

STAR WARS, DISNEY AND MYTH-MAKING

The Economist

DECEMBER 19TH 2015–JANUARY 1ST 2016

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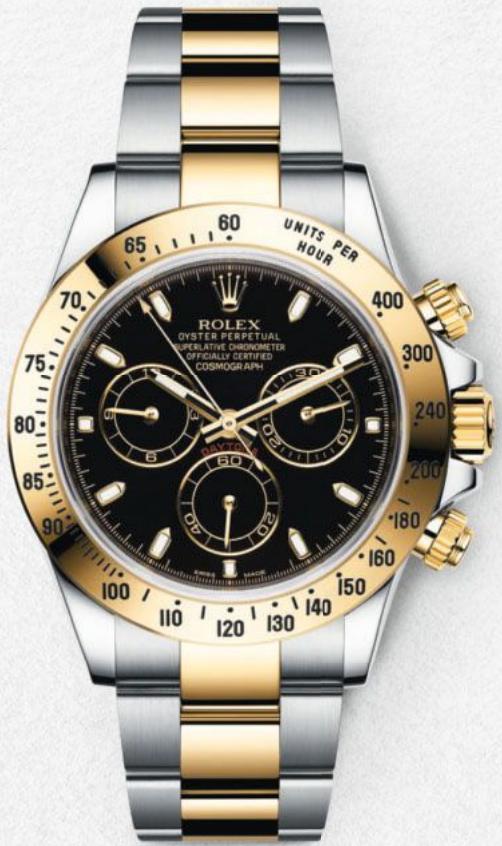
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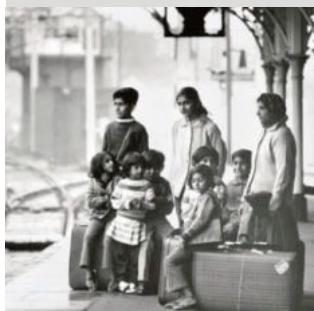
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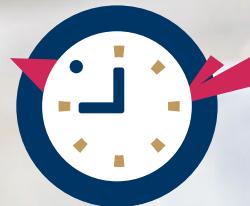




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Islamic State extended its bloody reach far beyond its base in Iraq and Syria. The group's barbarity was unrelenting. Gruesome propaganda included the burning alive in a cage of a Jordanian pilot whom is had captured, the beheading of 21 Egyptian Coptic Christians in Libya and the murder of the 82-year-old head of antiquities at Palmyra, a heritage site in Syria that was looted by is.

Western governments felt compelled to counter the threat, especially after is claimed responsibility for an assault on **Paris** in which gunmen mowed down people in restaurants and bars and at a rock concert, killing 130 and injuring hundreds. President François Hollande declared that France was at war with is.

After claiming that a Russian airliner had been bombed by is affiliates in **Egypt**, Russia sent fighter jets to Syria, ostensibly to bomb is. Most of its firepower, however, was directed at other opponents of the **Syrian despot**, Bashar al-Assad, a client of Vladimir Putin. In **California** 14 people were killed by a married couple inspired by is. In December Barack Obama claimed that the American-led coalition was hitting is hard, curtailing its operations in Iraq and Syria.

Turkey also entered the fray, after a student gathering was bombed in a town near the Syrian border. But Turkey also targeted the Kurdish **PKK**. Suicide-bombers in Ankara attacked a peace rally that called for an end to Turkey's actions against the Kurds, killing 102 people. The chaos only strengthened the hand of the ruling Justice and Devel-

opment party, which won an election in November.

Je suis Charlie

Other **atrocities** committed by jihadists included the killing of 148 people at Garissa University in **Kenya**, which the Shabab in next-door Somalia said it had carried out. A lone gunman slaughtered 38 tourists, most British, on a beach in **Tunisia**; three months earlier 22 people were killed at a museum in Tunis. In early January gunmen stormed the offices of **Charlie Hebdo** in Paris, killing 12. That attack prompted millions to protest worldwide in defence of free speech. But in some Muslim countries mass rallies were held denouncing the magazine for publishing cartoons of Muhammad the Prophet.

Around half of the hundreds of thousands of people who streamed into Europe in the continent's worst **refugee crisis** since the Balkan wars came from Syria. The image of a three-year-old Syrian boy found drowned on a Turkish beach caused widespread outrage. Several summits were held to try to resolve the crisis. Germany threw open its borders and is on course to accept more than 1m asylum-seekers this year.



China's stockmarkets plunged during the summer, sending out global ripples. China's ham-fisted attempts to stop the sell-off, such as directing large state investors ("the national team") to buy shares, did nothing to calm nerves. Nor did a sudden devaluation of the yuan. The whole episode raised perturbing questions about the state of China's slowing economy and the competence of its regulators.

The total value of announced **takeovers** in 2015 passed \$4.3 trillion, breaking a record set in 2007. Pfizer's \$160 billion purchase of Allergan, Dow Chemical's \$130 billion merger with DuPont and Anheuser-Busch InBev's \$110 billion acquisition of SAB Miller were three of the biggest in history. Other deals included Shell/BG Group (\$70 billion), Charter Communications/Time Warner Cable (\$55 billion), Anthem/Cigna (\$52 billion) and Heinz/Kraft (\$50 billion).

The **tech industry** passed several milestones. Dell's \$67 billion takeover of EMC was the biggest to date. **Facebook** set a new record when one billion people logged onto the social network in a single day. But there were fears that the heady valuations of many private tech startups, also known as "unicorns", might turn out to be another bubble.

It was a dismal year for **Volkswagen**. A boardroom spat at the German carmaker led to the resignation of Ferdinand Piëch as chairman. VW was then embroiled in crisis in the autumn after admitting it had installed software on diesel cars that cheated emissions tests in America.

The president of everybody

VW's wrongdoing came to light because of an American investigation. America also brought another institution based in Europe to task when it laid corruption charges against several officials at **FIFA**, football's world governing body. Football fans cheered when Sepp Blatter at last stepped down as FIFA's president.

A UN summit on **climate change**, held in Paris, produced an agreement that aims to hold the increase in the global average temperature to "well below 2°C above pre-industrial levels", a more ambitious goal than had been expected. It marked an unprecedented political recognition of the risks of global warming, though some greens were sceptical that governments would follow through.

Gay marriage took two giant steps forward. It became legal everywhere in America when the Supreme Court ruled that the constitution grants an "equal dignity" to gay couples. And Ireland became the first country to approve gay marriage by a popular vote.

Two big elections in Latin America suggested that the continent's "pink tide" was turning. In **Argentina** Mauricio Macri was elected president, beating the candidate favoured by the departing Cristina Fernández de Kirchner and bringing an end to 12 years of populist rule by the Kirchner family. In **Venezuela**, voters fed up with years of economic mismanagement rejected the party of President Nicolás Maduro in a parliamentary election.

A career-defining election



Britain's general election confounded the pollsters when the Conservative Party, which had governed in coalition with the Liberal Democrats for five years, secured its first overall majority in Parliament since 1992. The Lib Dems were reduced to a handful of MPs, whereas nationalists won all but three seats in Scotland. The opposition Labour Party went into self-destruct mode after the election by choosing Jeremy Corbyn, a leftist, as its new leader.

The polls also got it wrong in **Canada**, where the Conservative Party was ousted from office and a new Liberal government, headed by Justin Trudeau, was voted in. In **Israel** Binyamin Netanyahu wrong-footed the pundits when he was returned to power as prime minister. The Law and Justice Party, a group

► of xenophobic populists and conspiracy theorists, won two elections in **Poland**.

Nigeria elected a new president, Muhammadu Buhari, who defeated an incompetent incumbent, Goodluck Jonathan. Malcolm Turnbull became **Australia's** fourth prime minister in five years, when Tony Abbott was ousted by his Liberal Party.

An election in January brought the far-left Syriza party to power in **Greece**. It went on to win a referendum in July that rejected austerity imposed by the IMF and EU. But with markets jittery, and trading on the Athens stock exchange suspended for five weeks, Alexis Tsipras, the prime minister, was eventually forced to agree to another bail-out, much to the disgust of his more radical colleagues. Weary Greeks trudged to the polls for a third time in September and re-elected Mr Tsipras. With the euro zone still in the doldrums, the **European Central Bank** introduced a huge quantitative-easing programme in January.

After years of talks, **Iran** and six world powers reached a deal on Iran's nuclear programme. Some hailed it as a chance for Iran to come out of the cold. Others, notably Israel, said the deal was a mistake that would allow Iran to develop nuclear weapons and throw its weight around.

Dilma Rousseff had a terrible start to her second term as **Brazil's** president. A corruption scandal involving Petrobras, a state-controlled oil firm, ensnared members of her Workers' Party. The opposition threatened to impeach her because of allegedly illegal funding arrangements for the government. The economy shrank by 4.5% in the third quarter.

Russia's economy stumbled. The IMF expects Russian GDP to contract by 3.8% this year and 0.6% in 2016. The country has been hammered by falling oil prices. Brent crude started

the year trading at just under \$60 a barrel; it is now below \$38. Russia has also been hurt by sanctions in response to its military meddling in eastern **Ukraine**, though the fighting eased after a ceasefire was signed in February.

Nepal was struck by an earthquake of magnitude 7.8 in April, the worst in the Himalayan country in 80 years. The death toll of 9,000 was the highest from a natural disaster since the earthquake and tsunami that hit Japan in 2011.



Myanmar held its first freely contested election since 1990. The National League for Democracy, headed by Aung San Suu Kyi, trounced the party of the ruling junta. **Cuba** and the United States restored full diplomatic relations, which had been put in the deep freeze during the cold war. Travel restrictions were eased. Ameri-

ca hopes its engagement with the Castro regime will push the island towards democracy.

We'd like to build a great wall
America's presidential candidates started their campaigns. Hillary Clinton wobbled under pressure about her use of an insecure private server for official e-mail, but remains the Democratic front-runner. The Republican establishment was unpleasantly surprised when **Donald Trump** soared into the lead in the party's race, despite badmouthing women, Mexicans, Muslims, etc. The primaries start in February. **Paul Ryan** became (somewhat reluctantly) Speaker of the House following the defenestration of John Boehner.

America suffered several **mass shootings**. In one, in Charleston, South Carolina, nine people at a black church were gunned down by a white supremacist. Elsewhere the police were berated for their excessive use of force. The worst riots in **Baltimore** since the 1960s were triggered by the death of a black man in police custody.

The aviation industry introduced rules ensuring at least two crew members remain in the cockpit during a

flight, after a **suicidal co-pilot** deliberately crashed a German airliner into the French Alps, killing all 150 people on board.



After a nine-and-a-half-year wait, the New Horizons space probe whizzed past **Pluto** at 14km per second (31,000mph). It took remarkable pictures that are only now filtering back to Earth, such as the ice-covered al-Idrisi mountains.

Social media roared with indignation when **Cecil the Lion** was killed in a Zimbabwean national park by a dentist from Minnesota. Although the dentist had a permit, close to 1.5m people have signed a petition calling for him to face justice without anaesthetic.

Other economic data and news can be found on pages 126-127





TO BREAK THE RULES,
YOU MUST FIRST MASTER
THEM.

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Star Wars, Disney and myth-making

How one company came to master the business of storytelling



FROM a galaxy far, far away to a cinema just down the road: "The Force Awakens", the newest instalment of the Star Wars saga, is inescapable this Christmas. The first Star Wars title since Lucasfilm, the owner of the franchise, was acquired by Disney in 2012 for \$4.1 billion, it represents more than just the revival of a beloved science-fiction series. It is the latest example of the way Disney has prospered over the past decade from a series of shrewd acquisitions (see pages 25-28). Having bought Pixar, Marvel and Lucasfilm, Disney has skilfully capitalised on their intellectual property—and in so doing, cemented its position as the market leader in the industrialisation of mythology. Its success rests on its mastery of the three elements of modern myth-making: tropes, technology and toys.

From Homer to Han Solo

Start with the tropes. Disney properties, which include everything from "Thor" to "Toy Story", draw on well-worn devices of mythic structure to give their stories cultural resonance. Walt Disney himself had an intuitive grasp of the power of fables. George Lucas, the creator of Star Wars, is an avid student of the work of Joseph Campbell, an American comparative mythologist who outlined the "monomyth" structure in which a hero answers a call, is assisted by a mentor figure, voyages to another world, survives various trials and emerges triumphant. Both film-makers merrily plundered ancient mythology and folklore. The Marvel universe goes even further, directly appropriating chunks of Greco-Roman and Norse mythology. (This makes Disney's enthusiasm for fierce enforcement of intellectual-property laws, and the seemingly perpetual extension of copyright, somewhat ironic.)

The internal mechanics of myths may not have changed much over the ages, but the technology used to impart them certainly has. That highlights Disney's second area of expertise. In Homer's day, legends were passed on in the form of dactylic hexameters; modern myth-makers prefer computer graphics, special effects, 3D projection, surround sound and internet video distribution, among other things. When Disney bought Lucasfilm it did not just acquire the Star Wars franchise; it also gained Industrial Light & Magic, one of the best special-effects houses in the business, whose high-tech wizardry is as vital to Marvel's Avengers films as it is to the Star Wars epics. And when Disney was left behind by the shift to digital animation, it cannily revitalised its own film-making brand by buying Pixar, a firm as pioneering in its field as Walt Disney had been in hand-drawn animation. Moreover, modern myths come in multiple media formats. The Marvel and Star Wars fantasy universes are chronicled in interlocking films, television series, books, graphic novels and video games. Marvel's plans are mapped out until the mid-2020s.

But these days myths are also expected to take physical form as toys, merchandise and theme-park rides. This is the third myth-making ingredient. Again, Walt Disney led the way,

licensing Mickey Mouse and other characters starting in the 1930s, and opening the original Disneyland park in 1955. Mr Lucas took cinema-related merchandise into a new dimension, accepting a pay cut as director in return for all the merchandising rights to Star Wars—a deal that was to earn him billions. Those rights now belong to Disney, and it is making the most of them: sales of "The Force Awakens" merchandise, from toys to clothing, are expected to be worth up to \$5 billion alone in the coming year. In all, more than \$32 billion-worth of Star Wars merchandise has been sold since 1977, according to NPD Group, a market-research firm. Even Harry Potter and James Bond are scruffy-looking nerf-herders by comparison.

Those other franchises are reminders that Disney's approach is not unique. Other studios are doing their best to imitate its approach. But Disney has some of the most valuable properties and exploits them to their fullest potential. It is particularly good at refreshing and repackaging its franchises to encourage adults to revisit their childhood favourites and, in the process, to introduce them to their own children. This was one reason why Pixar, whose films are known for their cross-generational appeal, was such a natural fit. Now the next generation is being introduced to Star Wars by their nostalgic parents. At the same time, Disney has extended its franchises by adding sub-brands that appeal to particular age groups: children's television series spun off from Star Wars, for example, or darker, more adult tales from the Marvel universe, such as the "Daredevil" and "Jessica Jones" series on Netflix.

Do, or do not—there is no try

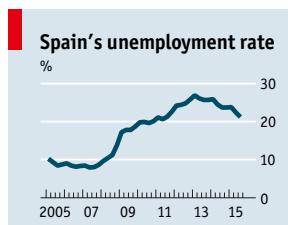
What explains the power of all this modern-day mythology? There is more to it than archetypal storytelling, clever technology and powerful marketing. In part, it may fill a void left by the decline of religion in a more secular world. But it also provides an expression for today's fears. The original "Star Wars" film, in which a band of plucky rebels defeat a technological superpower, was a none-too-subtle inversion of the Vietnam war. The Marvel universe, originally a product of the cold-war era, has adapted well on screen to a post-9/11 world of surveillance and the conspiratorial mistrust of governments, large corporations and the power of technology. In uncertain times, when governments and military might seem unable to keep people safe or stay honest, audiences take comfort in the idea of superheroes who ride to the rescue. Modern myths also have the power to unify people across generations, social groups and cultures, creating frameworks of shared references even as other forms of media consumption become ever more fragmented.

Ultimately, however, these modern myths are so compelling because they tap primordial human urges—for refuge, redemption and harmony. In this respect they are like social-media platforms, which use technology to industrialise social interaction. Similarly, modern myth-making, reliant though it is on new tools and techniques, is really just pushing the same old buttons in stone-age brains. That is something that Walt Disney understood instinctively—and that the company he founded is now exploiting so proficiently. ■

Spain's general election

iFeliz Navidad, España!

A new liberal party offers an antidote to populist euro blues



WHEN Mariano Rajoy and his conservative People's Party (PP) were elected in 2011, Spain had been knocked flat by the euro crisis and the bursting of a property bubble. Unemployment had more than doubled, to 20% (it peaked at 26% in early 2013), the economy was in a prolonged slump and most of the cajas (savings banks) were insolvent. Spain today is an altogether brighter place. The economy is still smaller than in 2008 but is set to grow by more than 3% in 2015—the best performance among large western European economies. Unemployment is falling steadily. Consumer and business confidence is robust. As Mr Rajoy proclaims: "Spain has passed from being a country on the brink of bankruptcy to a model of recovery that provides an example to...the European Union."

Mr Rajoy hopes that this record will bring him victory at an election on December 20th (see page 75). He can claim some credit for the recovery. While other euro-zone countries dithered, his government acted boldly. It has sorted out the banks, halved the budget deficit and made Spain more competitive by reforming the labour and energy markets. He makes a good case for another four years. But many Spaniards want political renewal, too—and to that Mr Rajoy's response is a shrug.

The slump exposed the accretion of corruption and cronyism in the PP and the opposition Socialists, which have largely run Spain since democracy replaced Franco's dictatorship. Both had recourse to illicit financing; their gouging of the cajas and their spendthrift regional governments contributed to the national collapse. Hence the crisis has spawned new political forces. Podemos ("We can") is a cry of anger. Its leader, Pablo Iglesias, a leftist political-science professor, now spends less time talking about class struggle and more praising the Nordic

social model. But his enthusiasm for Greece's disastrous experiment with his ideological soulmates, the Syriza party, bodes ill.

A more constructive response to the euro crisis lies in Ciudadanos ("Citizens"), a liberal party (in the British sense) in a country where liberalism has never been strong. Its leader, Albert Rivera, aged 36, is untested, but his advisers propose many policies that Spain needs. Ciudadanos would do more than the PP to deepen economic reforms, cut wasteful duplication in government and boost sluggish productivity. It wants a single labour contract in place of the cosetting of insiders that leaves many young people as temporary hires. Like Podemos, it wants to reverse the PP-Socialist carve-up of institutions that ought to be independent, including the judiciary, the diplomatic service and the universities. It opposes Catalan independence but, unlike the PP, recognises that Spain is a pluricultural country. And unlike Podemos, it wants to build on, rather than threaten, the achievements of the past 40 years.

Reform politics, as well as the economy

If *The Economist* had a vote, it would go to Ciudadanos. But the next government is likely to be a coalition, because opinion polls suggest that, although the PP will again be the largest party in the Cortes, it will fail to keep its majority. Since his party is in the centre, Mr Rivera may have the casting vote. He should resist the temptation to join Podemos in a centre-left government led by the Socialists under their lightweight leader, Pedro Sánchez. Such a government would be weak, and the Socialists have promised to undo the PP's labour reforms. Rather, Ciudadanos should ally with Mr Rajoy—on condition that the next government adopts the anti-corruption agenda on which it has campaigned. Populism is on the rise in the EU. If Spaniards eschew it and embrace reform, their country will indeed be an example to Europe. ■

South Africa

Try again, the beloved country

A nation on the brink deserves better than Jacob Zuma



SOUTH AFRICA has had three finance ministers in less than a week. The first, Nhlanhla Nene, a respected technocrat, was "redeployed" after he objected to wild spending plans. One clash involved the chairman of South African Airways, Dudu Myeni, who wanted the state carrier to buy aeroplanes via an unnamed middleman. Local press speculated that Ms Myeni was one of the president's mistresses. Jacob Zuma issued a public denial. He replaced Mr Nene with a nonentity: a backbench MP and former small-town mayor called David

van Rooyen. The rand promptly plummeted 9%. Over the weekend Mr Zuma dropped Mr van Rooyen and replaced him with Pravin Gordhan, a safe pair of hands who has done the job before. Problem solved? Not by a long shot.

Since Mr Zuma came to power in 2009, South Africa's finances have grown ever more precarious. The budget deficit is 3.8% of GDP. Public debt has ballooned from 26% to almost 50%. This month Fitch, a credit-rating agency, downgraded the country's debt to a notch above junk. Many analysts expect another downgrade in 2016. That could be disastrous (see page 59). Many of the funds that hold South African debt are barred from owning junk. If South Africa is downgraded again, investors will rush to dump its paper. The country's interest bill will ►

► soar, crowding out other public spending. Mr Zuma seems only dimly aware of the danger. In a speech after he sacked Mr Nene, he praised Robert Mugabe, Zimbabwe's despot, boasted that Africa is the biggest continent in the world (it is not) and failed to mention the small matter of his country's credit rating.

Since the end of apartheid in 1994, South Africa has been ruled by the party of black liberation, the African National Congress (ANC). At first the ANC embraced open markets and fiscal discipline. Under Mr Zuma, however, the country's macroeconomic stability, which underpins all the ANC's social programmes, is imperilled. The commodity bust is partly to blame, but the main problem is the way Mr Zuma governs.

He has acted as if the treasury were a bottomless purse with which to pamper ANC voters. Since 2006, the number of public servants has swollen by 25%, even as private-sector employment has fallen. South Africa now spends 40% of its budget on pay; similar countries spend 25% or so. Mr Zuma has also presided over a steady spread of corruption. Officials take kickbacks. Nurses steal from clinics. Union bosses sell public jobs to the highest bidder, leaving schools with teachers who draw salaries but never show up. A recent OECD study of maths and science scores in 76 countries placed South Africa second from bottom, below many poorer countries.

And Mr Zuma has fostered the growth of a peculiarly self-righteous form of cronyism. The ANC favours "black economic empowerment", a policy that purports to right the wrongs of apartheid by nurturing a new class of black businesspeople. The state gives preference to black-owned contractors; private firms are leaned on to transfer shares to blacks. In practice this has enabled senior members of the ruling party to give juicy contracts to their cousins and grab slices of enterprises created by other people. ANC bigwigs have become fabulously rich with minimal effort. Ordinary black South Africans suffer, however, because all this scares off investors and retards eco-

nomic growth, which will barely surpass 1% this year—slower than population growth and pathetic for an emerging market. Unemployment is 35%. Crime is widespread and stunningly violent. Unless things improve there is a risk that even more skilled South Africans, who pay most of the taxes, will emigrate. This is especially true of the 9% of the population who are white, many of whom have family ties abroad.

