popular. It argued that the law was malleable—a political instrument that had been misused by the powerful in the past and should be reinterpreted to empower the disenfranchised.

The great figure who opposed this approach was Antonin Scalia, who left the Chicago faculty to be a federal appeals court judge then a Supreme Court justice, and whose death almost exactly a year ago created the current opening.

As Mr Presser writes, Scalia believed the law and constitution should be followed by interpreting both as they were understood at the time they were enacted rather than stretched by unelected judges, since original intent was the best means of implementing the will of the people. Change should come through popular votes and the laws enacted by elected legislators. This approach, more than any particular issue, is a fundamental challenge to an expansive court, presidency and even, perhaps, to the aristocratic position that de Tocqueville discerned in the law. As Mr Presser shows, it is a challenge that resonated in unlikely candidates in the past, notably Felix Frankfurter, a Harvard professor, architect of Franklin Roosevelt's New Deal and a Supreme Court justice, who revealed in his opinions concerns about pushing the boundaries of law too far.

Mr Presser's book does not always make for easy reading, but the ideas that he has gathered together, all of them put forward by intelligent people, are complex. America is consumed by serious legal debates about issues, what the law says, what people think the law should say—and whether that is law. This may be the book that comes closest to spelling out what is really being argued. ■

Economic and financial indicators

Economic data

% change on year ago

	Gross domestic product latest	qtr*	2016†	Industrial production latest	Consumer prices latest	2016†	Unemployment rate, %	Current-account balance latest 12 months, $bn	% of GDP 2016†	Budget balance % of GDP 2016†	Interest rates, % 10-year gov't bonds, latest	Currency units, per $ Feb 1st	year ago
United States	+1.9 Q4	+1.9	+1.6	+0.5 Dec	+2.1 Dec	+1.4	4.7 Dec	-476.5 Q3	-2.6	-3.2	2.50	-	-
China	+6.8 Q4	+7.0	+6.7	+6.0 Dec	+2.1 Dec	+2.0	4.0 Q4§	+264.6 Q3	+2.3	-3.8	3.04§§	6.88	6.58
Japan	+1.1 Q3	+1.3	+0.9	+3.0 Dec	+0.3 Dec	-0.2	3.1 Dec	+189.1 Nov	+3.7	-5.5	0.08	113	121
Britain	+2.2 Q4	+2.4	+2.0	+1.9 Nov	+1.6 Dec	+0.7	4.8 Oct††	-138.1 Q3	-5.6	-3.7	1.48	0.79	0.70
Canada	+1.3 Q3	+3.5	+1.2	+1.5 Nov	+1.5 Dec	+1.5	6.9 Dec	-53.6 Q3	-3.5	-2.4	1.76	1.31	1.40
Euro area	+1.8 Q4	+2.0	+1.6	+3.2 Nov	+1.8 Jan	+0.3	9.6 Dec	+394.6 Nov	+3.3	-1.8	0.47	0.93	0.92
Austria	+1.2 Q3	+2.4	+1.5	+2.3 Nov	+1.4 Dec	+1.0	5.7 Dec	+8.0 Q3	+2.2	-0.9	0.70	0.93	0.92
Belgium	+1.1 Q4	+1.6	+1.2	+0.4 Nov	+2.6 Jan	+1.9	7.6 Dec	+3.4 Sep	+0.9	-3.0	0.88	0.93	0.92
France	+1.1 Q4	+1.7	+1.2	+1.8 Nov	+1.4 Jan	+0.3	9.6 Dec	-28.6 Nov‡	-1.2	-3.3	1.04	0.93	0.92
Germany	+1.7 Q3	+0.8	+1.8	+2.1 Nov	+1.9 Jan	+0.4	5.9 Jan	+296.9 Nov	+8.8	+1.0	0.47	0.93	0.92