The rot starts at the top

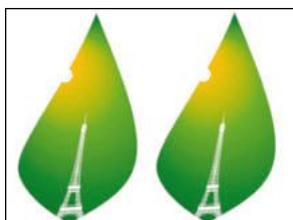
Does Mr Zuma's decision to sack his nonentity finance minister signal that he is belatedly serious about the economy? It would be nice to think so, but the omens are not good. First, Mr Zuma's view of economics is unconventional. Last week he declared that the value of a commodity should be determined not by supply and demand, but by the labour that went into producing it. Second, it is hard to imagine Mr Zuma rooting out cronyism when, by his own example, he seems to encourage it. He used public money to build himself a palace in his home town. Before he became president, he faced 783 charges of corruption, fraud, money-laundering and tax evasion, though these were all dropped and he denies any wrongdoing. Under him, politicians who steal are seldom punished.

South Africa deserves better. The liberal Democratic Alliance, which governs the Western Cape reasonably well, may win control of some big cities in 2016. Yet the ANC's grip on national power remains strong. Whether Mr Zuma's grip on the ANC can survive an economic crisis, however, remains to be seen. In 2008 the party declared his predecessor, Thabo Mbeki, unfit to govern, forcing him to resign. This is unlikely to happen again. But if it does, the deputy president, Cyril Ramaphosa, would be a better steward of the economy. Though his business career owed much to his political connections, he is shrewd and competent. And South Africa needs a steady hand if it is to pull back from the precipice. ■

Climate change

Hopelessness and determination

The Paris agreement will not stabilise the climate; but the efforts it makes possible could still achieve a lot



"THE test of a first-rate intelligence", F. Scott Fitzgerald, a sometime Parisian, once wrote, "is the ability to hold two opposing ideas in mind at the same time." By this standard, the 195 countries that gathered outside Paris in the two weeks

running up to December 12th to negotiate a new agreement on climate change have to be counted very bright indeed. It is vital, they declared, that the world's temperature does not climb much more than 1.5°C above pre-industrial levels; and yet they simultaneously celebrated a new climate agreement that got nowhere close to preventing such a rise.

The individual pledges that nations made going into the Paris talks—which they will now be expected, though not compelled, to honour—are estimated to put the world on course for something like 3°C of warming. In the non-linear universe of climate change, 3°C represents a lot more than twice as much risk and harm as 1.5°C; it could well, for instance, be the differ-

ence between the Greenland ice cap staying put and the sea-level rising, over centuries, by six metres.

For someone to propose means that fall so far short of their purported ends might seem like cynicism or stupidity. Sure enough, some of the keenest devotees to action on climate change have accused the Paris negotiators of both. In fact, the deal really did demonstrate collective intelligence.

The nations of the world know that they cannot suddenly force each other to stop emitting greenhouse gases, because fossil fuels are fundamental to the way that economies work. But many countries also want to reduce the risks posed by climate change and know that they need to find ways to work together. The Paris agreement offers a range of mechanisms to make this happen (see page 89).

Countries now have a framework to ensure that each is doing what it said it would; they have pledged more money to help the poorest and most vulnerable countries adapt to the effects of climate change; they have a task force for looking at the issues raised by those who cannot adapt and need to find new places to live; and they have the basis for new carbon-pricing ►

► deals. They have also agreed that big developing countries, which were largely spared by earlier deals, should consider making a greater contribution.

The Paris agreement provides a timetable for increasing the ambition of countries' emissions pledges as technology improves and experience accumulates. And, outside the main negotiations, Paris saw a commitment from rich countries and individuals to undertake a lot more research into new sources of clean energy. All this has signalled to investors that both developed and developing countries intend to act. This will not in itself bring about the end of the era of fossil fuels; it is, though, a step in that direction.

This side of paradise

But there are a daunting number of further steps. Some relate to administrative capacity. In many poor countries the ability to assess action on climate change and promulgate effective adaptation is inadequate; it must be nurtured.

Others relate to the use of private capital. If investors are discouraged from bankrolling fossil fuels, they are under no obligation to redirect their money to clean energy: they may prefer not to invest in energy at all. Governments will need to

structure their power markets, and plan for their growth, in ways that make sense to long-term backers. Without the lure of profits in low-carbon energy, climate action could result in hundreds of millions of people who now lack modern energy services being left in the darkness for longer.

By the same token, increased R&D on its own is a necessary condition for progress, but not a sufficient one. Backers need to ensure that it leads to innovative solutions which can be installed on a commercial scale, rather than becoming a self-perpetuating academic exercise (as with international efforts on nuclear fusion).

The worst risk is that a justified sense of accomplishment will engender a debilitating complacency. The Paris agreement drew on impressive reserves of diplomatic savoir faire and international solidarity. But if it is to live up to its promise, countries will have to make full use of the mechanisms for ratcheting up emissions cuts and accelerating adaptation for decades to come. Fitzgerald's example of opposing ideas was the ability "to see that things are hopeless and yet be determined to make them otherwise". Sustained determination could be the difference between an agreement that deals with climate change and one that turns out to be another wasted opportunity. ■

Our country of the year

Most favoured nation

Which country improved the most in 2015?



IF OUR "country of the year" award went to the place that grabbed the most headlines, Russia would be hard to beat. But we do not wish to honour military adventurism, domestic repression and the burning of perfectly good foreign cheese, so

Vladimir Putin will have to make do with the Chinese peace prize he won in 2011. Likewise, Islamic State, though it forced itself into the news more than most countries in 2015, is disqualified because it is not a nation but an abomination.

We prefer to recognise a country that has made the world a better place. And, amid the drumbeat of bad news, it is cheering how many contenders there are. America, among others, legalised gay marriage. It also restored diplomatic ties with Cuba and reached a nuclear agreement with Iran. China relaxed its cruel one-child policy somewhat. All couples will now be allowed two babies. And as a token of the Communist Party's compassion, the millions of children born without permission will soon be allowed access to public services, from which they were previously excluded. Nigeria saw its first peaceful ejection of an incumbent president at the ballot box. Voters replaced the hapless Goodluck Jonathan with Muhammadu Buhari, who makes the right noises about corruption and appears to have beaten back the jihadists of Boko Haram.

In Latin America the "pink tide" of left-wing populism began to turn. Venezuela's opposition won two-thirds of the seats in the National Assembly, and may curb the excesses of President Nicolás Maduro and his rotten, inept and authoritarian regime. In Argentina voters rejected the chosen heir of Cristina Fernández de Kirchner for Mauricio Macri, who must now

clean up her legacy of wild inflation, ruinous economic controls, dodgy statistics and the subversion of democratic institutions. In Guatemala a who's who of the political elite, including the former president, were arrested for alleged graft. Jimmy Morales, a comedian, won the presidency with the slogan "neither corrupt, nor a thief". Colombia may soon sign a deal to end the longest-running guerrilla war in the Americas.

Europe saw an alarming surge of xenophobic populism, but French voters thwarted Marine Le Pen's National Front in regional polls. Germany—along with Sweden—welcomed lots of Syrian refugees. Ireland, once written off as a Celtic calamity, posted tigerish growth of 7%.

Sympathy for Syrians

The Middle East had a wretched year, but there were outbreaks of generosity. Jordan and Lebanon hosted far more refugees from the bombs, bullets and beheadings of Syria and Iraq than any rich European nation. In Jordan they are nearly a tenth of the population; in Lebanon, a quarter. But in neither country are they formally allowed to work. Moreover, Jordan could be quite a bit kinder to its long-standing population of Palestinian refugees, and Lebanon is so badly governed that the rubbish is piling up in the streets.

Our winner, therefore, is Myanmar. Five years ago it was a larcenous dictatorship where even pictures of Aung San Suu Kyi, the opposition leader, were banned from newspapers. In November Miss Suu Kyi's party won 77% of the vote. The army, which retains huge privileges, appears ready to share power. It could still go wrong. (Myanmar still treats the Rohingya and other minorities disgracefully.) But the country's transition to something resembling democracy has come faster than anyone dared expect. For that, Myanmar wins the prize. ■

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CAPTURING CONVERSATIONS

In today's competitive landscape, companies need to analyse and innovate more than ever before in order to remain relevant. Effective conversations with industry peers are imperative to decipher trends and generate new ideas. In retrospect however, are executives leveraging insights garnered from these conversations enough in their pursuit of success?

WHICH CONVERSATIONS SHOULD YOU PRIORITISE?

For time-starved senior executives operating in today's global economy, choosing the right conversations to have is an everyday challenge.

Conversations, after all, are grist for the mill at any knowledge firm. "The typical business [of the future] will be knowledge-based, an organisation composed largely of specialists who direct and discipline their own performance through feedback from colleagues, customers and headquarters," wrote Peter Drucker, management theorist. "For this reason it will be what I call an information-based organisation."

However, technological developments and the democratisation of knowledge, for all their wonders, have led to one of the scourges of modern society: a deluge of information.

Executives who can filter out the noise, identify potentially valuable conversations, record key takeaways, and then inject them into in-house knowledge streams, can improve corporate decision-making, seed innovative ideas, and thus provide a competitive advantage for their business.

These conversations can be everything from casual coffeeshop chats to meetings and webinars, via a multitude of channels, traditional and high-tech.

EXTERNAL EVENTS

Senior executives can have much more productive conversations, of course, at formal industry

conferences. For although one's everyday activities will include external interactions, these can never match the concentration of intellectually-engaged contemporaries one encounters under one roof at industry gatherings.

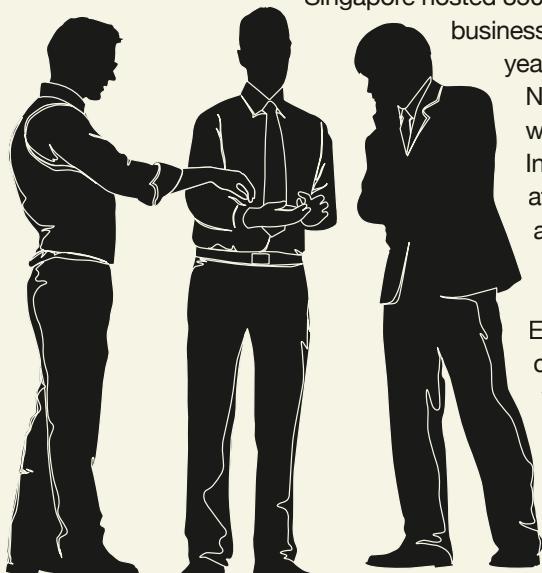
Although senior executives value external conferences, conventions and meetings, they have become increasingly selective about which ones to attend given the perceived glut of events—a sense of being "over-conferenced", says Grace Sai, CEO of The Hub, a co-working space in Singapore that counts some 220 companies and start-ups in its community of "Hubbers".

Participation in events by senior executives depends largely on the profiles of speakers and attendees, as well as the opportunities for networking.

In Singapore they certainly have their pick. Every year the island-city hosts a wide variety of business events in sectors from banking to pharmaceuticals to pet care. In 2014,

Singapore hosted 850 meetings, and attracted 3.2m business visitors. For eight consecutive years, the city has been deemed the No.1 destination for meetings in the world, according to the Union of International Associations. This is attributed to its sound infrastructure, accessibility and quality experience for attendees.

Events, in and of themselves are changing in the way they engage with their audiences. As Oscar Cerezales, COO Asia Pacific, MCI Group explains "corporates and associations are now faced with multi-generational and multi-cultural audiences, who they have



to engage with before, during and post the event, both online and offline". In effect, technology comes to the fore, with webinars, apps and wearables for instance, used to deliver more customised insights and interactions for each attendee.

Industry experts concur, that a fundamental shift is occurring in the business model of events. Destinations are no longer positioned only as a product of sophisticated logistics and infrastructure, but also need to inherently service expert insights and quality conversations.

Singapore has certainly recognised this trend and taken steps to successfully attract key associations and spokespeople from across industries. Sibos for instance, took place in Singapore this year, with more international conventions to follow, such as the European Society for Medical Oncology (ESMO) Asia Congress and the Lions Club International Convention 2020, highlighting the city's position as a knowledge hub in Asia.

Considering the focus given to facilitating effective dialogue in the events space, in the perspective of the business traveller, meetings - both external and internal - are only useful when the knowledge gathered from them is seamlessly communicated across the organisation.

INTEGRATING INSIGHTS INTO CORPORATE CONVERSATIONS

Senior executives today have access to a myriad of tools with which to document and share new information. Charanjit Singh, managing partner and co-founder of Construct Digital, a digital marketing agency mentions that today, a majority of his internal conversations are on Slack, a desktop and mobile collaboration platform that mimics the snazzy, "synchronous" interface of instant messaging.

Via Slack, Mr Singh conducts multiple parallel conversations across his company—some function-specific; others product or idea-specific. Third-party applications such as Dropbox and Google Docs plug seamlessly into Slack, making it a sort of central repository for much of the company's activity and knowledge. With this investment, "email usage has gone down by 90%" Mr Singh cheerily concedes.

GENERATING IDEAS

New technologies are having a major impact on the very first stage of idea generation: brainstorming.

At Construct Digital, collaboration on the Slack platform has boosted the number of ideas that are cycled through corporate conversations.

The activity on these channels keeps ideas percolating among employees, with good ones bubbling up and developing offline into something more serious.

However, once an idea has been generated, its further development is still highly dependent on traditional communications and collaboration, such as face-to-face discussions, presentations and pitches.

THE PERFECT SYNERGY: ARE WE THERE YET?

Senior executives in today's fast-changing, uncertain world, need to engage in the right conversations to innovate and stay ahead. Given the evolution in meetings and events industry, it is evident that executives are demanding meaningful conversations with industry peers, while internal communication processes impact the sharing of these conversations for effective ideation.

Executives who can filter out the noise, identify potentially valuable conversations, record key takeaways, and then inject them into in-house knowledge streams, can improve corporate decision-making, seed innovative ideas, and thus provide a competitive advantage for their business.

Corporations have to adapt their strategies to ensure that conversations do not go to waste, but rather provide a stepping stone for future success.

Singapore, as an established leader in the business events arena, understands the importance of bringing the right conversations to the business leaders of today. In light of this, the Singapore Exhibition and Convention Bureau will present 'Capturing Conversations', an in-depth content series to launch in January 2016. Watch this space to discover the evolving trends and challenges in harnessing insights for the innovations of tomorrow.



Centre for business insights

Green technologies

Your prescriptions for tackling global warming offered anything but the "clear thinking" you called for ("Clear thinking needed", November 28th). "Generous subsidies" for renewable energy "have achieved only a little and at great cost," you wrote. Carbon pricing would accomplish more and do so "much more efficiently than subsidies for renewables." That is true, but you ignore the 800-pound gorilla in this room, namely, subsidies for fossil fuels.

The International Energy Agency's "World Energy Outlook 2015" pegs global fossil-fuel subsidies at \$490 billion and those for renewables at \$135 billion. The IMF, which includes in its calculation the failure to account for negative externalities of energy use (what it calls "post-tax subsidies"), pegs global energy subsidies at \$5.3 trillion, most of it for fossil fuels.

If the much smaller subsidies for renewables, many of which are young, evolving technologies, "perpetuate today's low-carbon technologies" when the goal should be to "usher in tomorrow's", how would you describe the huge subsidies for fossil fuels that are the heart of the problem?

Put this way, the argument may allow you to poke a finger at those who practise "green theology," but it is a serious distortion of the real issue and its needed corrective.

JESSICA MATHEWS
Distinguished fellow
Carnegie Endowment for
International Peace
Washington, DC

Nearly 15 years ago, President George Bush argued for a push on technology rather than have America adopt the Kyoto protocol and its underpinning carbon-market approach. Lofty technology ideals in the Rose Garden weren't backed by a mechanism to prompt market uptake, so it failed. Today, global emissions are nearly 50% higher than on the day of that announcement.

Now, the World Bank and

others are loudly reminding policymakers that implementing a carbon price within the global economy should be their first priority, yet *The Economist* is proposing a return to the Rose Garden. Even as you argue that carbon pricing will not take root, China is implementing an economy-wide cap-and-trade system, the European Union is strengthening its, Canadian provinces and American states are building a market jurisdiction by jurisdiction and South Africa is implementing a modest carbon tax.

One final point; it is hard to conclude that ocean acidification and warming of the climate system is innocuous. The climate problem is serious, and market incentives from carbon pricing are an essential element of any serious policy response.

DIRK FORRISTER
President
International Emissions Trading
Association
Geneva

Japan's justice system

Your articles about Japanese criminal justice ("Forced to confess", "Extractor, few fans", December 5th) did not appreciate fully Japan's legal system. You said that many suspects "have only minimal contact with a lawyer". But under the constitution and the code of criminal procedure, suspects have the right to a counsel and can contact them whenever they wish, including during the detention period.

Strict rules apply to the investigating authorities regarding interview time limits and there is no scope for investigators to continue interviews against those rules, let alone to subject suspects to what you describe as "sleep deprivation".

Furthermore, the Japanese court adopts an adversarial system in which both the prosecution and defence present their arguments and the evidence. So it is difficult to find reasonable grounds for your description of the system as being "without an adversarial approach to establish

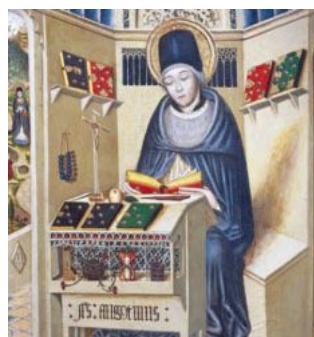
innocence and guilt".

High conviction rates are in fact a result of the cautious approach taken by Japanese prosecutors who, taking into account the grave effect of the prosecution itself on suspects, will only charge them when they are convinced that the prosecution case is strong enough to result in a conviction.

To say that "it is clear that the scales of justice are out of balance" merely on the basis of the conviction rates is a comment that in itself is clearly out of balance.

HIDEKI ASARI
Minister (public diplomacy and
media)
Embassy of Japan
London

Full of grace



Augustine's "solution was to stress man's sinfulness and inability, through his own efforts, to redeem himself". That is a downbeat view of human nature which discomforts many, your book reviewer said ("O come all ye faithful", November 28th). Yet nearly every page of your esteemed journal provides compelling evidence to support Augustine's view.

The only economic system that can flourish is based on greed; wars and conflicts abound; poverty continues. Attempts to alleviate looming disasters from climate change could well founder because of nationalistic selfishness ("Hot and bothered"); marital unfaithfulness by lecherous men is condoned ("Sex in Streatham"). One could go on. Augustine's views seems to me to have got it about right.

RON WHITE
Berkhamsted, Hertfordshire

Christmas number ones

"Bopping brilliant" (November 14th) looked at the music industry but said nothing about the technological disruption from services and distribution systems. In 2000, 88 albums sold more than 1m copies; this year there are four, with a potential fifth. Today, music is being used to sell smartphones, tablets, computers, recurring subscription fees, operating systems and to generate market share.

There is no reason or incentive to build an artist's career or sell the music. Many of the board members and management of these new companies are not from the music industry; they are from the world of technology, banks, software, hedge funds, private equity or technology firms. The interests of the artists and the music services are no longer aligned.

WOLF KRAMER
Los Angeles

One benefit of technology weakening the hand of the record labels is that we no longer have ghastly Christmas singles foisted upon us. In December 1985 there were no less than four Christmas tunes in the British top ten (I admit I have a soft spot for Wham's "Last Christmas"). This year Justin Bieber rules and there are no new Christmas songs.

KELLY HUGHES
London

A stocking filler

Lexington's column on knick-knacks from the presidential campaigns (December 5th) omitted the best item of all: Bernie's Briefs. This is underwear with Bernie Sanders's face emblazoned across the backside along with the words "Feel the Bern".

COERT WOTRUBA
Lacey, Washington ■

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Executive Focus



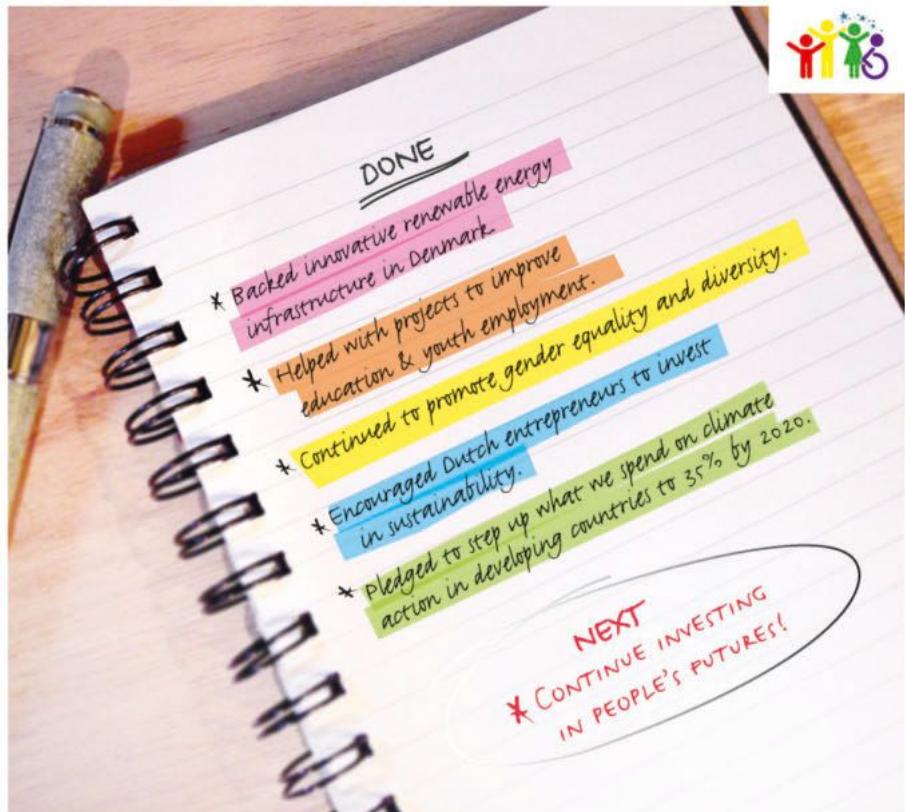
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LOS ANGELES, NEW YORK AND SAN FRANCISCO

Disney is making a fortune and safeguarding its future by buying childhood, piece by piece

AS AUDIENCES left the premiere of the new Star Wars film, "The Force Awakens", in Los Angeles on December 14th, its last image still alive in their imaginations, it became obvious that the hit of the year had arrived. Those at the screening saw plenty that is familiar from the original three episodes of the saga. Old characters from the 1980s Star Wars films are joined by a fresh generation of heroes to battle stormtroopers of a new evil galactic order. There is even a new hope of mysterious parentage on a desert planet, though now it is a woman, Rey, instead of Luke Skywalker. After three disappointing prequels the film is a return to form.

If "The Force Awakens" evokes the past, but on a grander canvas, Bob Iger, boss of the Walt Disney Company since 2005, has also set about remaking an original formula on a more ambitious scale. An intricate flow chart drawn in 1957 (see next page) elegantly lays out the company's strategy, with films at the centre surrounded by theme parks, merchandise, music, publishing and television. Each piece of the business provides content and leads to sales for the others. Putting films back at the heart of the business is a reboot of the Disney family's original scheme to dominate the entertainment industry by using content to appeal to a bigger, global audience.

In remodelling itself to prize content over the means to distribute it, Disney has become the envy of the industry. Profits have more than doubled over the past five years, to \$8.4 billion, and Disney's share price has risen nearly fivefold in a little over a decade, easily beating its rivals. Comcast comes closest. Its share price has tripled in the same period; that of 21st Century Fox has doubled. Time Warner's is up by only 20% and Viacom's is lower. Disney is the most valuable of the lot, worth a star-studded \$187 billion.

What has set apart Disney is its determination to put storytelling at the heart of its business, and its ability to get its hands on new characters capable of bringing fans back again and again. Disney's purchase of Pixar Animation Studios and Marvel Entertainment brought Buzz Lightyear of "Toy Story" and Iron Man of "The Avengers" to a stable of mice and Muppets. Lucasfilm added Star Wars to the cast of characters that the firm has amassed since Mr Iger succeeded Michael Eisner as CEO.

These new franchises have joined the world's most formidable licensing and entertainment empire, one that encompasses toy shops, video games, theme parks, cruises, comics, music, television and feature films. Disney is commercialising childhood through lots of channels—and mak-

ing the companies it bought, as well as itself, far more valuable in the process.

Stories should offer Disney protection against the currents sweeping across the industry. The most valuable parts of the entertainment giants' empires are still their cable-TV businesses in America. ESPN, a sports channel that Disney acquired in 1996, as part of the purchase of Capital Cities/ABC, is a money machine. Cable networks bring nearly half of Disney's revenues and profits (see chart on next page). Disney's competitors have pumped ever more cash into cable over the past decade and profits have risen steadily as the firms have expanded around the world.

A new dawn

Viewers, however, are starting to switch off. In rich countries many are now "cutting the cord" in favour of content delivered on-demand over the internet. The number of American households with pay-TV is expected to drop by 5m between 2014 and 2019, to 96.4m, according to eMarketer, a research firm. Cable's decline is a reminder that the way audiences get content may change. In contrast, customers' demand for great entertainment, irrespective of how they choose to receive it, is enduring. The firms with the most popular stories and characters will have the most bargaining power over whichever distributor, from Comcast to Netflix, finds favour. A decade ago the profits from ESPN and ABC helped Mr Iger pay for Pixar. In time his accumulation of content may make it easier to sell a streaming service directly to consumers who abandon cable.

Even when the future of cable looked bright, the Disney script was in need of a ➤

▶ rewrite. It may have been a profitable business but it was also one that produced mediocre entertainment, and it was run by a man with an ego cartoonishly outsized even by Hollywood's standards. Mr Eisner had turned around Disney himself two decades before, in part by reviving animation but in larger measure by turning Disney into a home-entertainment company, expanding its offerings on videotape, DVDs and on a variety of cable channels. But his relationships in Hollywood were fraying.

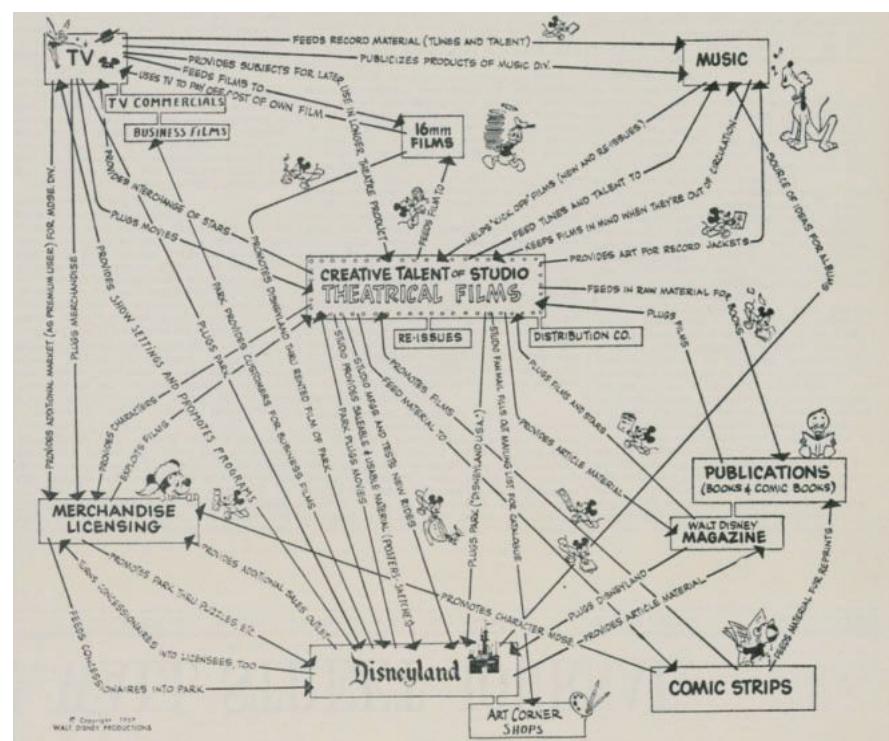
A shareholder lawsuit over his costly firing of Michael Ovitz, a former superagent, ended in a court case that in 2004 aired ignominious details of Disney's inner workings. The company's film business languished. Jeffrey Katzenberg, responsible for a run of successes, quit in 1994 after a rancorous feud with Mr Eisner, and helped form a rival, DreamWorks SKG. In 2004 Disney had to fight off a hostile takeover by Comcast. Meanwhile, Roy Disney, Walt's nephew, led a shareholder campaign to force out Mr Eisner and "save Disney". The company was, as Mr Iger recalls, at war with everyone and itself.

Mr Iger joined Disney in 1996 when it bought Capital Cities/ABC. When he replaced Mr Eisner in 2005, he set about making peace. On his second day as CEO, he told the board that he wanted to buy Pixar, a ground-breaking animated-picture company that had been making films for Disney to distribute since "Toy Story" in 1995.

The empire strikes back

The idea had come to him the previous month at the opening of Hong Kong Disneyland. Almost none of the characters on the floats in the parade was from Disney's own recent films. The ones that captured children's imaginations were from Pixar. Disney's own animation studio had been a mess since Mr Katzenberg had left in 1994, the year "The Lion King" was released and earned nearly \$1 billion at the box office worldwide. "As animation goes, so goes the company," Mr Iger told the board.

The problem was that Pixar was owned by Steve Jobs, never the easiest man to deal with and one of the many people with whom Mr Eisner had been feuding. Mr Iger paid Mr Jobs careful and attentive suit. He tailored his arguments for the merger to Mr Jobs's concerns, stressing, for example, that



The way Walt wanted it

Pixar would have creative independence, and, because it would be more insulated from the expectations of investors inside Disney, more creative freedom in another way: not every film would have to be a blockbuster, making the company or perhaps breaking it.

It probably did not hurt that Disney also paid Mr Jobs a great deal of money. When the acquisition went through in 2006 Disney spent \$7.4 billion on Pixar, an incredibly high price for a company that produced one film a year. Mr Iger was also willing to splash out when he set up his 2009 deal with Marvel; that cost \$4 billion, even though the film rights to two of its most valuable properties, Spider-Man and X-Men, were tied up elsewhere. And when he bought Lucasfilm, for \$4.1 billion in 2012, it had not produced a new title in years, and the three newer editions of Star Wars, though commercially successful, had been sufficiently unpopular with fans that the success of another sequence of films was by no means assured.

Money was not the only factor. All three companies were owned by controlling masterminds who needed to be kept happy, and could not be wooed by riches alone. Like Disney's own founder and Mr Jobs, Ike Perlmutter of Marvel and George Lucas had their own visions for their companies and products. Mr Iger's delicate approach helped. He felt Disney had lost its creative edge; it was failing to produce compelling characters that could keep a franchise running for years. There was no evidence it knew better than its partners what would work best, and so he was will-

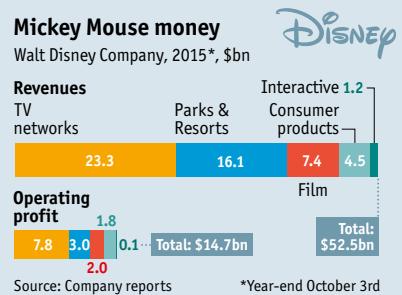
ing to be hands off when needed.

Marvel, the next item after Pixar on Mr Iger's shopping list, was not easy to pry from the hands of its reclusive boss. Mr Perlmutter, an Israeli-American self-made billionaire, is less famous than Mr Jobs and Mr Lucas, but no less fiercely protective of his business interests and of his privacy (he reportedly donned a disguise for the premiere of "Iron Man" in 2008). It took Mr Iger six months just to wangle a meeting.

A telephone call from Mr Jobs helped things along; a deal was finalised at the end of 2009. By this stage Mr Jobs was Disney's largest individual shareholder—a status he attained in the Pixar deal—so it was in his interest to help. But he and Mr Iger had also become close friends and allies. Mr Iger was one of a very few people Mr Jobs trusted with news that his cancer had returned, telling him just before the announcement of the Pixar deal (and giving him a last-minute out if he wanted).

Some analysts suggested at the time that Mr Iger had overpaid for Marvel, not least because he was getting what appeared to be a b-team of superheroes. But Mr Iger's faith in Marvel's creative team and vision paid off. Marvel turned the story of a second-tier character, Iron Man, into a blockbuster. This became the cornerstone of a franchise introducing a number of other heroes, including Captain America and Thor, which built up to an ensemble film, "The Avengers", that earned \$1.5 billion around the world in 2012.

An Avengers sequel this year did nearly as well. Two more are in development and a plan for related projects extends into the ➤



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middle of the 2020s. The success of the Iron Man and Avengers films has helped Marvel develop more obscure stories from its catalogue. With Disney's financial might as backup, Marvel can take risks on eccentric films like "Guardians of the Galaxy", which features a wisecracking raccoon and an ambulatory tree.

Nothing exemplifies the success of Mr Iger's strategy better, though, than the Star Wars franchise, for which Disney paid \$4.1 billion in 2012. "The Force Awakens" carries more gravitational force than the twin suns of Tatooine. Up to \$5 billion in Star Wars licensed products will be sold over the next year. The film itself could rake in as much as \$2 billion in ticket sales.

Return of the Jedi

The franchise encapsulates Disney's long-term thinking. There are another five Star Wars films to come by 2020—two sequels to "The Force Awakens" and three stand-alone stories. By that time vast new Star Wars attractions will have opened in the firm's theme parks in California and Florida. (Meanwhile Lucasfilm's other blockbuster franchise, the Indiana Jones films, has a fifth title in the works with Harrison Ford to return to his starring role.)

Again, the deal that made this possible owed something to Mr Jobs. He had bought Pixar from Mr Lucas in 1986 and the two men knew each other; Mr Jobs's experience with Pixar made the deal look good to Mr Lucas. So did Lucasfilm's happy experience working with Disney on Star Wars theme-park attractions. And so too did a chance piece of past conduct.

Mr Iger had demonstrated his sensitivity to Mr Lucas more than 20 years before when, as an executive at ABC, he approved a second series of Lucasfilm's "Young Indiana Jones Chronicles" despite poor ratings

in the first season. Mr Iger felt Mr Lucas had lived up to his commitments to make a high-quality show and deserved the opportunity. When he broached the idea of buying Lucasfilm in 2011, Mr Lucas told him he had not forgotten the kindness. Mr Lucas, the founder and sole owner, never considered selling to anyone else.

That does not mean things were destined to go smoothly. The new Star Wars trilogy does not reflect Mr Lucas's creative vision. He has described the sale as like a "divorce". Yet the opening credit of "The Force Awakens" shows Lucasfilm's green logo alone, without any mention of Disney. Mr Iger is not one to let his ego get in the way of a business deal and understands what matters to fans.

Disney has tried hard to preserve what Mr Iger terms the "creative essence" of the firms it has acquired, moving slowly when cutting costs or making administrative changes. A similar approach can be seen in the company proper, where individual business units enjoy more autonomy than they did under Mr Eisner.

In the case of Pixar, the leaving-well-alone was negotiated, from keeping its name on films in most markets to maintaining "beer Fridays" once a month at the studio's headquarters in California. This hands-off approach did not stop Disney learning from Pixar. It transplanted Pixar's film-maker-driven culture into Disney's own animation studio, including the "Pixar brain trust", a peer-review system and its notorious attention to detail. For "Frozen" researchers spent weeks in Norway studying local music, clothing, furniture and folk art. In 2013, it became the highest-grossing animated film ever, making close to \$1.3 billion worldwide.

Getting its hands on Pixar helped reinvigorate Disney's animation. It also gave

all the firm's other businesses new material to work with. That made all the Pixar properties—like those of Marvel—worth much more than if they had remained independent. Hit films create demand for merchandising and attractions and other entertainment, the success of which in turn creates more demand for more films, including not just sequels but also spin-offs that expand the universe of franchises. The power of these synergies is on display again with "The Force Awakens".

The biggest doubt is the durability of the model. It is not clear for how long such franchises can be stretched. And introducing new ones is a risk. "John Carter", a film based on one of a series of novels by Edgar Rice Burroughs, flopped. Cinema-goers will also have far more choice as other firms try to establish or add to their franchises. Universal has Fast and the Furious and Jurassic Park. Warner Brothers plans three more Harry Potter spin-offs and more from Marvel's rival, DC Entertainment, which includes Batman and Superman.

No competitor, however, rivals Disney's scale. The only media rival that comes close to matching its breadth is Comcast, which acquired NBC Universal, including Universal Studios and its theme-park business, in 2011. And none is anywhere near Disney when it comes to selling spin-off products. It is the world's number-one licensor of merchandise by far, with \$45 billion in sales in 2014, more than seven times as much as its closest competitor in Hollywood, Warner Bros.

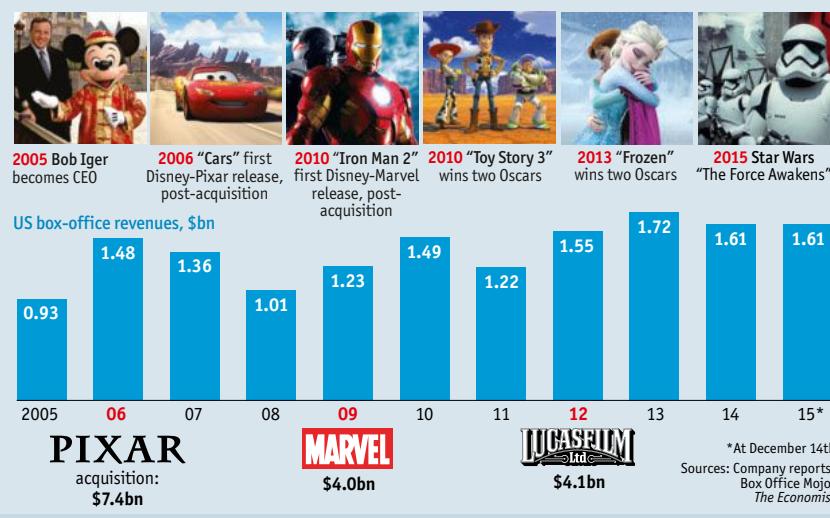
Disney helped develop products and markets which Lucasfilm on its own would have been too stretched to consider. With Walmart it has made a Star Wars advertisement that targets girls as well as boys. Disney has cannily made Rey, a female character, the protagonist in "The Force Awakens". The Disney effect could boost merchandising sales in America alone by five times what Lucasfilm could have managed by itself, according to Paul Southern, a licensing boss at Lucasfilm.

Disney also has a well-developed global retail network, and has been promoting Star Wars at its theme parks in Paris, Tokyo and Hong Kong. In 2016 Disney is opening a new theme park in Shanghai, the first of what might eventually be two in mainland China.

Mr Iger is due to step down in 2018. Can he stuff more into the toy box before he goes? Mr Iger keeps a list of firms Disney might be interested in buying. They are all leading international brands that would fit with Disney well. The Lego Group, a privately held Danish firm, already does business with the company, licensing products (including Star Wars) and placing shops at Disney's theme parks. It would make an obvious target for the firm that has already bought up so many other pieces of your childhood. ■

To infinity and beyond

Walt Disney Company, 2005-15



Interactive: "Disney's world" – an extended film history and company timeline Economist.com/disney2015

The emperor's mighty brother

YUSHU, QINGHAI PROVINCE

Demand for an aphrodisiac has brought unprecedented wealth to rural Tibet—and trouble in its wake



BY THE middle of May, the snowline in Yushu prefecture has retreated to the peaks of its steep valleys. Nomads who have spent the winter at the bottom of them have begun to herd their yaks and goats to higher pastures, where the first shoots of green have replaced the scorching white of winter. The landscape is still bleak and forbidding. Wolves prowl. Lightning strikes terrorise those caught exposed on the bare slopes.

Yushu is a vast area of mountains and alpine pasture, larger than Syria but with a population of fewer than 400,000 people (see map on next page). About 95% are Tibetans, who call the area Yulshul. For those living in the countryside—more than half of them—this is the busiest time of year. Elsewhere, in China's densely populated interior, children get a short break to celebrate Labour Day on May 1st. But in Yushu, as in many other rural settlements across the Tibetan plateau (a sparsely inhabited region the size of western Europe), schoolchildren are given an additional four weeks' holiday in May and June. They have to make up for it with a shorter summer holiday. And it is not for the sake of fun.

Children are at the front line of the armies of Tibetans (almost every able-bodied rural resident in Yushu) who will spend a frenzied month scouring the hills for what they call *yartsa gunbu*. In Chinese its name is *dongchong xiacao*, literally “winter-insect-summer-grass”, for that is what it resembles.

In summer the airborne spores of a fungus known as *cordyceps* (or *ophiocordyceps*) *sinensis* invade the caterpillars of various species of ghost moth, a large pale insect that flits over the pastures at

dusk. After grubs thus infected bury themselves in the soil to hibernate, they die; when winter comes they freeze. The warmth of spring activates the fungus, which grows to fill the caterpillar's entire body, leaving only the outer skin. A spindly brown shoot of it emerges from the caterpillar's head and pushes its way through the soil into daylight: just four or five centimetres—so tiny and often so widely separated from others that the keenest of eyes are needed to spot it.

This is Tibet's annual gold rush. *Yartsa gunbu* is so highly valued as a medicine that it often sells for more than its weight in the metal. It has many purported benefits, ranging from preventing cancer to curing back pain. But what makes it so prized is its supposed ability to improve sex lives. It is often described as a “Himalayan Viagra”, good for treating erectile dysfunction and (in women as well) low libido.

The children's good eyesight and short stature make them the best spotters of the fungus among blades of grass and stalks of ground-hugging cinquefoil shrubs that soon, as the weather warms, will dot the slopes with bright yellow flowers. It is not a job for those unused to the plateau's thin air. Caterpillar fungus, as *yartsa gunbu* is usually called in English, is generally found at altitudes above 4,000 metres (13,100 feet). That is higher than Lhasa, the capital of the Tibet Autonomous Region (TAR) which borders on Yushu and occupies about half of the plateau.

As your (ill-acclimatised) correspondent found, ascending the steep slopes of Yaseeda ridge in Yushu's Chindu county requires ➤

► nimble limbs as well as the genetic advantage Tibetans enjoy at such elevations, where there is 40% less oxygen than at sea level. His agile guides were sporting enough to let him rest as his heart pounded in a desperate quest for atmospheric sustenance.

Throughout the month of May each year, hundreds of villagers search through the scraggy vegetation looking for the precious fungus. Mayong Gasong Qiuding, a local guide, crawls on his hands and knees. At the start of the season, he says, he would spot one fungus every 15 minutes or so. By the end, it would be one every couple of hours.

Digging them up requires painstaking effort. A small pick is used, with great care taken not to break the sprout from the caterpillar's body. There is little demand for separated pieces; *yartsa gunbu* is dried and consumed whole. Aficionados gauge the quality of a caterpillar fungus based partly on the relative lengths of body and sprout—impossible if there is no way of being sure whether they were once attached.

Fungus-hunters often camp out on the hills. Mr Mayong says a diet of dried yak-meat and instant noodles (a product of China's spreading culinary influence: balls of roast barley flour, known as *tsampa*, are the cultural norm) keeps him going from dawn to dusk. Plastic sheeting provides makeshift shelter from rain. Dried yak dung (no shortage of that on the slopes) and the withered stalks of cinquefoil provide fuel for cooking.

On top of the world

Later, at his house in Xiewu township, Mr Mayong points out a man high up on a slope above his house—barely a speck, surrounded by other specks that are the man's yaks. "That is probably my brother," he says. Searching for caterpillar fungus may be tough and sometimes dangerous. ("If a bear comes, the best thing to do is run," he suggests.) But it is much more lucrative than tending yaks, which provide a subsistence living at best. Rural incomes in Tibet are among the lowest in China. Herders live hand to mouth, or at least they did until the 1990s when the price of *yartsa gunbu* began to soar. Since then an explosion of demand, almost entirely from non-Tibetan parts of China, has transformed the economy of large swathes of the Tibetan plateau. Daniel Winkler, a fungus expert who runs Mushroaming, a Seattle-based travel agency, and who has done extensive research on this, says caterpillar fungus has entwined the plateau's economy with that of the rest of China in a way that few other products have—there is little else made in Tibetan areas that is in such high demand elsewhere.

It is all the more remarkable for having remained largely a Tibetan preserve: despite much effort, no one has yet succeeded in producing commercially viable quantities of good-quality *yartsa gunbu* in artificial conditions. This means colossal dividends for Tibetans. In the TAR the retail value of the more than 50 tonnes of *yartsa gunbu* harvested there in 2013 was around 7.5 billion yuan (\$1.2 billion), equivalent to nearly half its earnings from tourism. Total annual production on and around the plateau, most in China but also in Nepal and Bhutan, is worth several times more.

It is omnipresent: at the airport in Xining, the capital of Qinghai province, huge advertisements for the stuff fill the arrivals hall. The streets of tourist areas of towns and cities across the region are lined with shops selling it. A souvenir shop in Yushu sells freeze-dried yak meat; the price would seem ridiculous, were it not (perhaps) for the large characters on the box: "Fed on caterpillar fungus". Over large areas of the Tibetan plateau, about 40% of rural residents' annual cash incomes have been generated by the fungus in recent years. Tibetans' income from farming (including fungus-gathering) has usually risen faster than the farming income of rural residents in other parts of China.