Greece	+1.6 Q3	+3.1	+0.4	+2.3 Nov	nil Dec	nil	23.0 Oct	-1.0 Nov	-0.3	-7.7	7.64	0.93	0.92
Italy	+1.0 Q3	+1.0	+0.9	+3.2 Nov	+0.5 Dec	-0.1	12.0 Dec	+50.9 Nov	+2.4	-2.6	2.32	0.93	0.92
Netherlands	+2.4 Q3	+3.1	+2.1	+2.9 Nov	+1.0 Dec	+0.2	6.4 Dec	+57.1 Q3	+8.6	-1.1	0.58	0.93	0.92
Spain	+3.0 Q4	+2.8	+3.2	+4.6 Nov	+3.0 Jan	-0.3	18.4 Dec	+24.3 Nov	+1.7	-4.6	1.67	0.93	0.92
Czech Republic	+1.6 Q3	+0.9	+2.4	+7.1 Nov	+2.0 Dec	+0.7	5.2 Dec§	+3.7 Q3	+1.7	nil	0.49	25.1	24.8
Denmark	+1.1 Q3	+1.5	+1.0	+13.3 Nov	+0.5 Dec	+0.6	4.3 Dec	+23.9 Nov	+7.5	-1.4	0.51	6.91	6.85
Norway	-0.9 Q3	-1.9	+0.6	+2.6 Nov	+3.5 Dec	+3.5	4.7 Nov‡‡	+18.0 Q3	+4.4	+3.5	1.81	8.25	8.70
Poland	+2.0 Q3	+0.8	+2.6	+2.4 Dec	+0.8 Dec	-0.7	8.3 Dec§	-3.1 Nov	-0.5	-2.4	3.87	4.01	4.03
Russia	-0.4 Q3	na	-0.5	+3.0 Dec	+5.4 Dec	+7.0	5.3 Dec§	+22.2 Q4	+2.3	-3.6	8.32	60.2	76.6
Sweden	+2.8 Q3	+2.0	+3.1	+0.1 Nov	+1.7 Dec	+1.0	6.5 Dec§	+22.2 Q3	+4.9	-0.3	0.74	8.76	8.53
Switzerland	+1.3 Q3	+0.2	+1.4	+0.4 Q3	nil Dec	-0.5	3.3 Dec	+68.2 Q3	+9.4	+0.2	-0.05	0.99	1.02
Turkey	-1.8 Q3	na	+2.7	+4.6 Nov	+8.5 Dec	+7.8	11.8 Oct§	-33.7 Nov	-4.7	-1.1	10.93	3.78	2.95
Australia	+1.8 Q3	-1.9	+2.4	-0.2 Q3	+1.5 Q4	+1.3	5.8 Dec	-47.9 Q3	-3.2	-2.3	2.74	1.32	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	1.94	7.76	7.78
India	+7.3 Q3	+8.3	+7.0	+5.7 Nov	+3.4 Dec	+4.9	5.0 2015	-11.1 Q3	-0.6	-3.8	6.43	67.5	67.8
Indonesia	+5.0 Q3	na	+5.0	-2.3 Nov	+3.5 Jan	+3.5	5.6 Q3§	-19.2 Q3	-2.1	-2.3	7.54	13,373	13,638
Malaysia	+4.3 Q3	na	+4.3	+6.2 Nov	+1.8 Dec	+2.1	3.4 Nov§	+5.6 Q3	+1.7	-3.4	4.16	4.43	4.16
Pakistan	+5.7 2016**	na	+5.7	+7.8 Nov	+3.7 Jan	+3.8	5.9 2015	-5.0 Q4	-1.4	-4.6	7.59†††	105	105
Philippines	+6.6 Q4	+7.0	+6.9	+14.6 Nov	+2.6 Dec	+1.8	4.7 Q4§	+3.1 Sep	+0.9	-2.3	4.30	49.8	47.7
Singapore	+1.1 Q3	+9.1	+1.8	+21.3 Dec	+0.2 Dec	-0.5	2.2 Q4	+63.0 Q3	+22.5	+0.7	2.30	1.42	1.42
South Korea	+2.3 Q4	+1.6	+2.7	+4.3 Dec	+2.0 Jan	+1.0	3.2 Dec§	+99.0 Nov	+7.2	-1.6	2.17	1,158	1,201
Taiwan	+2.6 Q4	+1.9	+1.1	+6.2 Dec	+1.7 Dec	+1.4	3.8 Dec	+74.7 Q3	+13.0	-0.4	1.20	31.4	33.4
Thailand	+3.2 Q3	+2.2	+3.2	+0.5 Dec	+1.6 Jan	+0.2	0.8 Dec§	+46.4 Q4	+11.8	-2.3	2.68	35.1	35.6
Argentina	-3.8 Q3	-0.9	-2.1	-2.5 Oct	— ***	—	8.5 Q3§	-15.7 Q3	-2.6	-4.7	na	15.8	14.1
Brazil	-2.9 Q3	-3.3	-3.4	nil Dec	+6.3 Dec	+8.4	12.0 Dec§	-23.5 Dec	-1.2	-6.3	10.62	3.15	3.98
Chile	+1.6 Q3	+2.5	+1.7	+0.3 Dec	+2.7 Dec	+3.8	6.1 Dec§‡‡	-4.8 Q3	-1.6	-2.8	4.19	646	712
Colombia	+1.2 Q3	+1.3	+1.6	+1.6 Nov	+5.7 Dec	+7.5	8.7 Dec§	-13.7 Q3	-4.8	-3.7	6.89	2,908	3,331
Mexico	+2.0 Q3	+4.0	+2.1	+1.3 Nov	+3.4 Dec	+2.9	3.7 Dec	-30.6 Q3	-2.8	-3.0	7.44	20.8	18.3
Venezuela	-8.8 Q4~	-6.2	-13.7	na	na	+424	7.3 Apr§	-17.8 Q3~	-2.9	-24.3	10.43	10.0	6.31
Egypt	+4.5 Q2	na	+4.3	-1.2 Nov	+23.3 Dec	+13.8	12.6 Q3§	-20.8 Q3	-6.9	-12.2	na	18.8	7.83
Israel	+5.2 Q3	+3.6	+3.5	-4.5 Nov	-0.2 Dec	-0.5	4.3 Dec	+13.3 Q3	+3.3	-2.2	2.40	3.78	3.96
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	+0.5 Nov	+6.8 Dec	+6.3	27.1 Q3§	-12.3 Q3	-3.9	-3.4	8.87	13.4	16.0