This windfall is the result of the rapid emergence of a middle class in other parts of China, and with it a big growth in spending power on health products—not least those that claim to help with erections. The Chinese often appear not to share Westerners' embarrassment about such medicaments; a good sex life is seen as

evidence of overall health. One high-class restaurant in Beijing specialises in animal penises, the eating of which is supposed to boost virility. Westerners visit for a titter, Chinese businessmen to impress their clients. (Yak penis, says the eatery's website, is a "luxury gift for close friends".) A book of "traditional, health-preserving" recipes on sale in one of Beijing's biggest state-run bookshops includes the following remedy for impotence and premature ejaculation: "18 grams of caterpillar fungus; one fresh human placenta. Wash the caterpillar fungus and the placenta separately. Place in a saucepan, with water. Stew at high temperature until the placenta is cooked. (Drink the human placenta soup once a week for one or two weeks to see results.)"

Caterpillar fungus may even have been the salvation of Tibet's pastoral way of life (or what remains of it after the forcible settlement of many nomads by the government). In the rest of China, less than half the population now works on farms. On the Tibetan plateau, which is home to around 6m people, the share raising animals or growing crops fell only slightly between 2000 and 2010, from 87% to 83%. Andreas Gruschke of the University of Leipzig says *yartsa gunbu* has provided some herders with enough extra income to make yak-rearing viable. It certainly helped in Yushu after an earthquake in 2010, which flattened much of the main town of Gyegu (or Yushu city) and killed more than 2,600 people. To aid the area's battered economy, the government launched an annual "caterpillar-fungus culture festival"—a trade fair, in effect, attracting buyers from across the plateau (prices are often decided by a coded touch of hands under a cloth, to keep rivals in the dark).

But clouds hang over the industry, and are looking ever more ominous. Fakes, sometimes dangerous, are becoming increasingly ubiquitous, threatening consumer confidence. Your correspondent bought two caterpillar fungi from a Tibetan in Gyegu's main square for what seemed a bargain price of 50 yuan. Later he accidentally dropped them on the floor of his hotel room; they snapped, revealing that they were made of plaster moulded onto tiny sticks. To boost demand for the fungus, some merchants adulterate products made of it with Viagra, or Weige (Mighty Brother), as it is more suggestively named in Chinese. Wholesalers—most of them in Qinghai are Hui, a Muslim ethnic group—were surprisingly candid in expressing doubt about how much the fungus by itself could really help to boost libido.

Even more troublesome to those in the business is President Xi Jinping's campaign against corruption, which has been unusually fierce and protracted. This has curbed the once-common practice of bribing officials with expensive gifts, including caterpillar fungus. A glass jar containing 80-odd plump specimens neatly tied together still sells for 63,380 yuan—nearly \$10,000—at a medicine shop in Beijing. But prices have fallen by as much as 20% in the past year, even as supply has remained level.

More worrying for the authorities, *yartsa gunbu* has fuelled ➤





Flat out on the plateau

unrest on a plateau already boiling with discontent over Chinese rule. Gyegu's annual horse festival offers a clue to this. The three-day summer fair involves displays of horsemanship, singing and dancing—including, one year, by children dressed as caterpillar fungi (pictured on next page, in 2007). It attracts thousands of Tibetans, many of whom camp on the surrounding grassland by a meandering river. The festival resumed in 2014 for the first time since the earthquake. At this year's event your correspondent saw police deployed in large numbers, some equipped with fire-extinguishers. Two fire engines were parked by the main arena.

Such precautions are common these days in areas where Tibetans gather, lest anyone attempt to set fire to themselves: a desperate form of protest against Chinese rule that has claimed at least 123 Tibetan lives since 2009. In the now lavishly rebuilt city of Gyegu, a 27-year-old Tibetan monk apparently tried to kill himself this way in the main square in early July, just a few days before the horse festival. Police extinguished the flames and hustled him away. Tibetans in exile say he died a few days later in hospital.

Fungus, a bogey man

Yartsu gunbu has, indirectly, heightened these tensions. It has contributed to a surge of visitors to the plateau in recent years, most of them members of China's ethnic-Han majority. Uneasiness over this influx, and the fact that businesses catering to tourists are also dominated by Hans, were among the causes of an explosion of unrest across the plateau in March 2008, including anti-Han rioting in Lhasa that left several people dead.

Caterpillar fungus has also been a direct cause of violence among Tibetans, and between Tibetans and caterpillar-poaching Hans. In parts of the plateau, the annual rush for fungus is Klondike-like. In a report by the Communist Party committee of Nangqian county in Yushu, a village official says: "Caterpillar fungus has turned people bad. It has made them think only of money and caused them to lose their sense of family, friendship and humanity." Complaints abound about Tibetans frittering away their caterpillar money on gambling and booze (there are few opportunities for Tibetans to find decent work in cities, where jobs usually go to Hans or Huis).

Mr Mayong, the guide, insists that in his experience, fellow villagers are courteous to each other in their collective scramble. That is not how it works between rival villages, however, or when caterpillar poachers invade a village's territory. In 2013 two people were killed in another part of Qinghai when villagers shot at rivals. The Dalai Lama, Tibet's exiled spiritual leader, said fungus-fuelled fighting had caused "disgrace to the Tibetan people" and a "crisis" on the plateau.

During this year's harvest season, security forces in some parts of the plateau warned that the task of "stability preservation" was "grim". In Shangri-La, a Tibetan town in Yunnan province (so

named in 2002 in order to attract more tourists), police told residents to give up any hidden guns as the season approached. In one county of the TAR, villagers were told they would be banned from harvesting caterpillar fungus for a year if they used any outsiders to help—an attempt, partly, to curb the kind of violence that has sometimes broken out between Tibetans and Han fungus-gatherers.

The environmental fallout has been considerable, too. For a time before the earthquake in Yushu, the horse festival (which includes yak races—a perilous sport for the riders) offered a clue to one aspect of this. It was in the elaborate traditional costumes that rural Tibetans like to wear on special occasions. Enriched by caterpillar fungus, some took to augmenting their garb with the skins of leopards and tigers smuggled from India through Nepal.

Local officials in Tibet were of little help in stopping this. According to Emily Yeh of the University of Colorado at Boulder, they wanted to encourage festivals as way of attracting tourists from the rest of China; exotically dressed Tibetans were seen as crowd-pullers. Counties in some parts of the Tibetan plateau "competed to show off their wealth and development status through the hyperbolic display of jewellery and pelts on the bodies of their Tibetan participants [at festivals], often so much that participants had trouble walking under their weight", she said in a paper published in 2013. Popular singers began sporting pelt trims on their music DVDs. This surprising—and tragic—side-effect of demand for a purported aphrodisiac came to an equally unexpected end. In 2006, at a prayer ceremony in India attended by thousands of Tibetan pilgrims, the Dalai Lama called on Tibetans to cease wearing animal furs. The impact was immediate. From across Tibet reports emerged of Tibetans piling up their furs and burning them: given the garments' huge value, an extraordinary display of devotion to the Dalai Lama. Anxious Chinese officials tried to ban such bonfires and arrested the organisers. In some places they even ordered Tibetans to wear their furs at festivals.

But the Dalai Lama's injunction held firm. Despite a stepped-up campaign by the government to vilify the exiled Tibetan leader since the unrest in 2008, Tibetans appear largely to have heeded him. India's tiger population fell from 3,642 in 2002 to a low of 1,411 in 2006. Since then it has climbed back up to 2,226. Your correspondent did not spot any furs looking like those of rare animals at this year's festival in Yushu. In the privacy of Tibetans' homes, the Dalai Lama's popularity is evident. One yak-herder, in her tent on the 4,500-metre pastures of Lanweilaha Mountain, gets out her box of recently harvested caterpillar fungi. She keeps it under a portrait of the Dalai Lama (banned in some parts of the plateau) which has a strip of yellow cloth draped over it as a symbol of respect.

Another worrying environmental impact, which has yet to be stopped, is on the grassland itself. Mr Mayong says villagers ↗

► replace any turf they dig up with their small hand-hoes (as local regulations require them to). But some Tibetan villages employ outsiders who are often less fastidious. Estimates of the damage this causes vary wildly, from a few square kilometres of grassland damaged every year to more than 65 square kilometres in Qinghai province alone. This compounds problems caused by global warming, mining, the spread of rodents and, officials insist, overgrazing, though herders and environmentalists accuse the government of exaggerating to justify settling nomads in places where officials can better control them. Yushu is the source of three of Asia's greatest rivers: the Yellow river, the Yangzi and the Mekong; the grasslands play a vital role by regulating the flow of water into them.

In the rest of China, such concerns appear to weigh little on the minds of *yartsa gunbu*'s wealthy buyers. State-controlled media do not like to dwell on anything that portrays life on the Tibetan plateau in a negative light. Environmental activism—particularly related to Tibet and other areas inhabited by restless minorities—is kept on a very short leash. The authorities worry that eco-campaigning might provide cover for separatists.

Neither is there much questioning of whether *yartsa gunbu* is all it is cracked up to be. The Communist Party is a staunch defender of traditional Chinese medicine (often called TCM), despite a lack of scientific evidence for some of its claims. At its margins, TCM blends into mysticism—a belief in a force, known as *qi*, that regulates the body in ways unrecognised by modern science. But the party sees itself as a defender of Chinese nationalism; TCM is seen by many nationalists as a vital ingredient of Chineseness.

It is odd, however, that the fungus has become quite the TCM star that it is today. There is no known mention of it in Chinese medicinal works before the 17th century—by the standards of TCM, that is relatively recent. By the 19th century, however, the fungus had become linked with status. The Colonies, a British newspaper, told its readers in 1876: “[I]t is reputed to possess strengthening and renovating qualities; but on account of its scarcity it is only used in the palace of the Emperor or by the highest mandarins.”

Early foreign observers were no less astonished by *yartsa gunbu*'s cost. “A Handbook of the Larger British Fungi”, published by the British Museum in 1923, said in a footnote: “Black, old and rotten specimens are said to be worth four times their weight in silver.” The Communist takeover in 1949, however, was a huge blow to business. Wealthy Chinese, the main consumers, fled abroad; under a Western-led trade embargo, trade slumped.

The fungus revival began in 1993, at the World Athletics Championships in Stuttgart, Germany. A team of little-known Chinese runners took the gold medals in the women's 1,500-metre, 3,000-metre and 10,000-metre races. Then, a month later, the same team won these races at China's national games in Beijing, setting world records in all categories. One of them, Wang Junxia, shaved an astonishing 42 seconds off the previous best for 10,000 metres. Only a year earlier, she had been ranked a mere 56th in the world.

The “secret weapon” of the team's success, said their coach, Ma Junren, was a combination of intense high-altitude training on the Tibetan plateau, turtle blood, ginseng and a tonic made of caterpillar fungus. *Yartsa gunbu*'s fans prefer to leave the story at that, downplaying evidence that emerged several years later that other athletes trained by Mr Ma had been taking banned substances, including testosterone (he denies giving them any). Mr Ma is now reported to be engaged in a new business, breeding Tibetan mastiffs.

Mr Ma's plug for the fungus came at an opportune moment. Grassroots health care in the countryside had disintegrated in the 1980s with the break-up of the “people's communes” that Mao Zedong had established. Now in the cities many state-owned enterprises were teetering on the brink of collapse, and with them the basic medical services they had once provided. Citizens were being forced to pay cash for treatment; serious diseases could easily plunge families into dire poverty. Demand for TCM remedies, with their reputed prophylactic properties, was beginning to soar.

Caterpillar fungus appealed to the better off, but TCM offered many medicines that were cheaper than imported Western ones. TCM-related mystical practices such as *qigong*—involving breathing exercises and meditation—could supposedly ward off major illness for no cost.

That there was no clear evidence of *yartsa gunbu*'s properties made little difference. Between 1998 and the global financial crisis in 2008, calculates Mr Winkler, the price rose more than 17-fold to nearly 70,000 yuan per kilogram. In 2003 an outbreak of SARS, an often deadly respiratory disease, gave the fungus a further publicity boost: TCM doctors claimed it had helped some patients to recover more rapidly than they would have with Western medicine alone. The *People's Daily*, the Communist Party's main mouthpiece, said that in the fight against SARS, TCM “once regarded as outdated or effective only against chronic diseases” had proven to be “one of the most powerful weapons”.

There are some sceptics, too. Last year an anti-TCM campaigner in Beijing offered a 50,000-yuan reward to any TCM doctor who could achieve a success rate of at least 80% in diagnosing pregnancy merely by checking a woman's pulse (a critical diagnostic tool in TCM). His challenge aroused considerable media interest in China. There were a couple of well-publicised failed attempts, but nobody won the prize.

Advocates, however, claimed a victory in October when a TCM doctor, Tu Youyou, was given a Nobel prize for the discovery of artemisinin, an anti-malaria drug. The prime minister, Li Keqiang, said the award demonstrated the “great contribution of traditional Chinese medicine to the cause of human health”.

Mercifully for the government's budget, caterpillar fungus is not one of the medicines covered by state-funded health insurance. Your correspondent had only his own wallet when he went to the caterpillar-fungus department of a TCM clinic attached to an emporium in central Beijing run by one of China's biggest retailers of TCM products, Tongrentang, a company founded in 1669.

Dr Li Zhenhua took the pulse of both wrists and looked in his patient's mouth. He asked a few questions: “Do you feel thirsty?”, “How is your sex life?”. Then came a more animated discussion about what to prescribe (the only symptom proffered was poor sleep, though Dr Li said his examination revealed a lack of vigour in the kidneys). What quality of caterpillar fungus would the patient like? Would he like ginseng, too? The prescription thus negotiated involved three months of daily medication. At a cashier's desk the bill was totted up. It came to more than \$4,600—possibly the most expensive remedy for jet lag ever prescribed. Your correspondent muttered his excuses and left. ■



Everybody do the caterpillar fungus



Pakistan confronts extremism

Job half-done

PESHAWAR

The army and the government have taken the fight to the enemy—within limits

A YEAR ago seven terrorists wearing suicide vests rampaged through the Army Public School in the city of Peshawar in Pakistan's north-west, killing 132 green-blazered schoolchildren and nine others. It was the bloodiest terrorist attack in Pakistan's history. In the home of Farooq Shah Afridi, a poster-sized photograph now hangs of his 17-year-old son, Mobeen, one of the dead pupils. A state medal awarded posthumously sits next to the portrait. It helps Mr Afridi come to terms with his loss. But so too, he says, is the thought that the death of Mobeen and his schoolmates helped to change Pakistan forever.

For the horrifying attack brought about something many thought could never happen: it forced Pakistan at last to confront the Islamist militancy tearing at the country's vitals. A confrontation long seemed unlikely. The country's bargain with jihadists stretched back decades, with militant Islam used as a tool to influence events in Afghanistan, rile India and shape domestic politics. And when leaders wished to move against extremism, they feared a ferocious backlash. Yet, a year on, the effectiveness of Tehreek-e-Taliban, an alliance of militant groups also known as the Pakistani Taliban and which claimed responsibility for the school massacre, has been all but beaten. Attacks by militants have fallen by half this year compared with 2014.

The change is largely thanks to an army campaign, greatly intensified after the

school massacre, to clear North Waziristan, a tribal agency bordering Afghanistan that had become infested with jihadis. But as well as taking the battle to the tribal areas, the army sought a series of other measures. In order to bypass a slow and easily intimidated judiciary, military courts were empowered to try civilians. The death penalty, hitherto suspended, was reintroduced with little oversight. Among a spate of recent executions ordered by the courts were four men involved in the school plot, though details of their role are sketchy.

Due process was dispensed with entirely in the case of Lashkar-e-Jhangvi (LeJ), a Sunni supremacist outfit responsible for countless deaths of Pakistani Shias. In the past the authorities have treated it with kid gloves. Yet the group has lost much of its top leadership in what the authorities call "encounters" with police but which in reality are extrajudicial executions. Although weakened, LeJ remains dangerous, killing a provincial home minister in August and two dozen shoppers in the mostly Shia town of Parachinar on December 13th.

More than anyone, the change in official attitudes towards Pakistan's extremists is down to the army chief, General Raheel Sharif (pictured, above). He had been itching to wage a full-blown campaign against domestic militants well before the Peshawar school attack. But a public befuddled by decades of pro-jihadi propaganda was not easily won round, while a new govern-

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Banyan is away

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ment had squandered a year in office trying to hold peace talks with Tehreek-e-Taliban. The school massacre galvanised both public opinion and civilian politicians, and the army still ensures that the horrors of the massacre do not go to waste. For instance, an army propaganda video shows long-haired terrorists holding a village hostage before the army comes and dispatches them all. There is little talk any more of militants being errant tribesmen incensed by filthy American imperialism.

In other parts of the country purveyors of extremist ideology have been challenged, with a few mullahs arrested for hate speech. (Though the head of a notorious place of worship, the Red Mosque in Islamabad, the capital, has become active again.) A number of activists belonging to Hizb-ut-Tahrir, an Islamist group dedicated to the avowedly non-violent pursuit of a caliphate uniting all Muslim nations, have been arrested in recent months. And in October the Supreme Court emphatically rejected the appeal of Mumtaz Qadri who, as a police bodyguard, murdered the governor of Punjab, Salman Taseer, in 2011. Mr Taseer had dared publicly to criticise Pakistan's much-abused blasphemy laws. His murder turned Mr Qadri into a hero among hardline Muslims. So the court's rejection of his appeal was a much-needed stand against religious mob-rule.

Much left to do

Yet drawing the poison from decades of state-sanctioned Islamisation will prove far harder than picking off militant leaders—not least because death squads and the casual use of capital punishment risks a backlash. Meanwhile, a measure of abiding public intolerance came on December 14th when hundreds of people protested outside a shopping complex in Lahore against the nearly unprecedented arrest of ►

► a shopkeeper for putting up a sign barring Ahmadis, a much-persecuted minority Muslim sect.

A year ago the prime minister, Nawaz Sharif, who is no relation of General Sharif's, vowed to make no distinction between "bad" Taliban (those who wreak violence in Pakistan) and "good" ones (militants whom Pakistan has used to gain leverage in Afghanistan, a troublesome neighbour that claims tracts of Pakistani territory, or those who keep alive the territorial dispute with India over Kashmir). Yet few steps have since been taken to curb the Pakistani operations of the Afghan Taliban or its lethal ally, the Haqqani network. Pakistan has consistently argued that it cannot use force while it is trying to broker peace talks between the Afghan Taliban and Afghan government. But at a regional "Heart of Asia" summit in Islamabad last week, Pakistan promised, according to one diplomat, to take action against "irreconcilable" Taliban who refuse to participate in peace talks. Whether it will carry out the

promise is another matter.

This month Pakistan also promised India that it would bring to a speedy conclusion the trial of seven men said to have been involved in terror attacks in Mumbai in 2008 carried out by Lashkar-e-Taiba (let), a group with training camps in Pakistani-controlled Kashmir and with deep links to Pakistan's security agencies. The country's broadcast regulator had already taken the surprise move of banning coverage of Jamaat-ud-Dawa and Falah-e-Insanit Foundation, let fronts designated as terrorist organisations by the UN. But Pakistan has resisted more meaningful steps, such as seizing sizeable physical assets.

Pakistan is likely to proceed with caution against let. The outfit is widely thought of as South Asia's most lethal terrorist group. And through Falah-e-Insanit it runs a vast and popular nationwide welfare organisation. A year ago, for instance, it was their ambulances and volunteers that were most prominent at the many funerals held on a cold winter's day in Peshawar. ■

Thailand's royal pooch

Who are you calling a bitch?

BANGKOK

Dissing the king's dog is a crime in Thailand

THAILAND'S King Bhumibol Adulyadej, who is 88, has a favourite dog. Thongdaeng ("Copper") is a stray whom he adopted in 1998. Four years later he penned a best-selling book about her. Thongdaeng, he wrote, is a "respectful dog with proper manners". She is "humble and knows protocol. She would always sit lower than the King; even when he pulls her up to embrace her, Thongdaeng would lower herself down on the floor, her ears in a respectful drooping position, as if she would say 'I don't dare'."

A rather fitting model for the king's subjects, in other words. And this month an animated film based on the book hit Thai cinemas to the applause of the junta that seized power in May 2014 (abolishing politics along with open expression). Quite how seriously the generals take Thongdaeng has now become clear with the arrest of Thanakorn Siripaiboon.

Since their coup, the generals have made heavy use of laws against lèse-majesté, or insulting the monarchy. Mr Thanakorn has learnt, in a military court, that the laws protect the monarch's copper bitch too. The Bangkok factory worker has been charged over a "sarcastic" post on the internet concerning Thongdaeng. He has also been charged with sedition and insulting the king. He could be imprisoned for up to 37 years if convicted—all for Facebook comments,

"likes" and "shares". Rape in Thailand earns 17 years less than that. Khaosod English, the open-minded website that chose to break the story, quickly took down the post. Other Thai media will not touch it.

A decade ago the king himself called for less draconian use of the lèse-majesté laws. Yet since the coup at least 57 people have been charged for expressing an opinion of the monarchy. Others have been charged for falsely claiming links to the monarchy for the purpose of profit or corruption—two have died in custody.

Criticising the laws can itself be illegal. The police are investigating America's ambassador to Thailand, Glyn Davies, for lèse-majesté after he gave a speech to foreign correspondents on November 25th in which he praised the king but criticised the "lengthy and unprecedented prison sentences" given to those whom military courts have found guilty of lèse-majesté.

Mr Davies has diplomatic immunity, but his expulsion would cause a ruckus with America. Yet Thailand at least would glide on, a noble pyramid with the king at its apex dispensing beneficence, the army and a tiered bureaucracy to assist him, and a broad, grateful and deferential peasantry living happily at the base. No alternative vision is permissible—not even in the fantasy world of the cinema.

North Korea's rock chicks

Songs of praise

SEOUL

A North Korean girl band fails to take China by storm

HARDLY had the group of two dozen winsome North Korean musicians arrived in Beijing, than they were on a flight back home. Their first ever overseas concert, set for December 12th at the National Centre for the Performing Arts (the "egg", as the giant building in the centre of the Chinese capital is known), had been cancelled. North Korea's state news agency removed its gushing coverage of the all-female band's tour from its website. Chinese censors swiftly erased news of the cancellation from their country's social media.

Mysterious last-minute plug-pulling on performances by foreigners are the norm in China. But they usually involve the discovery of political incorrectness: a singer's sympathy with Tibetan independence, for example. The North Korean soft-rock band, Moranbong, could hardly be faulted on that score. Their number "A Song of a Big Haul of Fish" is typical: according to the North Korean news agency it describes an "abundant life under socialism".

More to the point, Moranbong is a favourite of North Korea's leader, Kim Jong Un, who is said to have set it up himself three years ago as a "standard-bearer on the ideological and cultural front". Its five lead singers, who expose an unusual amount of leg for such a puritanical country, have been credited with "arousing" ev-



Tinpot ally

Every member of the 1.1m-strong North Korean army, it is thought, selected the women personally (his fondness for them is reciprocated in their song "We Can't Live Without His Care").

Xinhua, a Chinese state-run news agency, said that the band's tour had been called off because of "communication issues". Theories range from North Korean anger over gossip in South Korea's press about a rumoured dalliance between Mr Kim and the bandleader, to North Korean ire over the low rank of Chinese delegates attending the concerts, to Chinese displeasure at lyrics heard in a dress rehearsal—too effusive, maybe, about the North's nuclear programme (a video of North Korean mis-

siles being launched featured in at least one of Moranbong's shows).

But few think the incident means ties are getting frostier again. China's foreign ministry was quick to say that it would push "co-operation forward on all levels, including cultural exchanges". According to some, North Korea's ambassador to China apologised to local officials for the cancellation. A former senior official at the Blue House, South Korea's presidential office, says there has been "very serious" discussion between North Korea and China about a possible visit to Beijing by Mr Kim—his first since assuming power four years ago. That long-awaited debut is still one to watch out for in 2016. ■

ican, Canadian and Australian export-credit agencies, will allow work to begin on the underground mining phase. When it is at full tilt, Oyu Tolgoi may account for a third of Mongolia's entire economy. No wonder that the protracted squabbling between Rio Tinto and Mongolia over taxes, management fees and other issues seemed like a bad omen. Foreign direct investment in Mongolia fell by 85% between 2012 and 2015. But now the new package is a "huge milestone", says America's ambassador to the country, Jennifer Galt.

Mongolia is not out of the woods yet. Hard currency remains in short supply, inflation is stubbornly high and the budget deficit is way above the target of 2% of GDP, despite tax rises and cuts in public-sector pay. Above all, the country's political turbulence is all but certain to continue. The government's fragility was laid bare in August when the Mongolian People's Party, the country's former communists, was ejected from the coalition and six cabinet ministers were replaced.

A new round of parliamentary elections takes place next spring. According to Sumati Luvsandendev of the Sant Maral Foundation, an independent polling outfit, ineptitude and squabbles within the Democratic Party have led its approval ratings to decline "quite dramatically". Mr Sumati predicts solid gains for the Mongolian People's Party.

The party will appeal to Mongolians' sense of nationalism over mining. One of its MPs, Sodbileg Otgonbileg, says that the Democratic Party's hopes of winning public applause for the Oyu Tolgoi deal are misplaced. Rio Tinto, he says, has been allowed to get away with too much control, excessive management fees and procurement irregularities; instead of maximising the benefit for Mongolians, it is saddling them with debt—"as if we own a beautiful apartment but get treated like a squatter". Activists are critical, too. Sukhgerel Dugersuren of OT Watch, an NGO, says the mine's use of the area's scarce water is unsustainable. She says the mine pays too little tax—and inadequate attention to the interests of local herders.

Executives at Rio Tinto and Oyu Tolgoi insist that the project is run to the highest international standards, that 95% of its workforce is Mongolian and that it has already paid \$1.3 billion in taxes and other fees to the Mongolian government, with much more to come as production increases. They also expect copper prices that are depressed by a sharp drop in Chinese demand to recover by the time the mine's underground phase is ready to produce. And the executives have faith that, whatever the outcome of the election next spring, Mongolian resource nationalism will be kept in check and the project will remain resolutely on track. Indeed, they repeat it like a mantra. ■

Mongolia and mining

Back in the saddle?

ULAANBAATAR

After a period of unstable politics, frail finances and flagging growth, Mongolia may be turning a corner

A PHRASE is repeated like a mantra around Ulaanbaatar, the steppe capital: "Mongolia is back in business." The prime minister, Chimed Saikhanbileg, has said it several times. Foreign mining executives and diplomats have also taken up the refrain. And there is something tangible to cheer at last. After years of squabbles and delays, development of the Oyu Tolgoi copper and gold mine in the Gobi desert, by far Mongolia's biggest investment project, seems to be back on track with the signing on December 15th of a new financing package worth \$4.4 billion.

A Mongol hoard

It is certainly welcome news after a period of spectacular mismanagement, both of the economy and of relations with foreign investors, by the coalition government led by the Democratic Party. In 2013–14 the government introduced disastrous steps to counter a slump in growth that a couple of years earlier had peaked at 17% (see chart). Measures to stabilise prices and subsidise mortgages involved huge injections of central-bank money and off-budget financing. Bad loans in the banking system ballooned. The currency, the togrog, slumped. Foreign-exchange reserves shrank. A balance-of-payments crisis loomed. Mongolia had to turn to China, its overbearing neighbour, for help.

Most inept of all, the government fell out with Oyu Tolgoi's foreign investors just as worldwide commodities prices were tumbling. The mine, boasting a copper deposit that is among the world's biggest and purest, is controlled by Rio Tinto, a British-Australian firm, with the Mongolian gov-



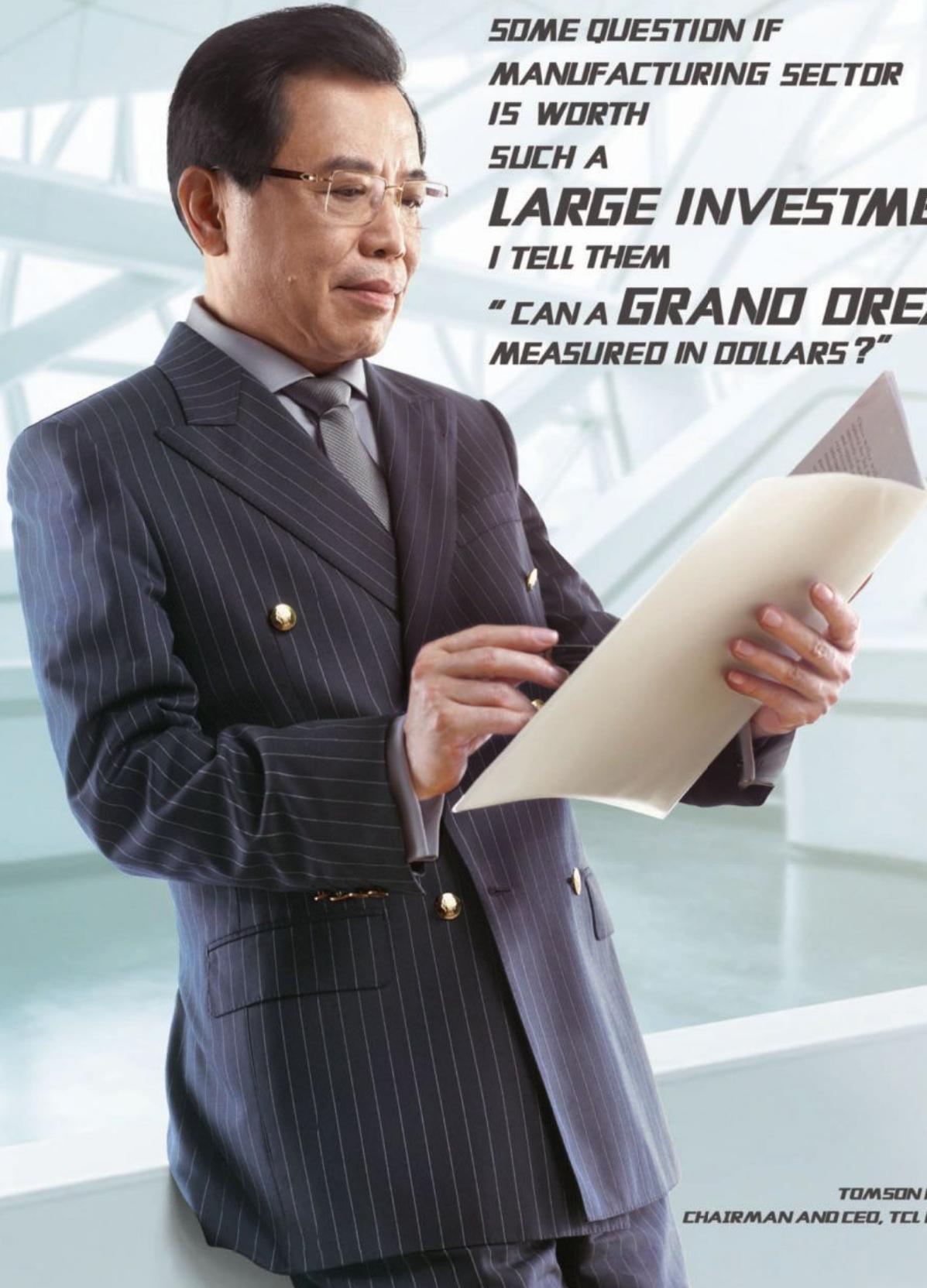
ernment holding a 34% stake. The open-pit portion of the mine began operating in 2013 and has already produced 1.5m tonnes of copper concentrate, most of it for China. But four-fifths of the project's value may lie underground.

This week's financing deal, which involves 15 commercial banks and the Amer-

TCL

创意感动生活
The Creative Life

**SOME QUESTION IF
MANUFACTURING SECTOR
IS WORTH
SUCH A
LARGE INVESTMENT.
I TELL THEM
“CAN A GRAND DREAM BE
MEASURED IN DOLLARS?”**



李东生

TOMSON DONGSHENG LI
CHAIRMAN AND CEO, TCL CORPORATION

TCL: Leveraging the Internet for Industrial Transformation

China is gearing up to implement its “13th Five-Year-Plan”, the blueprint for the country’s growth in 2016-2020. Given the plan’s focus on economic transformation, innovation and internationalisation, Chinese industry has a mandate to elevate production from “Made in China” to “Intelligently Made in China”.

A number of Chinese companies have already made plans for the transformation, including TCL Corporation, a globalised manufacturer of smart products and provider of Internet application services, headquartered in Guangdong. “Industry is the backbone of China’s economy,” says Li Dongsheng, chairman and CEO of TCL Corporation. “Chinese industry needs to grow its innovative potential and strengthen its core competencies to realise the transformation.”

Mr Li believes that China’s industrial sector is going to play an even bigger role in driving future economic growth, assisted by internationalisation efforts and the country’s Internet+ strategy, which aims to transform traditional businesses—their processes, products, even entire business models—through Internet technologies.

As a 34-year-old company manufacturing TV sets, cellphones, home appliances, display panels and much else, TCL understands what it takes to move from “Made in China” to “Intelligently Made in China”. In 2014, in the face of a shock to the Internet economy, Mr Li led the industry by conceptualising the “Double +” transformation strategy of “Intelligence + Internet” and “Product + Services”.

TCL’s restructuring led to record revenues of RMB101.03bn (US\$16.44bn), a year-on-year increase of 18.4% and the first time the firm has surpassed a hundred billion renminbi in sales.

To reach the next hundred billion as soon as possible, in 2015 Mr Li proposed the “Two-wheel Drive” development strategy—business transformation alongside greater overseas expansion. In other words, TCL—the company which acquired Schneider’s colour TV business (in 2002), Thomson’s colour TV business (in 2004), Alcatel’s mobile phone business (in 2004) and the right to use the Palm brand (in 2014)—has already been proactively aligning itself with the objectives of China’s 13th Five-Year-Plan.

Innovative research and development (R&D) boosts competitiveness

TCL understands that business vitality and competitiveness spring from a mastery of core competencies and technologies. In 2010 the firm invested RMB24.5bn (US\$3.7bn) in the 8.5 generation of China Star Optoelectronics Technology LCD panel projects. The 100,000 sq m display panel workshop boasts a myriad of robotic arms, which boosts TCL’s manufacturing capabilities in core parts, but also consolidates its upstream industrial foundation.

In 2014, TCL invested RMB3.9bn (US\$0.6bn) in R&D, a 20% increase from 2013. It registered 2,971 annual patents, of which more than 2100 are invention patents. This puts TCS among the top five Chinese companies in terms of patent applications. Chinese enterprises accounted for 13% of global invention patent applications, up from 7% in 2010.

TCL restructures and transforms by taking advantage of the Internet

TCL has been harnessing the Internet’s transformative power for many years. For instance, in 2009, Mr Li created huan.tv, China’s first smart TV platform. Now huan.tv has 17.919m active users, and an average of 6.757m million daily active users, making it China’s largest smart TV service platform.

Meanwhile, three years ago, TCL invested in GoLive, which was founded to stream Chinese mandarin TV programs globally through the Internet. Through partnerships with content creators and distributors, GoLive has managed to grow its active user base to 3.7m.

Deeper and broader internationalisation continues apace

TCL began its internationalisation in 1999, and has never looked back—today its products are found in more than 160 countries and regions around the world. By the 3rd quarter of 2015, the overseas revenue of TCL accounted for 45.3% of the group’s overall revenue. And in terms of global sales volume compared to its international competitors, in 2014 TCL ranked 4th for LCD TVs, 6th for mobile phones and 5th for display panels. TCL is further expanding and upgrading its cooperation model with qualified countries and regions, gradually developing local industrial capability and product technical skills. For emerging markets, TCL has formulated the “Tri-force” strategy of televisions, mobile phones and household appliances, which it has launched in Brazil, India and Russia.

By leveraging the Internet, strengthening core competencies, and promoting deeper cooperation with global partners, TCL is making dreams come true.

创 意 感 动 生 活
The Creative Life

Park life

BEIJING

A day in the life of one of the capital's few green spaces



FROM the top of a stone pagoda Li Zhaolin is shouting, almost yodelling: "voice exercises", he calls them, to help him breathe. Several people appear to be wrestling with trees, gripping trunks and pushing against them. One man stands with his arm over a branch and rubs his left armpit against it while patting his head rhythmically with his right hand. A few elderly folk walk backwards, a practice that is believed to help back pain and relieve knee stress. Alone or in groups, many practice tai chi, a Chinese martial art, some with fans or swords.

Life in Beijing's Ritan Park begins even before day breaks. At 3.30am, when the gates are still shut, Wang Jiangyou is already chasing leaves with a long twig broom. For the past 17 years he has lived within the grounds, sharing a three-room dormitory with nine other park-keepers. His first shift is nearly finished by the time the gates open at 5.30. Hawkers are already selling fruit outside to the early birds, most elderly, who come to exercise or pace the park's circumference. Many are alone. One carries a radio; a gravelly voice retelling a long Chinese folk story emanates from his pocket. Five old men walk, chatting quietly, one turning wooden meditation balls over and over in his hand.

Aficionados know Ritan ("sun altar") Park as one of Beijing's oldest. The altar was built in 1530 in the Ming dynasty for the emperor to make sacrifices to the sun. It was once part of Beijing's for-

mal layout, lying to the east of the imperial palace of the Forbidden City and balanced to the west by the moon altar (*yuetan*). Altars to the earth and heaven (*ditan* and *tiantan*) formed a north-south axis. These, too, are now parks.

When the sun altar was built, Beijing was probably the world's most populous city, with around 700,000 people. Now it ranks eighth, with 21m, and skyscrapers loom from all sides over the small patch of green, less than half a kilometre square. Private space in China is in such short supply that much activity is pushed into the open. Ritan Park is populated from dawn to dark with locals for whom it is playground, parlour, gym, tea-house and concert hall. Cypress trees, weeping willows and pines line winding paths that lead to painted wooden pagodas sitting over ornamental ponds and rockeries. Yet the park's history is one of constant reinvention, too; of a modern country catching at its past.

Greens for reds

For most of the 500 years since the altar at Ritan was built, it was closed to all except the emperor. Commoners lived in narrow *hutongs*, alleys with almost no open space. Inspired by the 19th-century park movement in Europe, China's first public park opened in 1907 when a former imperial garden was turned into a zoo, the "Park of Ten Thousand Animals" (*wanshengyuan*). Ritan became a ➤

▶ public park only in 1956, part of a socialist vision of opening up formerly proscribed land to the masses.

The authorities demolished walls, repaved the sacrificial area for dancing and later removed it altogether. They planted trees to "green the motherland", only promptly to replace many with nearly 10,000 "productive" fruit trees. In 1965 lawns were laid to "let no bare earth face the sky". Just months later the Cultural Revolution exploded, and the anti-communist "revisionist's poisonous grass" was dug up. At one point the park became a military barracks.

That turbulent history is all but invisible now. In the 1980s Ritan Park and others were reopened, with a conscious effort to incorporate apparently traditional Chinese designs, such as miniature stylised landscapes. A mural near the southern tip, "Sacrificing to the Sun", depicts an invented history: female dancers dominate it, though women were banned from imperial altars; the emperor wears clothes from the wrong dynasty. As China's economy started to gear up, so Ritan became more commercial: it charged an entrance fee and, for a while, hosted attractions such as a roller-skating rink and even a children's spaceship ride. But these closed as it became a place to preserve a supposedly traditional culture—albeit one that was newly invented.

In the 1950s belching factories populated this part of Beijing. These have all moved or shut now, replaced with foreign embassies, a shopping mall known for exhibiting avant-garde art alongside high fashion, and some of the world's priciest flats. But many former factory workers remain in state-provided housing, and it is they who cram life into the park. Over the course of any day almost every corner has multiple uses. Only the recently rebuilt altar, now enclosed by red walls, remains off-limits, still closed to the masses after nearly half a millennium.

The mass line

By 7.30am the north end of the park is covered with poems. A dozen people watch as a man dips a giant calligraphy brush into a bucket of water before writing in the dust. A 61-year-old accountant, he comes here every morning before work. Yesterday he copied six-character poems; today's selection includes Ming stanzas.

At this time of day most exercise is individual or confined to a dozen people at most. But for ten minutes from 8am, the park's north-east corner rings with the voice of 82-year-old Guo Baomu, a charismatic former chauffeur with a baseball cap and microphone, who counts as around 70 people pat their thighs 30 times, then their knees, shoulders, backs and heads. The session closes with a shouted "Be happy!" and Mr Guo goes off to breakfast.

Like much park activity, Mr Guo's is based on the principles of traditional Chinese medicine, which is enjoying a resurgence. Chinese medicine sees disease as a product of troubled interaction between different parts of the body. Qi—life energy or life force—must flow freely through it, hence the patting, which is believed to unblock the body's "meridians", or passageways. Other people do handstands to "make the blood flow backwards"; some use public back-massage machines to help circulation. Towards the centre of the park a man is teaching "natural yoga". He says he can diagnose people's maladies simply by touching their heads.

Urban parks are among the few places in China where people can engage in such activity. They are a haven where older and retired Chinese can socialise or exercise, and a rare zone of flat land for wheelchairs in cities with bumpy kerbs and giant roads. There are more gyms now, but they are pricey. Most Beijingers live in tiny apartments without gardens, often three generations together. But the provision of green space has failed to keep pace with massive

Private space is in such short supply in Beijing that much activity is pushed into the open



urban expansion—which is not yet over. Half the country's population—around 700 million people—already live in urban areas; by 2030 about a billion will. Individuals now have control of their spare time, as they did not under Mao, yet many have little to do. Most women retire at 50 and men at 55 or 60, often with decades of good health remaining (life expectancy in Beijing is 82). Already one in six Chinese is over 60; by 2025 nearly one in four will be.

Public parks everywhere have their private aspects, providing a chance to escape prying eyes in occasional secluded spots. In China public displays of affection between adults are still rare: couples occasionally hold hands but never kiss in public. So, unlike park-life in other countries, there are no signs of secret sexual liaisons in Ritan, nor of drug-takers or drinkers.

But behaviour that many other societies consider private is public here: amateur singing, dancing, massage, even sleeping. By 9.15am most of the calligraphy at the northern end of Ritan has dried up and 12 dancers are strutting between the flower beds to "Xiao Pingguo" (Little Apple), a popular catchy tune. The leader (and radio owner), Ms Luo, wears a flowery sweatshirt adorned with "Love and Peace" in English. She learned the steps on the internet; now her crew is practising to smash a Guinness world record for 30,000 people dancing to the same song at once.

Some parts of the park are almost silent; others are crowded with competing groups. Towards the centre, members of a folk-dance troupe swirl broad red ribbons to "The Good Children of China", a schmaltzy song about nationalistic heroes, under fierce instruction from their permed, bespectacled leader. The plink-plonk nearly drowns out a nearby melody: two people learning the *hulusi*, a recorder-like instrument with a gourd at the top, originally from south-west China. Their instructor, a graceful man in a blue zip-up top, is teaching them "Marriage Vows", a melody from a 1950s film score, the music hooked on the tree with a nail and written in Chinese musical notation, where numbers rather than a five-line stave are used to represent the notes.

Little of this music or dancing is remotely sexual, or even sensual. Most dancers repeat a fixed set of moves without personal interpretation. Ritan's ballroom dancers, however, are a little different. Each couple does its own thing: some waltz gently back and forth while others twirl and dip; some are male-female pairs and others two women. Occasionally a man practises a step off to the side, his hands out wide for an imaginary partner. A nearby tree is adorned with coats and bags, to stop them touching the dirty ground.

Li Ruifen, a 53-year-old woman dressed in a green US army shirt, has been dancing here for the past three months with Min Baozhen, a man with boot-polish-black hair. As they waltz his palm is square on her upper back while she holds only the side of her hand to his; her face is impassive. Both are divorced; Ms Li is retired and lives with her son and his family. They dance for a few hours every morning and then again in the evening.

There is no clear division between performance and practice. ➤

► One man sings all forms of opera and songs ("I admire Pavarotti"), fearing neighbours would complain at home. Twice a week a group of 25 men and women wheel a keyboard into a large pavilion to sing "I Love You, China" and other patriotic anthems. They erect a red banner, "Sing for better health and happiness".

She once was a true love of mine

Li Shuling, who is 65, sings every day with a friend, mostly traditional Chinese songs (plus a version of "Scarborough Fair", an English ballad popularised in China by a Peking opera star). She remembers the anarchy of the Beijing streets during the Cultural Revolution, when she avoided being sent to the countryside because she was caring for her sick mother. She was very upset when Zhou Enlai (communist China's first prime minister) died in 1976, she says, but "not so much" when Mao Zedong died the same year. Life is calm now, she says. She owns her own flat; while she sings, her husband cooks lunch at home.

In every country tribes converge on parks at particular times of day. In the West, early-morning dog-walkers are succeeded by lonely buggy-pushing mothers, then lunchtime joggers. After school come running, shouting children, then lounging and smoking teenagers. A Chinese park's rhythms are different. Dogs are banned. Most runners are gone by 10am (the activity is new enough to China that some jog in work boots and jeans). Teenagers, burdened with homework, are rarely seen during the week.