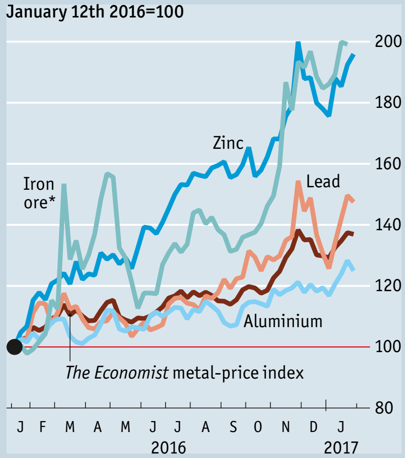
Source: Haver Analytics. *% change on previous quarter, annual rate. †*The Economist* poll or Economist Intelligence Unit estimate/forecast. §Not seasonally adjusted. ‡New series. ~2014 **Year ending June. ††Latest 3 months. ‡‡3-month moving average. §§5-year yield. ***Official number not yet proved to be reliable; The State Street PriceStats Inflation Index, Nov 35.38%; year ago 25.30% †††Dollar-denominated bonds.

Markets

	Index Feb 1st	one week	% change on Dec 31st 2015 in local currency	in $ terms
United States (DJIA)	19,890.9	-0.9	+14.2	+14.2
China (SSEA)	3,308.1	+0.3	-10.7	-15.7
Japan (Nikkei 225)	19,148.1	+0.5	+0.6	+6.6
Britain (FTSE 100)	7,107.7	-0.8	+13.9	-2.3
Canada (S&P TSX)	15,402.4	-1.5	+18.4	+25.7
Euro area (FTSE Euro 100)	1,103.5	-2.0	+0.8	-0.1
Euro area (EURO STOXX 50)	3,258.9	-2.0	-0.3	-1.2
Austria (ATX)	2,727.7	-0.4	+13.8	+12.7
Belgium (Bel 20)	3,575.2	-0.8	-3.4	-4.3
France (CAC 40)	4,794.6	-1.7	+3.4	+2.4
Germany (DAX)*	11,659.5	-1.2	+8.5	+7.5
Greece (Athex Comp)	619.1	-6.1	-1.9	-2.9
Italy (FTSE/MIB)	18,740.7	-4.3	-12.5	-13.3
Netherlands (AEX)	479.7	-1.7	+8.6	+7.5
Spain (Madrid SE)	944.1	-2.2	-2.2	-3.1
Czech Republic (PX)	938.2	nil	-1.9	-2.8
Denmark (OMXCB)	823.8	+2.2	-9.1	-9.7
Hungary (BUX)	32,584.2	-0.7	+36.2	+37.4
Norway (OSEAX)	779.0	-1.3	+20.0	+28.7
Poland (WIG)	55,651.8	+0.3	+19.8	+17.8
Russia (RTS, $ terms)	1,167.5	+0.7	+54.2	+54.2
Sweden (OMXS30)	1,547.3	+0.1	+6.9	+2.9
Switzerland (SMI)	8,329.2	-0.7	-5.5	-4.7
Turkey (BIST)	86,847.9	+4.5	+21.1	-6.6
Australia (All Ord.)	5,704.0	-0.4	+6.7	+11.2
Hong Kong (Hang Seng)	23,318.4	+1.2	+6.4	+6.3
India (BSE)	28,141.6	+1.6	+7.7	+5.5
Indonesia (JSX)	5,327.2	+0.6	+16.0	+19.6
Malaysia (KLSE)	1,671.5	-0.7	-1.2	-4.3
Pakistan (KSE)	49,455.9	-0.6	+50.7	+50.6
Singapore (STI)	3,067.5	+0.9	+6.4	+6.6
South Korea (KOSPI)	2,080.5	+0.7	+6.1	+7.4
Taiwan (TWI)	9,448.0	nil	+13.3	+18.7
Thailand (SET)	1,576.3	-0.5	+22.4	+25.4
Argentina (MERV)	19,200.8	-1.1	+64.5	+34.7
Brazil (BVSP)	64,836.1	-1.5	+49.6	+87.6
Chile (IGPA)	21,007.6	-2.0	+15.7	+26.9
Colombia (IGBC)	10,142.8	-0.6	+18.7	+29.5
Mexico (IPC)	47,009.5	-2.6	+9.4	-9.1
Venezuela (IBC)	28,109.7	-0.8	+92.7	na
Egypt (EGX 30)	12,584.3	-2.3	+79.6	-25.8
Israel (TA-100)	1,254.1	+0.5	-4.6	-1.8
Saudi Arabia (Tadawul)	7,100.9	-0.4	+2.7	+2.8
South Africa (JSE AS)	53,104.1	-0.3	+4.8	+20.8

Metal prices

The Economist's metal-price index has risen by 37% over the past 12 months. China, which accounts for over half of global metal consumption, increased infrastructure spending to ensure it reached its target GDP growth rate; that pushed up industrial-metal prices. Chinese production cuts designed to reduce excess capacity also buoyed the prices of iron ore and of aluminium, which makes up 42% of our index. Zinc and lead prices have risen partly because of the closure of large mines in Australia, Canada and Ireland. Anticipation of a construction boom in America has also provided a boost. Prices may not have reached their peak. The World Bank predicts they will rise by 11% this year.



Sources: *The Economist*; Bloomberg
*Not in *The Economist* commodity-price index

Other markets

	Index Feb 1st	one week	% change on Dec 31st 2015 in local currency	in $ terms
United States (S&P 500)	2,279.6	-0.8	+11.5	+11.5
United States (NAScomp)	5,642.7	-0.2	+12.7	+12.7
China (SSEB, $ terms)	338.5	nil	-20.6	-20.6
Japan (Topix)	1,527.8	+0.4	-1.3	+4.7
Europe (FTSEurofirst 300)	1,433.1	-1.0	-0.3	-1.3
World, dev'd (MSCI)	1,793.4	-0.7	+7.9	+7.9
Emerging markets (MSCI)	913.0	+0.1	+15.0	+15.0
World, all (MSCI)	433.5	-0.6	+8.6	+8.6
World bonds (Citigroup)	888.3	-0.1	+2.1	+2.1
EMBI+ (JPMorgan)	784.1	+0.3	+11.3	+11.3
Hedge funds (HFRX)	1,209.5§	-0.3	+3.0	+3.0
Volatility, US (VIX)	11.8	+10.8	+18.2	(levels)
CDSs, Eur (iTRAXX)†	73.6	+7.7	-4.6	-5.5
CDSs, N Am (CDX)†	65.8	+3.2	-25.5	-25.5
Carbon trading (EU ETS) €	5.3	+1.7	-36.9	-37.5

Sources: Markit; Thomson Reuters. *Total return index.
†Credit-default-swap spreads, basis points. §Jan 31st.

Indicators for more countries and additional series, go to: **Economist.com/indicators**

The Economist commodity-price index

2005=100

	Jan 24th	Jan 31st*	% change on one month	one year
Dollar Index				
All Items	149.8	148.8	+4.9	+18.8
Food	162.9	160.2	+3.5	+9.7
Industrials				
All	136.2	136.9	+6.6	+32.0
Nfa†	145.5	149.0	+7.9	+39.4
Metals	132.3	131.8	+6.0	+28.6
Sterling Index				
All items	218.2	215.1	+2.0	+35.7
Euro Index				
All items	173.4	171.2	+0.8	+19.8
Gold				
$ per oz	1,213.2	1,211.5	+4.8	+7.5
West Texas Intermediate				
$ per barrel	52.6	52.8	+0.9	+76.2

Sources: Bloomberg; CME Group; Cotlook; Darmenn & Curl; FT; ICCO; ICO; ISO; Live Rice Index; LME; NZ Wool Services; Thompson Lloyd & Ewart; Thomson Reuters; Urner Barry; WSJ. *Provisional
†Non-food agriculturals.