But Ritan Park has its own tribes, nonetheless. One is the bird-lovers. Every day Mu Xionglu, a former factory worker, comes to "walk the birds and walk myself", meeting friends in a quiet corner, each with two thrushes shrouded by blue cloths. They unveil small wooden cages and hang them on trees, "to let the birds sing together and feel as if they're in nature again". An hour is enough for the birds to let it all out, he says.

A large number of the children in a Chinese park are with grandparents, who most often shoulder the child care. Dai Wei, a shining 16-month-old with stars on his trousers and shoes that squeak at each step, is here with his grandparents, 75-year-old rice farmers from Henan province, who moved to Beijing a year ago to look after him. They spend far more time with him than they did with their own children when they were his age, but avoid fellow park-dwellers, who "look down on us for being farmers".

Even after school finishes for the day, most children in the park are under three, the age at which they start kindergarten. The absence of older children is not owing to Beijing's notoriously polluted air—even on bad days smog rarely stops play and few wear masks—but because Chinese young people spend far less time

outside than those in Europe and North America. Many sleep at lunchtime until they are five or six, and study at night. The share of boys who are obese is twice as high as the share of men who are, and nearly 80% of 16- to 18-year-olds are short-sighted, a common consequence of getting too little daylight.

Childhood frolics are simply not a priority. Playgrounds are rare, and usually charge a fee. In Ritan, bumper cars, a mini-train and other rides are crammed into a small enclosure. Even the slides cost 10 yuan (\$1.50) an hour. The competing, off-key tunes of the different activities recall a horror film rather than a temple to joy; often the attendants (many of them smoking) outnumber the children.

China's government does promote activity for the elderly. "Adult playgrounds"—public, open-air exercise equipment for grown-ups—are ubiquitous and include frictionless cross-trainers, benches for sit-ups and leg exercisers. Such machines first appeared in the 1990s and millions now populate roadsides, parks and villages. In Ritan, their creak and clank is audible all day.

As the number of Chinese people engaged in manual labour dwindles, cardiovascular exercise is becoming more common. Badminton starts at 6.45am. Several men lift weights they made themselves from a wardrobe rail and two concrete blocks. Every afternoon a group of hotel workers kick a jianzi, a cross between a shuttlecock and hacky sack, which they try to keep in the air.

There are lessons in "tai chi softball", where martial-arts moves are made with a racket in hand, its soft latex head enveloping a small ball. Each activity is part-game, part-show: in China, even card-playing is a spectator sport. Most popular in Ritan is Dou Dizhu (Fight the Landlord), a form of Chinese poker. Groups bring small cushions to sit on and several use a bathmat as a card table. Though gambling is banned in China, most are playing for money.

Beijing groovin'

As the light fades, many elderly go home to eat and the average age of park-dwellers falls. At 6.15pm three women are dancing to a soppy tune by the trees, when a man plants a far larger stereo by the next flower bed and without even looking in their direction starts performing ballet-like moves to a thumping beat. The women turn up their sound but within minutes their rival has attracted more followers, and they harrumph off. Though the pace and volume of the park have stepped up, ballroom dancers sway on under the 1,000-year-old cypress tree. A few late arrivals swirl in skirts but most foxtrot in trousers and trainers. Three young women in thick jumpers groove to the ballroom tempo individually, as though at a school disco. The evening crowd is more varied: people stop by on their way home from work; there are more out-of-towners.

Ms Li and Mr Min, the dance partners from earlier on, return after eating steamed dumplings. She is hesitant about dating him, she says, partly because he is not from Beijing but also because he worked for a private business so he has no state pension or health insurance, which "could make things difficult". But he has a good, moral character. Her son likes him.

As the clock reaches 9pm, the park lights flash off and a patrol of guards in red armbands wielding torches urge the masses out. Most obey immediately. The tree is stripped bare of the bags hanging from its branches and people funnel towards the park's three exits. The dance partners gather their things and leave without saying goodbye to their fellow waltzers. They walk slowly together towards the north gate. Tomorrow they will be back. ■



Broom with a view



Internal migration

Shifting barriers

BEIJING

The government reforms a socially divisive system, warily

THE pillars of social control are flaking at the edges. First came the relaxation in October of draconian family-planning restrictions. Now it is the turn of the household-registration, or *hukou*, system, which determines whether a person may enjoy subsidised public services in urban areas—rural *hukou* holders are excluded. On December 12th the government announced what state media trumpeted as the biggest shake-up in decades of the *hukou* policy, which has aggravated a huge social divide in China's cities and curbed the free flow of labour. The pernicious impact of the system, however, will long persist.

As with the adjustment to the decades-old family-planning policy (now all couples will be allowed to have two children), the latest changes to the *hukou* system follow years of half-hearted tinkering. They will allow migrant workers to apply for special residency permits which provide some of the benefits of an urban *hukou* (a booklet proving household registration is pictured above). If an urban *hukou* is like an internal passport, the residency permit is like a green card.

Under the arrangements, migrants will be able to apply for a permit if they have lived in a city for six months, and can show either an employment contract or a tenancy agreement. The document will allow access to state health care where the migrants live, and permit their children to go to local state schools up to the age of 15. It

will also make other bureaucratic things easier, like buying a car. Such reforms have already been tried in some cities. They will now be rolled out nationwide.

For those who meet the requirements, the changes will bring two main benefits. They should allow some of the 70m children who have been left behind to attend school in their native villages to join their migrant parents. And it will allow migrants to use urban services without losing the main benefit of their rural *hukou*: the right to farm a plot of land. According to a survey in 2010 by the Chinese Academy of Social Sciences, 90% of migrants did not want to change their registration status because they feared losing this right.

Collar-colour counts

As with the two-child policy, though, there is less here than meets the eye. Most migrants are casual labourers. They rarely have any labour or tenancy contracts. The success of the reforms will also partly depend on funding. The government recently decided to tie schools' budgets to the number of their pupils. In theory this will cover extra demand. But the system is untested.

There are other catches. In cities of between 500,000 and 1m people, applicants for urban *hukou* will need to have contributed to the government's social-insurance scheme for three years. In cities of 1m-5m, the minimum is five years. And the reforms do not really apply in the biggest cit-

ies. They set their own requirements.

There are similar problems with the 13m people who have no *hukou* at all, which means they cannot obtain the identity card needed for everything from travelling by train or plane to obtaining a passport. About 60% of such people are "black" children, as they are often called in China, born in contravention of the one-child policy. On December 9th President Xi Jinping said those without *hukou* could obtain one. But it is unclear what kind of *hukou* they will get and whether a fine will still have to be paid for violating the family-planning rules.

The government says it hopes 100m rural migrants (there are now about 250m of them living in urban areas) will have urban *hukou* by 2020. That seems unlikely. Many live in the biggest cities where, to judge by the reforms proposed by the city government of Beijing, changing status will get harder: the capital's requirements give precedence to people who have paid 100,000 yuan (\$15,500) in tax a year, far more than manual labourers earn.

The *hukou* policy was introduced in the 1950s to prevent a rush of migrants that might destabilise cities. Since the 1990s, China has depended on migration to provide cheap labour for its manufacturing boom. But it still wants to control where labourers move. It worries that an unregulated flow, especially into the biggest cities, may fuel discontent among the urban middle classes who fear that public services will be swamped. The new reforms to the *hukou* system appear mainly designed to push migrants away from big coastal cities towards smaller ones inland. Zuo Xiuli, a house-cleaner who has worked in Beijing for ten years and earns 2,500 yuan a month, is not sure he will bother to apply. "Of course I hope to get a Beijing *hukou*," he says. "But it's impossible for me." ■

Also in this section

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Philanthropy

Panda power

SHANGHAI

Scepticism about charity starts to give way to generosity

THE feeding frenzy for the pandas comes at nightfall. People furtively approach them, pouring bags of old clothes down their gullets. By day, the trucks arrive to clean the bears out, leaving them empty for the next big meal. The pandas are plastic. They are large, bear-shaped receptacles, designed to entice people to donate their unwanted garments to those in need. First deployed in 2012, there are now hundreds around Shanghai, often placed by entrances to apartment buildings. They swallowed about a million items of clothing last year.

The procession of donors feeding trousers to pandas is impressive. But they usually do so under cover of darkness. Charitable giving is not yet a middle-class habit. Many people still feel awkward about it, despite their growing prosperity. China's GDP per person is about one-seventh of America's. But in 2014 Chinese gave 104 billion yuan (\$16 billion) to charity, about one-hundredth of what Americans donated per person (see chart).

This is partly a legacy of attitudes formed during Mao's rule, when the party liked to present itself as the source of all succour for the poor (to suggest otherwise was deemed counter-revolutionary). Even until more recent years the party was reluctant to encourage charities, worried that they might show up its failings.

The middle classes have worries too—that giving large amounts to charity may draw unwanted attention to their wealth. They do not want to fuel the envy of the have-nots or encourage tax collectors to pay them closer attention. The top 100 philanthropists in China gave \$3.2 billion last year, according to Hurun Report, a wealth-research firm based in Shanghai. That was less than the amount given by the top three in America.

In 2008 when a powerful earthquake hit the south-western province of Sichuan—the deadliest in China in more than 30 years—it seemed that one positive outcome would be a boom in charitable giving. Volunteers poured into the devastated region and donations filled the coffers of aid organisations. Problems soon arose, however. Embarrassed that private relief efforts were proving more effective than official ones, the government reined in citizen-led organisations.

A subsequent succession of scandals about mismanaged funds has not helped the growth of charities either. Even though



most of them are well run, caution is sometimes warranted. Swindlers have even spied opportunity in the panda receptacles. Yuan Yuan, the organisation behind the pandas, noticed copycat ones popping up in Shanghai over the past year. Someone devised a scheme for using these as a way of conning people into donating clothes, and into investing in a business which would supposedly make money by reselling them. Returns of more than 10% were promised—much higher than on deposits in banks. Dozens of people fell for the scam, handing over a total of at least 3m yuan to the crook. They got nothing back.

For Yang Yinghong, general manager of Yuan Yuan, this con was just the latest in a series of challenges. Lest people be tempted to put their refuse in the donation boxes, he came up with the panda design and

made the animals translucent so that passers-by could see that clothes were piling up inside them. The pandas' eye-catching visibility has had an unfortunate side-effect, however. Mr Yang says people prefer to drop off their donations at night because others may think badly of them for giving away perfectly wearable clothes.

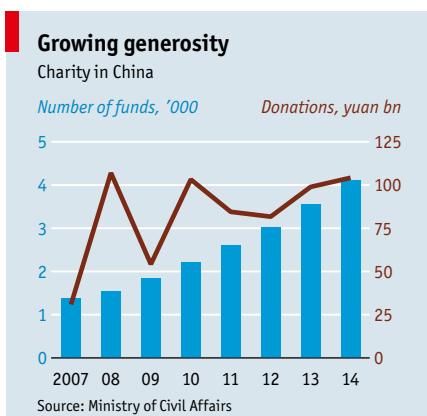
Despite such middle-class diffidence, the proliferation of the pandas on Shanghai's streets may reflect a growing acceptance of public displays of charity. The pandas are migrating around the country, popping up in cities along the coast and deep in the interior.

Big-ticket donations by rich businesspeople are also becoming more common. When Bill Gates and Warren Buffett hosted a dinner in Beijing for China's richest people in 2010, hoping to encourage them to give to charity, many billionaires chose to stay away (Zong Qinghou, a drinks magnate, said that philanthropy was just a way to dodge taxes). Some of them now seem less inhibited. In 2014 Jack Ma, co-founder of Alibaba, an e-commerce company, created a philanthropic trust (the firm's diverse interests expanded further this week with the purchase of Hong Kong's leading English-language newspaper, the *South China Morning Post*—see page 95). Zhang Xin and Pan Shiyi, who are property developers, launched a fund to help poor Chinese students go to universities abroad.

The China Philanthropy Research Institute estimates that fully 80% of donations by the wealthiest Chinese go to overseas charities. Many may well prefer to give to local causes, but regulations have hindered the development of philanthropy at home. To function as a not-for-profit organisation, charities must have a government partner, which entails the loss of their autonomy. It is also difficult for them to obtain tax breaks for their donors.

But this will soon change. The government published a draft law on charities in late October. Under discussion for a decade, it defines charities broadly, and acknowledges that they can help improve everyone's quality of life. The law promises to allow charities to register directly, rather than work through an official partner. They may also enjoy tax exemptions. Zhu Jiangang of Sun Yat-sen University in Guangzhou says the law should help reduce the influence of government, and thus encourage charities to flourish. It is expected to be approved soon.

How far the government is really willing to go remains in doubt, though. At the same time as giving charities more space to operate, it is cracking down on non-governmental organisations, wary of foreign influence. Until charities are allowed to develop independently, the wealthy who aspire to be more generous will have few options. Some quip that it is easier to make money in China than to give it away. ■



That dear old oak in Georgia



MARIETTA

The long afterlife of America's only anti-Semitic lynching

THE old man sat in the synagogue, jiggling his leg as he waited for the story's grim climax. At last the lecture reached the night in August 1915 when Leo Frank was abducted by a gang, brought to this very neighbourhood, and hanged from a tree. When a list of the lynchers was projected onto the synagogue wall, the old man called out. What did the speaker know of the part played by the Burton brothers, Emmett and Luther? Only, came the reply, that the Burtons rode in the back of the car with Frank as, in his night-shirt and handcuffs, he was driven through the darkness to Marietta, and his death.

Emmett Burton was my father, the old man said; Luther was my uncle. He wanted everyone at the talk to know that, shortly after that episode, the Burton brothers enlisted in the American army and rode away in a boxcar to fight in the first world war. They were not just a pair of redneck extremists. They didn't help to kill Frank because he was a Jew, as many then believed and still do. They did it for the little girl who had been murdered.

Reputedly the only anti-Semitic lynching in American history, Frank's death shocked the country and traumatised its Jews. The tawdry, riveting affair combined skulduggery and shockingly public violence; depravity and courage; atavistic trauma and neuroses about modernity (for which, as they often do, Jews served as avatars). Alive and raw 100 years on, it has acquired new resonances and meanings. Now the case bears witness to the tenacity of the past—at once inescapable and intractable—and asks whether memory always illuminates the present, or rather sometimes poisons it. In the pain that still reverberates on its centenary, the story is a reminder that history can often be wrenchingly personal.

Atlanta, then and now

The case generally goes by Leo Frank's name, but it began two years before his death, when, on April 26th 1913, Mary Phagan went to collect her pay at the National Pencil Company in Atlanta. In some ways, Georgia's capital hasn't changed all that much in the intervening century. Then, as now, its boosters peddled an optimistic version of the city as economically progressive and racially harmonious. Public transport, like the streetcar Mary rode into town, was at least as reliable as today's. But in other respects the place was less recognisable. April 26th was Confederate Memorial Day, and Atlanta's parade featured hundreds of real, limping veterans: the civil war's wounds, physical and psychic, were still tender. Meanwhile the factories that powered the city's resurgence ran partly on child labour.

Children such as Mary, who, at 13, had been employed to operate a machine that inserted erasers into the tips of pencils. That lunchtime she received her pay—\$1.20—but never left the factory. In the small hours of the next morning she was found in the basement, her head gashed, her dress hitched up, a cord around her neck. Two mysterious notes lay nearby, purportedly written by her and incriminating “a long tall black negro”. “It's too big a hole to put you in,” Mary's mother, Fannie, cried at her funeral.

Sixty years later, the memory of “Little Mary”, as she instantly became, could bring her brother, Joshua Phagan, to tears. Mary Phagan Kean—Joshua's granddaughter and the murdered girl's great-niece—asked him about her once, in the 1970s. She looked a lot like his long-dead sibling, Joshua told her. But then he began to sob, and she never asked again. When she was born, though, he had requested that she be given his sister's name. “My family”, Ms Phagan Kean says, “has struggled over this for 100 years.”

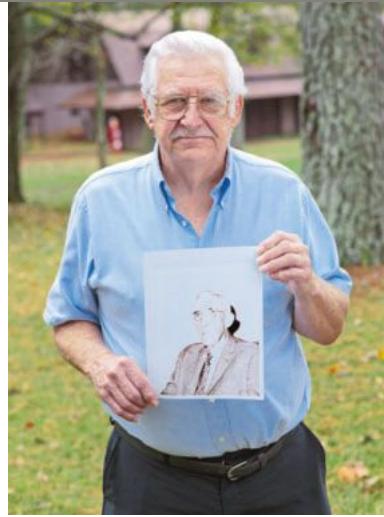
She spent much of her childhood abroad (her father was in the armed forces) and only learned the awful story when, aged 13 her- ➤

►self, a teacher asked whether she and her namesake were related. Today a room in her home in the apple-growing hills of north Georgia contains an archive-cum-shrine to Mary, holding the memorabilia and research she began to amass as a teenager. Ms Phagan Kean, a retired educationalist, tries to rebut what she sees as misconceptions about the case, insisting, for example, that Mary's ten-cents-an-hour job was temporary and that the family was respectable. She curates her great-aunt's memory in a more literal way, tending her grave in the old Confederate cemetery in Marietta, just north of Atlanta and hometown of the child's extended family (the original Mary's father died before she was born).

As children's graves often are, Mary's is cluttered with toys and miniature angels, at once mawkish and heartbreaking. The grave-stone declares the dead girl's "heroism" to be "an heirloom, than which there is nothing more precious among the old red hills of Georgia". That is a reference to the theory that she died resisting sexual assault—just as the South itself, many southerners believed, had nobly resisted violation by the north. The botched investigation failed to confirm that hypothesis, along with other key facts. Atlanta's police were bumbling, brutal and corruptly entwined with its newspapers, which, following William Randolph Hearst's purchase of the *Atlanta Georgian*, were themselves embroiled in a reckless circulation war.

Of the many suspects the police detained, amid a frenzy of tip-offs and slanders, the man charged—because of his allegedly shifty demeanour, as well as groupthink, stubbornness and latent rivalries among police and lawyers—was Leo Frank. Then aged 29, Frank was born in Texas but grew up in New York and studied at Cornell University. He was the pencil factory's superintendent (his uncle Moses was a shareholder), and, having dispensed Mary's pay, was the last person to acknowledge seeing her alive. He was also a Jew. "Police Have the Strangler" screeched the *Georgian's* front page after his arrest.

Two slugs of evidence helped secure his conviction in a cramped, baking Atlanta courtroom. A gaggle of young women testified that he had previously harassed Mary or themselves. More damning still was Jim Conley, a hard-drinking, heavily indebted factory sweeper with a police record as long as his broom. Lionised as the "ebony chevalier of crime", Conley claimed to have stood guard while Frank conducted assignations in his office. As Steve Oney relates in "And The Dead Shall Rise", a superb his-



Emmett Burton, son and father

tory of the case, after Conley alleged that his boss had a penchant for oral sex, the judge cleared female spectators from the courtroom. According to Conley, Frank "wanted to be with the little girl" and struck her when she refused; Conley had written the strange notes at Frank's dictation, and had helped move Mary's body to the basement.

As the best lies are, his account was rich with idiosyncratic details: of clothes and drinks and dialogue. By contrast, Frank's statement was nerdy and rambling. The prosecutor timed his summation so that his final word—"Guilty!"—punctuated the chimes of a church clock. The jury obliged, the judge sentenced Frank to death and Atlanta rejoiced.

Frank wasn't in court for the verdict: everyone agreed the risk of mob violence, should he be acquitted, was too high. His absence informed claims that the whole trial

was discredited by prejudice. Certainly both sides dealt in noxious racial stereotypes, sexual and otherwise—of Jews but, even more, of blacks. The defence called Conley "a plain, beastly, drunken, filthy, lying nigger", arguing that to take his word over a white man's would be disgraceful; the prosecution relied on the perception that he was too simple to have invented his tale.

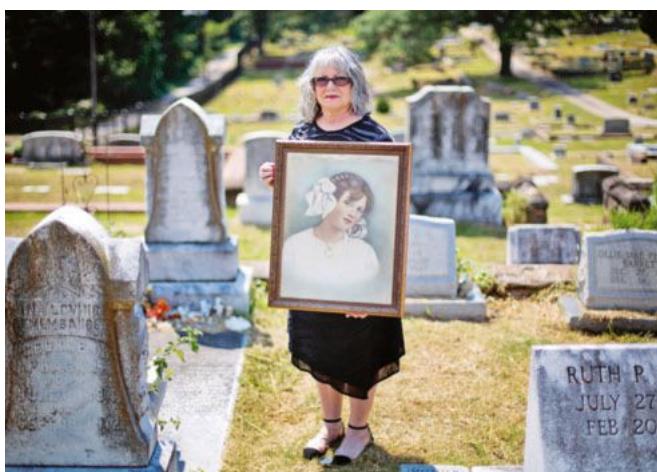
Ms Phagan Kean believes Frank was guilty, and that the trial itself was not anti-Semitic. Reports that, as the jury deliberated, crowds chanted "Hang the Jew or we'll hang you!" are, she points out, apocryphal. But she does not deny the tornado of prejudice that engulfed Frank afterwards. Eminent northern Jews mobilised for his freedom, comparing his predicament to the Dreyfus affair in France. The ferocious response in Georgia was led by Tom Watson, a former congressman and Populist vice-presidential candidate, by then the demagogic publisher of the *Jeffersonian*. His coverage blended ancient anti-Semitic tropes of Jewish predation and avarice with the resentment of carpet-bagging Yankees to which, as a northern industrialist, Frank was equally vulnerable.

J'accuse, y'all

It is an ugly story, but it has its heroes. William Smith, an enlightened lawyer who represented Conley, was one. Analysing the murder-scene notes after the trial, Smith became sure that his own client was their author and had therefore committed the crime—and wrecked his own career by saying so. On his deathbed Smith again affirmed Frank's innocence. Another was John Slaton, Georgia's governor and Frank's last hope after other legal remedies failed. Slaton re-examined the evidence during his final days in office. "I would be a murderer if I allowed that man to hang," he concluded as he commuted the sentence to life imprisonment. A mob promptly besieged his mansion; Slaton was burned in effigy and reviled as "King of the Jews". Rumours of secret financial inducements—of "Unlimited Money and Invisible Power", in Watson's words—swirled around the case, as, more quietly, they still do.

He couldn't save Frank. Watson demanded his lynching; with unusual premeditation, a vengeful group from Marietta, drawn from families that were (and in many cases, remain) wealthy and well-connected, vowed to accomplish it. Among them were a judge, a sheriff, a mayor, incumbent and former state legislators and a former governor of Georgia. Naturally, they enlisted less prominent men to do most of the dirty work. The recruits included Emmett Burton and his brother Luther.

Those two were not, maintains Emmett Burton's son (also called Emmett), "two crazy men after a Yankee Jew". If they had been motivated by prejudice, he and others ask, why didn't they settle on Conley, the black man? They thought Slaton, who was a partner in the firm of one of Frank's lawyers, was chasing Jewish business. "He was convicted and his sentence was to hang," says



Little Mary and her great-niece

► the surviving Emmett Burton, still a resident of Marietta and now the closest living relative of anyone involved. "What's the difference in who hung him?" His father's role was "nothing anybody bragged about", he says, but nor is it a source of shame. "They just wanted to give that little girl justice."

Yet along with their perspective on the killings, in private as at the synagogue, Mr Burton urgently wants to relay his forebears' wider personalities and deeds: to insist, in other words, that a person's life should not be reckoned by one dark night. He tells a funny story about Emmett senior resisting his regulation buzz-cut after he joined the army and ending up with a stripy bonce; he has the record of his father's discharge after the first world war, which describes his character as "excellent". The elder Emmett was a farmer and long-serving police officer, who, says his son, distributed silver dollars to children at Christmas: "Daddy was well thought of." For his part, Uncle Luther was a champion chequers player; he ran a coal-yard and, during the Depression, gave coal to the poor. He was known as "dollar-bill Burton" for his generosity.

Mr Burton has bills of sale that show his father traded with Jews, and he has photographs. Just as old pictures help to resurrect the victims in the case—Little Mary impishly pretty, Frank pale and fragile, both of them tragically unaware of their impending fates—so do photos of the vigilantes. There is Emmett senior, a lean young man in farm overalls; there he is again, older and in police uniform. To his son, he was not a villain but an upstanding citizen, and a parent. "My father", Mr Burton says, "was not a low-life drunken monster."

Just like the old days

On the night of August 16th 1915 the lynching party drove to the state prison at Milledgeville, cut the phone lines, easily subdued the staff—the ringleaders seem to have leaned on prison authorities—and handcuffed and abducted Frank. He sat between Emmett and Luther in the back of one of the convoy's cars. Local legend has it that the brothers told Frank he would be spared if he confessed. ("That's Hollywood," Mr Burton comments dismissively. "Why would they say that?") Near dawn, on the outskirts of Marietta at a place called Frey's Gin, named for the former sheriff who owned the land, the lynchers looped a rope around the bough of an oak tree and perched Frank on a table. A fellow prisoner had tried to cut his throat, so his last words may have been hoarse: "I think more of my wife and my mother than I do of my own life." It wasn't a long drop and he didn't die quickly.

A large crowd soon gathered: lynchings, like other forms of terrorism, were above all public spectacles. After it was cut down, Frank's body had to be wrestled away from the mob, like some Southern Gothic version of a scene from the "Iliad". Pieces of tree and rope—though not, as in some instances, pieces of the victim himself—were taken as souvenirs. Thousands more people viewed the corpse at the undertaker's in Atlanta, just as thousands had filed past Mary's. "The Wages of Sin is Death," crowed Watson in the *Jeffersonian*. "Semper Idem" reads the gnomic Latin inscription on Frank's headstone in New York: "Always the same".

Today the lynching site is a patch of noisy scrubland in the shadow of an interstate flyover. Unlike the nearby Big Chicken, a giant mechanical rooster that nests on a fast-food restaurant and is a Marietta landmark, the place is unheralded and overlooked, as well as overgrown. The trees themselves are long gone (though for a while part of Frank's bloodied nightshirt was displayed at a bar up the road). So are the plaques affixed by Rabbi Steven Lebow to the side of an adjacent office building, since demolished. Still, for the past 20 years, on the anniversary of the lynching Mr Lebow has said *kaddish*, the Jewish prayer of mourning, for Frank on this spot; in recent years he has said it for Mary, too. He keeps the plaques in his room at Marietta's Kol Emeth synagogue.

Mr Lebow grew up in Florida and moved to Marietta in 1986, peripherally aware of the Frank affair from studying and teaching Jewish history. His interest was galvanised two years later by the



The fateful site, where the rabbi says *kaddish*

broadcast of a mini-series about it, starring Jack Lemmon as Slaton. He realised that he was passing the lynching site every day on his way to the synagogue. After he put up the plaques, he would occasionally trim the foliage around them in the middle of the night. Sometimes he walks his dog here. "A rabbi", says Mr Lebow, "is a professional rememberer." And, in Frank's case, for a long time everyone else wanted to forget.

That included America's Jews. Initially there was uproar—among Jews who thought such bloodletting belonged in old Europe, and those gentle Americans who agreed. From a modern perspective, the killers' impunity was even more shocking than the crime. Many photographs were taken, which soon circulated as postcards, as was customary. None of the smiling faces around the dangling corpse is covered. Yet no one was punished—not surprisingly, since the investigation was overseen by one of the conspirators, and the grand jury convened to consider the case was stuffed with them. On the contrary, some of them benefited. Watson became a senator; the circulation of his *Jeffersonian* rocketed. The prosecutor at the trial became governor of Georgia. The broader cause of American racism was fatefully buoyed as well. Several of the participants joined the posse which, three months later, ascended Stone Mountain, just outside Atlanta, to burn a huge cross, marking the rebirth, after a 45-year hiatus, of the Ku Klux Klan. Luther Burton later signed up.

But for Jews in Marietta and Atlanta, the legacy was a strangulating compound of fear and shame. Jewish businesses were vandalised and some Jews harassed. Many fled, their hopes of amicable integration undone. Chuck Marcus, a great-nephew of Lucille Frank, Leo's widow, says his father Alan, a child in 1915, remembered leaving Atlanta in a wagon in the middle of the night; the family's lives were marred for ever, Mr Marcus says. He himself knew nothing about the calamity until Lucille died in 1957 (she mostly stayed in Atlanta, working at the glove counter of a department store, where her customers included wives and daughters of her husband's killers). Forever wary of unwanted attention, Lucille asked to be cremated. For months Alan Marcus kept her ashes in the boot of his car; eventually, in secret, he and his brother buried them between her parents' gravestones.

One in six million

Just as Atlanta's Jews preferred not to talk about Frank, so, for different reasons, did the lynchers. The case receded from public consciousness, but it didn't die. In 1982 Alonzo Mann—then 83, but in 1913 an office boy at the National Pencil Company—came forward to say that, on the day of the murder, he had seen Conley carrying Mary's body, in circumstances that contradicted the sweeper's testimony. Conley had threatened him, Mann said, and his parents had enjoined him not to tell anyone. That set off a push for a posthumous pardon. Even then, some elderly Jews were opposed to the effort, for fear of raising old demons. Evidently those nerves

► were justified. Roy Barnes—then a political ally of Georgia's governor, a job he later did himself—says that influential people lobbied against the initiative. Anti-Semitism infected the debate.

In 1866 a pardon was granted, on the basis not of Frank's innocence but that the state had failed to protect him. Then, in 2000, a list of the lynchers, originally compiled by Ms Phagan Kean, found its way onto the internet. Several such rosters were put together over the years—characteristically for a case in which everything is doubled. It has two murders, two Leo Franks (innocent and perverted), two Atlantas (bustling and barbaric). But this was the first to be published. Among those who learned only in the 21st century that their family was complicit was Governor Barnes's wife, whose grandfather was on the lists. She was ashamed.

Still it isn't over. At a moving memorial service in August, Mr Lebow and assorted Georgian judges called for Frank to be fully and finally exonerated by the state. "It is not possible to make the future good", the rabbi told what, these days, is Marietta's thriving Jewish community, "unless we are willing to make the past right." Over the summer a roadside billboard proclaimed Frank's innocence. Once again, there are dissenters.

Mr Lebow and Ms Phagan Kean, Little Mary's great-niece, have clashed in the past. Why, she asks, is the rabbi so interested in a case to which he has no direct connection? And indeed there is something quixotic about this focus on a 100-year-old incident when so much else has befallen the world's Jews and, for that matter, Georgia. Altogether 22 people were lynched in the state in 1915, including John Riggins—a black man, like all the mobs' other victims—who was killed on the same day as Frank. Georgia lagged behind only Mississippi in that abhorrent pursuit. For all the guff about progress, dozens of blacks were massacred in Atlanta itself during a racist pogrom in 1906, just a few years before the Phagan-Frank saga began.

The rabbi thinks Frank's fate emblematic of all these injustices, from the atrocities of the Jim Crow era to contemporary police violence. That view is endorsed by civil-rights leaders such as John Lewis, a congressman whose skull was fractured on the bridge in Selma in 1965, and who agrees that "racism and anti-Semitism are one and the same". Mr Lebow himself has fought other battles. He first got involved in civil-rights issues after the county commission passed a homophobic resolution in the 1990s.

But he acknowledges that his devotion to Frank's cause has a psychological component, too. He has no extended family: many of his relatives died in the Holocaust, leaving the American branch with only another set of painfully inadequate black-and-white photographs. All that wider suffering is not a contradiction of his mission, he reasons, but an explanation. "This is my one small corner of the world that I can attempt to put right," the rabbi says. "I can't do anything about the 6m, but this one has a name and a face I know."

Leo Frank, the musical

Gruesome as their deaths were, Mary Phagan and Leo Frank have inspired many artists. Besides the television series and other screen adaptations, there are the songs. Fiddlin' John Carson, balladeer of the poor, rural whites who swelled Atlanta's population at the turn of the 20th century, wrote several. In the lyrics of the best-known, Frank "laughed and said, Little Mary,/You've met your fatal doom". Carson sang that on the steps of the state capitol as the governor weighed the condemned man's life. Another of his ditties celebrated the "Dear Old Oak in Georgia" from which

Frank was hanged.

Then there is "Parade", a musical that premiered on Broadway in 1998 and was later a hit in London. In November students at Kennesaw State University revived it for one night in Marietta, part of a series of centennial events organised by the university and the Southern Museum of Civil War and Locomotive History. "Parade" emphasises Georgia's lingering Confederate sentiment and Frank's incongruous northerness: he cannot bear Atlanta's "magnolia trees and endless sunshine". Alfred Uhry, the librettist, is the great-nephew of the National Pencil Company's biggest shareholder. As a child he knew Lucille Frank, he recalls, but when Leo was mentioned older family members would leave the room. The theatre stands on the square where, 100 years ago, jubilant townsfolk gathered after the lynching.

As Mr Oney, the author, puts it, alone among Americans southerners are constantly stumbling over partly open graves, endlessly confronting the sins of previous generations. Some would prefer this particular trauma to be irrevocably interred. "The Phagan family", insists Ms Phagan Kean, "wants this to die." She was in the

theatre for "Parade" and was distressed by its portrayals of Little Mary as flirtatious and her mother Fannie as anti-Semitic. "They don't realise how much pain they cause," Ms Phagan Kean says. She rebuffs the overtures of far-right groups who try to exploit her great-aunt's death: the Klan once marched to the cemetery (some of the lynchers are buried there too), and on the internet Frank is a pin-up for white supremacists. Equally, though, she passionately opposes his exoneration. Somehow she believes that those advocating it dishonour Mary's memory. If the rabbi gets his way, she says, she will erect a marker declaring Frank the murderer: "I'm not going to stop."

A century on, conclusive proof is impossible. What is clear is that the trial was unfair—by the standards of its own time, let alone today's. The prosecution suppressed evidence that favoured Frank; prejudicial testimony was admitted; several damning witnesses later recanted. Conley—who did ten months on a chain gang as an accessory, but was soon back inside—lied incessantly. At first he claimed to be illiterate, admitting he

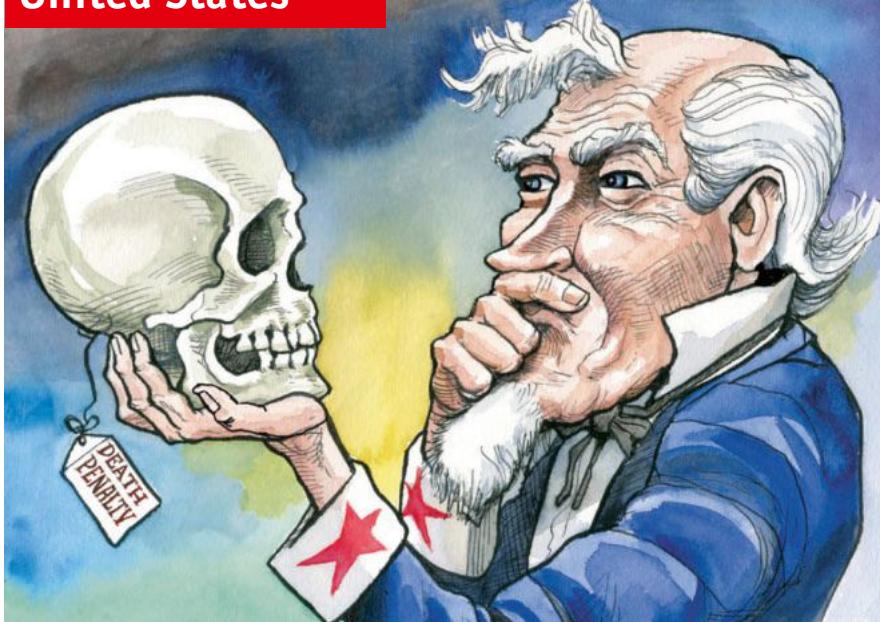
wrote the notes only after his handwriting was identified; his story changed drastically under police tutelage. Almost certainly he killed Mary himself, realised that someone would have to swing, and saw a way for that to be Frank. But probably only he, Frank and Mary could ever have said for sure.

Some things will never see the light of day. "All I know", says Mr Burton, "is that it didn't happen like they're saying." Coincidentally he is an expert on vintage cars—for 35 years he supplied vehicles for films—and he is convinced his father, uncle and the rest couldn't have got to Milledgeville and back in the way conventional accounts of that night describe. He believes the conspiracy was even wider, and blame more diffuse, than it appears. But he knows it is too late for further resolution. "There's nothing that can be done now," Mr Burton says. "It's all been done." Most of all, he "would like for it never to be discussed again by anybody."

Frank was not talked about in the Burton household. But, in a tangible way, he was always there, and still is. In the dresser in the master bedroom there was a drawer that was always locked. Inside the drawer there was a box, also locked. In the box, Mr Burton says, were the handcuffs his father put on Frank's wrists at the prison and took off him when he was dead. He still has the handcuffs, though he declines to produce them. "Nobody", he says, "will ever lay their eyes on them." ■



Pieces of tree and rope, though not, as in some instances, of the victim, were taken as souvenirs



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Capital punishment in America

Who killed the death penalty?

ATLANTA

Many suspects are implicated in capital punishment's ongoing demise. But one stands out

EXHIBIT A is the corpses. Or rather, the curious paucity of them: like the dog that didn't bark in Sherlock Holmes, the bodies are increasingly failing to materialise. Only 28 prisoners have been executed in America in 2015, the lowest number since 1991. Next, consider the dwindling rate of death sentences—most striking in Texas, which accounts for more than a third of all executions since (after a hiatus) the Supreme Court reinstated the practice in 1976. A ghoulish web page lists the inmates admitted to Texas's death row. Only two arrived in 2015, down from 11 the previous year.

There is circumstantial evidence, too: of the political kind. Jeb Bush, a Republican presidential candidate—who, as governor of Florida, oversaw 21 executions—has acknowledged feeling “conflicted” about capital punishment. Hillary Clinton, the Democratic frontrunner, said she “would breathe a sigh of relief” if it were scrapped. Contrast that stance with her husband's return to Arkansas, during his own campaign in 1992, for the controversial execution of a mentally impaired murderer. Bernie Sanders, Mrs Clinton's main rival, is a confirmed abolitionist.

The proof is overwhelming: capital punishment is dying. Statistically and politically, it is already mortally wounded, even as it staggers through an indeterminate—but probably brief—swansong. Fairly soon, someone will be the last person to be

executed in America. The reasons for this decline themselves form a suspenseful tale of locked-room intrigue, unexpected twists and unusual suspects. So, whodunit? Who killed the death penalty?

Twelve less angry men

Where politicians follow, voters often lead. Capital punishment is no longer a litmus test of political machismo because public enthusiasm for it is waning. Most Americans still favour retaining it, but that majority is narrowing. And one critical constituency—the mystery's first prime suspect—is especially sceptical: juries.

Take the case of Eric Mickelson. In 2011 a jury in Louisiana sentenced him to death for murdering and dismembering an elderly man. Problems with the original trial led to a rerun this year: the new jury gave him life without the possibility of parole. According to a tally by the Death Penalty Information Centre (DPIC), a lobby group, overall only 49 people were sentenced to death in America in 2015, the lowest total in modern records. This despite the fact that, to serve in a capital trial, a juror has to be willing in principle to hand down a death sentence. (Actually doing so can be traumatic: Stewart Dotts “had always considered myself a reasonably tough guy”, but serving on a jury that passed a death sentence in New Jersey gave him many sleepless nights. “It's an unfair burden to place on ordinary citizens,” Mr Dotts concludes.)

The widely available alternative of life without parole—which offers the certainty that a defendant can never be released—helps to explain that trend. So does the growing willingness of jurors, in their private deliberations, to weigh murderers' backgrounds and mental illnesses; ditto the greater skill with which defence lawyers, generally better resourced and trained than in the past, muster that mitigating evidence. But the biggest reason, says Richard Dieter of the DPIC, is juries' nervousness about imposing an irrevocable punishment. Behind that anxiety stands another, unwilling participant in the death-penalty story: the swelling, well-publicised cadre of death-row exonerees.

People like Harold Wilson, who served over 16 years for a ghastly triple homicide in Philadelphia before being exonerated in 2005. A decade later he is still fighting for compensation, as well as campaigning with Witness to Innocence, an exonerees' organisation. He has “walked through hell”, Mr Wilson says. Ironically he thinks he might still be inside, doing life, if prosecutors hadn't overreached in their quest to kill him. It's a “broken-down system”, he believes. In 2015 alone, six more prisoners have been freed from death row.

Those mistakes implicate another suspect in the death penalty's demise: prosecutors. The renegades who have botched capital cases—by suppressing evidence, rigging juries or concentrating on black defendants—have dragged it into disrepute. But some responsible prosecutors have also contributed, by declining to seek death in the first place. They have been abetted by another unlikely group: victims' relatives.

Bethany Webb's sister was among eight people killed in a Californian hair salon in 2011; her mother was shot, but survived. She wants the culprit to die “alone and unnoticed”, rather than being euthanised in ►

► an execution-night circus. The way prosecutors messed up the case—by needlessly deploying a jailhouse informant—has alerted her to the risks of injustices in others. Then there is the attritional legal rigmarole: the killer would smile at the victims' families at court appearances, Ms Webb says; her mother is obliged to relive the trauma at each fresh hearing. A life sentence would have meant that “next time we see his face in the paper, it would be for his obituary”.

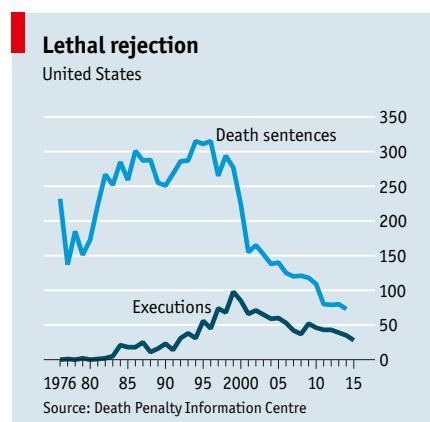
To avoid that protracted agony, says James Farren, district attorney of Randall County in Texas, “a healthy percentage” of families now ask prosecutors to eschew capital punishment. Mr Farren also fingers another key player in the death-penalty drama: the American taxpayer.

Capital cases are “a huge drain on resources”, spiralling costs that—especially given juries’ growing reluctance to pass a death sentence anyway—have helped to change the calculus about when to pursue one, Mr Farren says. In 2011 a Californian study estimated that death-penalty trials cost the taxpayer an extra \$1m a pop. Guilty verdicts mean lengthy and pricey appeals; death-row prisoners are often incarcerated in expensive isolation. Prosecutors are sometimes explicit about the trade-off between punishment and payment: in Arizona one withdrew his bid for a death sentence, court documents show, to help the county “meet its fiscal responsibilities”. Defence lawyers can be equally frank. Katherine Scardino says that, on being appointed in Texas, “the first thing I do is, I go start spending the state’s money”—on psychologists, investigators, the lavish cast of capital trials. Ms Scardino included an estimate of the cost of going to trial in a recent plea bargain.

The mystery of the empty vial

Even in vengeful Texas, she thinks, voters will eventually say of egregious villains, “Lethim rot” in prison instead. Like exonerations, says Cassandra Stubbs of the American Civil Liberties Union, the exorbitant costs are a flaw that attracts widespread disapproval. They create an extra injustice: just as it was once unfair for death sentences to be reserved for the poorest criminals with the worst lawyers, so it is equally unjust for some to be spared on account of being tried in poor jurisdictions. A further upshot is an average delay between sentencing and executions that, at the last count, had risen to 16 years. The experience of Dale Cox, a prosecutor in Caddo Parish, Louisiana, is emblematic. He has been characterised as a juridical angel of death because of his outspoken advocacy of the ultimate punishment. Nobody prosecuted by Mr Cox has ever been executed.

Even when the appeals are exhausted, enacting a death sentence has become almost insuperably difficult—because of an



outlandish cameo by the pharmaceutical industry. Obtaining small quantities of drugs for lethal injection, long the standard method, might seem an easy task in the world’s richest country; but export bans in Europe, American import rules and the decision by domestic firms to discontinue what were less-than-lucrative sales lines has strangled the supply. Arizona’s latest chemical misadventure is typical of the resulting travails. As Dale Baich, a public defender there, puts it, with several others the state was recently caught in “a drug deal gone bad”, after it tried to buy a deadly compound from a middleman in India; the batch was impounded by federal officials at Phoenix airport. This squeeze has obliged states to experiment with new concoctions and suppliers, not all of which are reputable. Those manoeuvres have given rise to gruesomely protracted executions—and still more litigation.

Lethal injection was intended to be reassuringly bloodless, almost medicinal (as, once, was electrocution). Should it become impractical, it is unclear whether Americans will stomach a reversion to gorier methods such as gassing and shooting: they are much less popular, according to polls. The death penalty’s coup de grace may come in the form of an empty vial.

Or it may be judicial rather than pharmaceutical: performed in the Supreme Court, the most obvious suspect of all. In an opinion issued in June, one of the left-leaning justices, Stephen Breyer, voiced his hunch that the death penalty’s time was up. He cited many longstanding failings: arbitrariness (its use varying widely by geography and defendants’ profiles); the delays; the questionable deterrent and retributive value; all those exonerations (Mr Breyer speculated that wrongful convictions were especially likely in capital cases, because of the pressure to solve them). He concluded that the system could be fair or purposeful, but not both. Meanwhile Antonin Scalia, a conservative justice, recently said he would not be surprised to see the court strike capital punishment down.