His money or his art?

James Stephen George Boggs, artist and trickster, was found dead on January 23rd, aged 62

A HAMBURGER and Coke with Steve Boggs was a disconcerting event. To begin with he preferred to be called "Boggs", just straight. He also had a way of opening his eyes a little wider than normal, giving his thin face an unnerving, even devilish look. And then, when the eating was done and the bill came, he would take out his wallet, unfold the notes, and put one on the table in a way that portended something profound and strange.

At first glance, the note would look normal. It was not. The portrait on it might be of Mr Boggs himself, or Martha Washington instead of George. The bank name might be "Federal Reserve Not", or "Bank of Bohemia". The plate serial number might be "EMC2" or "LSD". All this delicate copying and subverting had taken up to ten hours of Mr Boggs's time, working on special paper with the finest-tip green and black pens. (He later shifted to limited-edition prints, a little speedier.) The result was now proffered to pay for his food.

To the bemused waitress, he would politely explain that he was an artist. He could pay her with official money if she wanted. But he believed in producing something beautiful; and having spent so much time on this drawing of money, wasn't it worth the value it declared?

Nine out of ten times, the offer was refused. If it was accepted, Mr Boggs would note down time and place on the blank back of the drawing, ask for a receipt and take any change he was "owed". After a day, he would call one of many avid collectors of his works; he would sell the collector, at a roughly fivefold mark-up, the receipt and change; and from those clues the collector, if he wished to buy the drawing, would have to track down the new owner. Receipt, change and drawn note, when reunited, became joint proof of the drawing's value, confirmed by the transaction; and would then change hands, typically, for tens of thousands of dollars.

This elaborate charade ensured that Mr Boggs never sold his drawings. He "spent" them at "face value" in exchange for goods and services, cheekily challenging the value ascribed to money. The inspiration dated from 1984, when a waitress in Chicago accepted his sketch of a dollar bill on a napkin for a doughnut and a coffee. She even gave him a dime in change, which he kept as a lucky charm. After that, wherever he was in the world, he drew the local currency and threw down his challenge.

Early on he struggled, unwashed, hungry and heavily in debt. But by 1999 his drawings had paid for more than $1m-worth of goods, including rent, clothes, hotels and a brand-new Yamaha motorbike. He thanked the Swiss, who discovered him in 1986 and were often delighted to accept original art rather than "real" money.

He was cautious, however, about dealing with anyone he already knew. He preferred to offer his exchange to people who had never heard of him, even though they might just scrumple his precious note into a pocket. And his main aim was to raise disquieting questions about the notion of exchange itself. What was money really worth? What supported a dollar bill, other than faith? Was the value of anything just subjective? When salesmen told him they didn't accept art, he would point out the beauty of official notes, with their scrolls and arrow-clutching eagles. When shopkeepers demanded only "real" money, he might launch into the non-reality of time and space, too. To his long-time tracker and biographer, Lawrence Weschler, he was "just short of being a con man—but no more so than anyone else in the art world, or for that matter in the world of finance—which, of course, is the whole point."

Feat counterfeit

A simpler view was taken by the authorities. This looked like counterfeiting to them. In Britain, where he lived for several years, he was arrested and put on trial at the Old Bailey for "reproducing" the currency. He argued back that it was the "real" notes that were reproductions: his drawings were originals, never meant to be the real thing. He was acquitted, as he was when he faced similar charges in Australia.

America, though, hardly knew how to deal with him. In 1992 he had a madcap idea to flood Pittsburgh, where he lived then, with $1m in Boggs Bills, and see if they could get through five transactions (handlers would put thumbprints on the back). The Secret Service warned the city and raided his studio, seizing more than 1,000 pieces of work. They never returned them. The courts solemnly debated whether the drawings were closer to pornography—which might be censored, but also allowed as free speech—or evil non-returnable contraband, like drugs.

Mr Boggs's career was blighted by fruitless appeals to try and get them back. His legal costs mounted. At his Old Bailey trial he had paid his lawyer with drawings for his services. He now started on a series of $1,000 Boggs Bills sporting a portrait of him by Thomas Hipschen, America's chief engraver of banknotes (itself happily exchanged for a Boggs Bill), to cover a hearing in the Supreme Court, if he could get one. But he was also venturing closer to the edge, toting guns and using methamphetamines, and died before he had got that far.

His art remained on the walls of America's finest museums and of galleries all over Europe. His questions remained, too, evading easy answers. ■