Cue much lawyerly soothsaying about that prospect. Yet the legal denouement is

already in train: a joint enterprise between state courts, legislatures and governors. Of the 19 states to have repealed the death penalty, seven have done so in the past nine years. Others have imposed moratoriums, formal or de facto, including, in 2015, Arkansas, Ohio, Oklahoma, Montana and Pennsylvania. The number that execute people—six in 2015—is small, and shrinking. (After their legislature repealed the death penalty in May, Nebraskans will vote in 2016 on reinstating it; but their state hasn’t executed anyone since 1997.) These machinations may help to provoke a mortal blow from the Supreme Court. After all, the fewer states that apply the punishment, the more “unusual”, and therefore unconstitutional, it becomes.

Juries; exonerees; prosecutors, both incompetent and pragmatic; improving defence lawyers; stingy taxpayers; exhausted victims; media-savvy drugmakers: in the strange case of the death penalty, there is a superabundance of suspects. And, rather as in “Murder on the Orient Express”, in a way, they all did it. But in a deeper sense, all these are merely accomplices. In truth capital punishment is expiring because of its own contradictions. As decades of litigation attest—and as the rest of the Western world has resolved—killing prisoners is fundamentally inconsistent with the precepts of a law-governed, civilised society. In the final verdict, America’s death penalty has killed itself. ■

Muslim refugees

Doing just fine

ST LOUIS

How Muslim refugees from Bosnia transformed a corner of the Midwest

“**A**merica has always been conflicted about immigration,” says Anna Crosslin, head of the International Institute of St Louis, which sponsors refugees and helps them after they arrive. In the 1840s brawls erupted in St Louis when Germans took against the Irish newcomers. The same happened when the first Italians came to a town then considered the gateway to the West. In the late 20th century the influx of Hispanic and Asian immigrants created a familiar tension.

It was no different when thousands of Bosnian refugees fleeing civil war in the former Yugoslavia were settled in St Louis in the 1990s. The city and its previous waves of immigrants were fearful and even resentful of the newcomers, who were almost all Muslims. When some built smokehouses in their backyards and spit-roasted a whole lamb, the International Institute received phone calls from locals tell-



Room at the inn

▶ing them that the Bosnians were barbecuing the local dogs.

The fear and suspicion lasted for two or three years, during which the new arrivals rebuilt their lives at sometimes astonishing speed. Ibrahim Vajzovic came to St Louis in 1994, aged 35, with his wife and three children. Within six weeks he had an entry-level job at a printing plant, and he quickly advanced to warehouse manager. In 1999 he enrolled at graduate school and earned a PhD. Today he owns three businesses and teaches at Webster University. His son is an engineer; one daughter is a lawyer at a well-known firm in Chicago, and his other daughter is at Harvard Law School. "We made big sacrifices," admits Mr Vajzovic. His biggest problem when he arrived was his inability to speak English.

Thanks to the industrious Bosnians, an entire neighbourhood in southern St Lou-

is, Bevo Mill, was transformed from a crime-ridden area pockmarked by abandoned buildings into a decent quarter with small shops and restaurants with vowel-poor names: Stari Grad, Grbic. Today more than 50,000 Bosnian refugees and their children live in the St Louis area. They have built two mosques and set up a chamber of commerce. Their community has lower crime and unemployment rates than among the general population. And they are better off: Jack Strauss of St Louis University has found that immigrants in the area, many of them Bosnians, earn on average \$83,000 a year, or 25% more than those who were born in America. They are more inclined to start a business, three times more likely to be skilled rather than unskilled and much more likely to have an advanced degree. In general, immigrants are also less likely than the native-born to

receive food stamps or cash assistance from the government. Mr Strauss concludes that St Louis now would be doing much better, compared with other big cities, if it had attracted more immigrants. (The immigrant population makes up 4.5% of the total; in Chicago it is 21%).

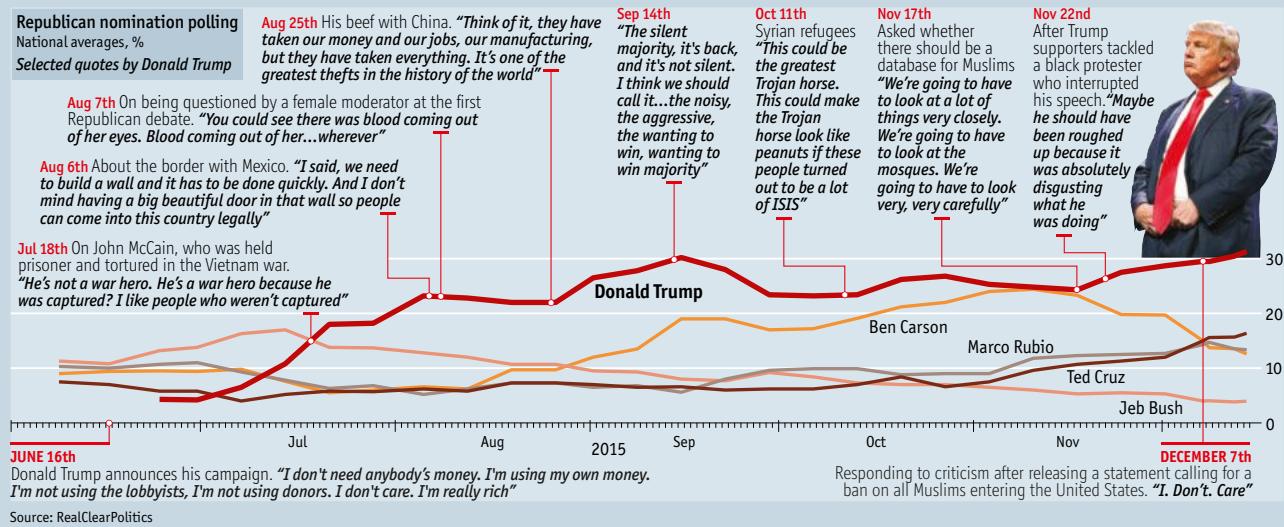
Like many cities in the Midwest, St Louis is suffered from the decline of manufacturing and the consequent flight of residents to the suburbs. In the census of 1950, 856,796 residents were recorded, making it one of the largest cities in the country. By 2010 only 319,294 people lived there. This is one of the reasons why Francis Slay, the mayor of St Louis, has not budged from his call to welcome Syrian refugees to his city, in spite of the backlash after the terrorist attacks in Paris and California. Leaders of the local Bosnian community would like to see more Syrians in St Louis; so far this year, a mere 29 have been resettled there.

At Bosna Gold, business was slow at lunchtime on a sunny December day. Neither the employees nor the solitary diner spoke English. All attention was focused on the Bosnian soap opera on the television behind the bar. Bosna Gold is busier at night when men come to eat tripe (tripe), sarma (stuffed cabbage) and cevapi (sausage), drink, smoke and discuss sports (Bosnians have lifted the level of St Louis soccer). The older generation is homesick, torn between the beautiful life they have created here and the country they left behind, says Nedim Ramic, a lawyer.

Yet even amid success stories like St Louis, some evidence bolsters those who would rather keep Syrian refugees out. Earlier this year six Bosnian immigrants were charged with sending money and supplies to terrorists in Iraq and Syria. Three of them lived in St Louis County. ■

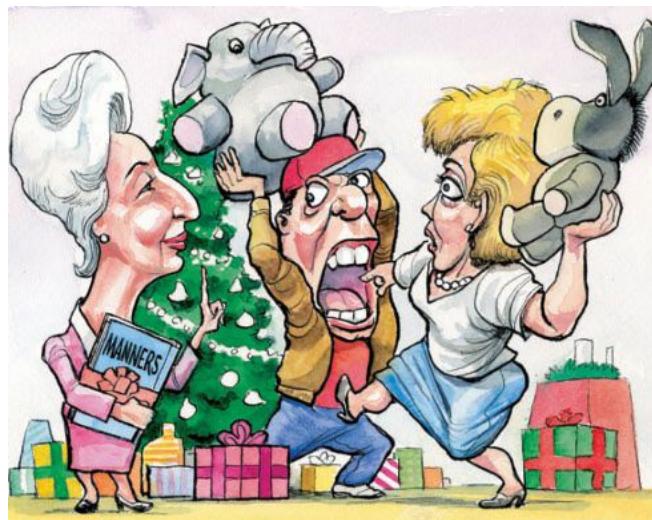
Enough said

The strangest political story of the year has been the rise of Donald Trump, who has discovered a potent formula. More often than not, when Mr Trump says something particularly absurd or obnoxious his poll numbers go up



Lexington | Miss Manners

Changing notions of politeness reflect America's steady progress



HOW did America, a generous country, end up with such ungenerous politics—and might that ever change? Seeking good cheer in this holiday season, Lexington stepped away from the campaign trail to consult an expert with a different perspective on society and its foibles. Judith Martin has been writing her "Miss Manners" column since 1978, and is syndicated in more than 200 news outlets three times a week. Her postbag is as heavy as ever: she receives some 50 or 60 letters and e-mails each day. Beneath Mrs Martin's social advice lies a good deal of moral philosophy, not to mention wisdom (at 77, she shows no signs of retiring, though she co-writes columns now with her adult children). Her first two decades of correspondence are held at Harvard University, as a trove for future sociologists or historians.

In a pre-Christmas conversation at her club in Washington, DC, Mrs Martin offers hope that all is not lost when it comes to American manners, even if modern politicians seem to struggle with civility. First some bad news. Quizzed about readers' concerns in this holiday season, Mrs Martin reports that partisans have found sneaky new ways to inject politics into Christmas, starting with the giving and receiving of gifts. For a few years now, the holiday season has brought letters about bossy leftists trying to ban whole categories of presents. Such scolds complain when their children are given toys that are aggressive or overtly religious, or when they are given too many toys (fuelling the sin of materialism). Sometimes the scolds write their own letters. One woman explained to Miss Manners that she and her husband boycott all goods made in a country "notorious" for poor workplace conditions and child labour, and yet "every year" their young daughter is given gifts from that banned country by her thoughtless grandparents. The idea of expressing polite thanks, then discreetly giving away the unwanted gifts, appears to be anathema to these new Puritans.

The political right is not to be outdone. Appalled readers frequently tell Mrs Martin about conservative relations who, in lieu of a gift, explain that they have made a donation in their name, then reveal—kaboom!—that the beneficiary is the National Rifle Association or some similarly provoking outfit. A recent letter came from an openly gay woman with relatives who regularly donate to "anti-gay" charities in her name.

To a political pundit, such complaints seem simple to explain. They look like fresh evidence of ideological divisions tearing at America's social fabric—all of a piece with opinion-poll data showing that a growing number of Republicans and Democrats would be unhappy if their children married someone who backs the opposite party. Usefully, Mrs Martin offers a broader perspective. Yes, she agrees, her postbag and e-mail inbox include many grumbles with a political tinge. Common gripes include colleagues or acquaintances who blitz everyone they know on Facebook or by e-mail with adoring talk of a favoured candidate, or abuse for a political opponent. Readers seethe about unwanted invitations to political fundraising events. Sometimes the whole country seems to be spoiling for a fight. One December letter, from a cashier in a shop who greets customers with "Happy Holidays", sighed about irate clients who worry about creeping secularism, shouting: "I choose to celebrate Christmas."

Without doubt it is rude to use presents as a weapon, to impose opinions on those who have not asked for them, or to shout at those who cannot answer back. But Mrs Martin observes that these sad lapses are not confined to political partisans. Somehow, a modern reverence for authentic self-expression has reversed the rights and duties that go with gift-giving and hospitality. Now, Mrs Martin says, the "idea has gotten around" that recipients should have control over their presents—lest they be obliged to conceal disappointment with insincere expressions of delight. To Mrs Martin, this power-grab is rooted in selfishness, even greed. It is a trend that goes hand-in-hand with the readers who want to charge guests for holiday food (she has had actual letters asking how to dun Grandma for what she eats at Thanksgiving).

Mad tidings

It is a similar story with political fundraisers. Her readers resent them, but in the same way that they complain about pressure to give to charities chosen by their boss, to local schools or even the neighbour's son who wants money to travel abroad. "Everyone is fundraising for everything," she sorrowfully observes. Many of her columns are variations on the Copernican theme that not everything revolves around readers, their brilliant children or their favourite causes, beneath such crisp headlines as: "Toddler's Dance Recital Will Not Be a Hot Ticket".

Still, a chat with Mrs Martin inspires hope. For one thing, she argues that in important ways the country has become more civil. Notably, bigotry—whether aimed at other races, women or gays—is increasingly understood to be rude, as well as wrong. For another, she observes that the failures of American etiquette often arise from great national virtues, such as restless ambition, candour and above all the principle of equality. The Founding Fathers, she notes, took great interest in etiquette—meaning rules of polite conduct policed by social disapproval—because they had just invented a republic which preferred not to use class hierarchies or the law to regulate speech and many individual acts.

In such a republic of liberties, the exchange of ideas and opinions is made possible by civility. The battle to ensure that those liberties remain both strong and civil is not won even today. Too many on the left seem tempted by rules to restrict "unsafe" speech. Lots of voters on the right are thrilled by the politics of insult and rancour. Some presidential candidates scorn civility as a sign of weakness. History suggests that those boorish politicians are misjudging a country that is better-mannered than this. Hope that history is right. ■

The Black Chamber

The man who made
Edward Snowden
inevitable

IT WAS a shocking disclosure that made headlines around the world. An American intelligence professional revealed the existence of a secret American bureau, which obtained, decoded and read the private messages of nearly 20 foreign governments. He disclosed methods of surveillance and subterfuge, describing a clandestine world of pilfered telegrams, forged wax seals and invisible inks. Laws had been broken and the privacy of many intruded upon. Telecommunications companies had co-operated secretly with the government. America's past and future enemies learned how their encrypted messages had been read.

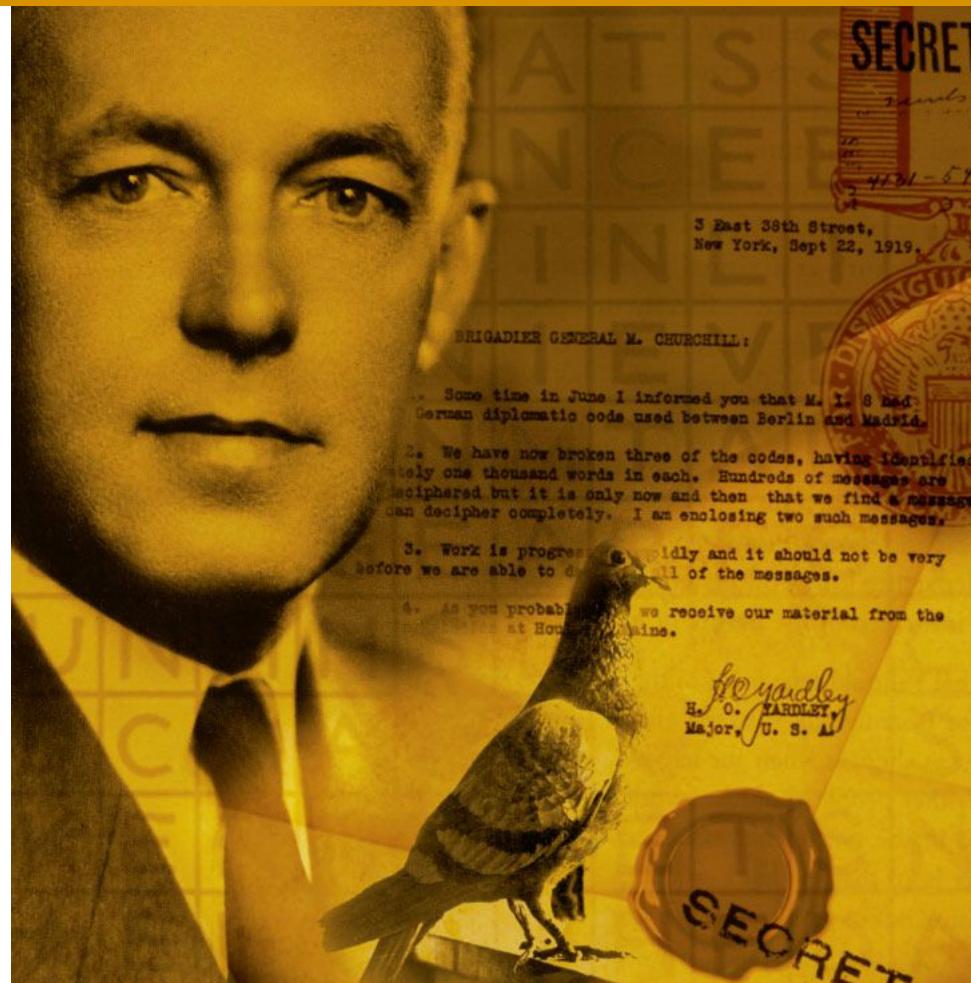
When in 1931 Herbert Yardley spilled the secrets of America's eavesdropping programme, he may well have endangered national security. But, unlike Edward Snowden, he was no mid-level whistleblower shocked at the excesses of a lawless surveillance state. Yardley was the proud father of that surveillance state, creating the forerunner of the National Security Agency. He published a blockbuster book after the government decided that reading private messages was not in keeping with American values and shut his clandestine operation.

Mr Snowden, with his leaks, tapped into a fundamental libertarian fear that too much knowledge in too few hands could destroy Americans' freedom. Yardley sold the opposite view: that more secret knowledge could protect them from evildoers. Each claimed to be a patriot defending his country's values. But whereas Mr Snowden endures exile in Russia, charged with espionage, Yardley lies buried in Arlington National Cemetery, with a place in the NSA's Hall of Honour. A hard-drinking poker player, born in 1889, in the last days of the old West, Yardley long ago faded into history. But, thanks to him, our metadata will live for ever.

Born to be a spook

American snooping has a history older than the republic. With the help of a code-breaker, George Washington deciphered British messages during the critical siege of Yorktown. At least three times he planted false war plans and military documents on agents in successful bids to deceive the British. Abraham Lincoln was a regular presence in the War Department's telegraph room, as he sought to keep track of his army and learn of Confederate plans. But information collection was still spotty and primitive.

By Yardley's lifetime the world was much more interconnected thanks to the telegraph, a technology he was born to master. His father was a railroad telegrapher in Worthington, Indiana, and taught the craft, including Morse code, to his son. A precocious student, Yardley learned poker in the saloons of Worthington, where he probably also developed his lifelong affinity for tall tales. (He said he saw one player bet his farm and then die of a heart attack at the table while clutching the winning hand, four aces.) He learned how to detect a bluff and how to fool others out of a pot. And he learned never to show his cards when he tricked opponents into



folding theirs, lest he expose his stratagems.

The young man had a mind for games, numbers and deception. David Kahn, a historian of cryptography and biographer of Yardley, writes that he was a voracious reader, had a talent with words and was considered by one friend "the smartest boy in the county". Another said: "His mind was on a different level than anyone in town." But he had no place in Worthington to apply his mind except at the poker table. His destiny changed in 1912 when he aced a civil-service test and moved to Washington to work as a telegraph clerk in the State Department.

Working the night shift in the code room, in what is now the Old Executive Office Building, Yardley felt history pass through his hands in coded messages from America's embassies. Before America entered the first world war in 1917, it was naive about secure communications. There was no military office devoted to intercepting and decoding enemy messages until Yardley suggested himself for the job. He worried about foreign eavesdropping. "Other countries must have cryptographers. Why did America have no bureau for the reading of secret diplomatic code and cipher telegrams of foreign governments?" He knew then, he wrote, that this would be his life's mission. "Perhaps I, too, like the foreign cryptographer, could open the secrets of the capitals of the world."

Yardley set about teaching himself code-breaking. He started solving codes by trial and error, working on whatever coded ➤

► telegrams he could get, both foreign and domestic. This included many he should not have been reading. One night in March 1915, listening in on a line between New York and the White House, he copied down a telegram meant for President Woodrow Wilson from his trusted adviser Edward House. It was perhaps the first case of an American cryptographer eavesdropping on the president. Yardley said he solved their code in less than two hours, and was soon reading House's report of his meeting in Germany with Kaiser Wilhelm II, the emperor, about the prospects for peace.

He was aghast at the "schoolboy" techniques used to encode communications with the president. He burned the evidence, but would later present a detailed report on America's easy-to-crack diplomatic codes. He eventually persuaded his government of the need, with war at hand, for tougher codes and a cryptography section to match those of the Europeans. "America must know who her friends were and who her enemies," he later wrote. "How except by reading the secret messages of foreign governments was she to learn the truth?"

Wheels within wheels

Britain, America's putative best friend in Europe, was already reading the president's telegrams and much more. So were the other major European powers, to whatever extent they could manage. Britain's military code-breaking operation, Room 40, helped usher the United States into the war, without American leaders having any idea of its precise role. The unit made copies of every message that went over America's trans-Atlantic telegraph cable by tapping into all traffic that passed through a relay station at Porthcurno, on the western edge of England, before they travelled across the ocean.

In January 1917 Room 40 intercepted a coded telegram sent by Arthur Zimmermann, the German foreign secretary, promising support for Mexico to take three American states in exchange for allying with Germany against the United States. In a telling indication of how little was thought of America's intelligence prowess, Germany had trusted that a hostile telegram sent over America's own communications lines would be secure; it was indeed safe from American eyes but not from Room 40. British officials handed the "Zimmermann telegram" to the American government, inventing a cover story about how they had got it. Its publication caused a national furore, and the United States was finally jolted out of its neutrality and into the Great War.

Yardley knew that code-breakers would be needed for the war. He persuaded the head of military intelligence to admit him to the army to set up MI-8, a new cryptographic bureau. At just 28 years old, writes Mr Kahn, fast-walking, smooth-talking Herbert Yardley—standing all of five foot five (1.65 metres), with a prematurely receding hairline—became the father of American cryptography. But when he started he had no cryptographic staff: deciphering tasks were being sent to a sprawling private estate outside Chicago owned by George Fabyan, a wealthy eccentric. Fabyan had created an amateur decryption staff to look for messages hidden in Shakespeare's plays that would prove his belief that Francis Bacon was the real author. The brightest among them was a young geneticist named William Friedman, who wrote influential training texts on cryptography and would emerge years later as Yardley's chief rival.

Yardley quickly developed MI-8 into a fully fledged cryptographic agency. This precursor of the NSA was a primitive, hands-on operation of trial and error. Once a Justice Department agent brought him a dead carrier-pigeon to see if its per-

forated feathers contained a hidden message (the feathers contained only lice, he concluded). The head of military intelligence gave him a blank sheet of paper that had been found in the heel of a suspect's shoe, to check for invisible writing. Yardley telephoned around for a chemist in Washington who applied heat until the sheet revealed a message written in Greek.

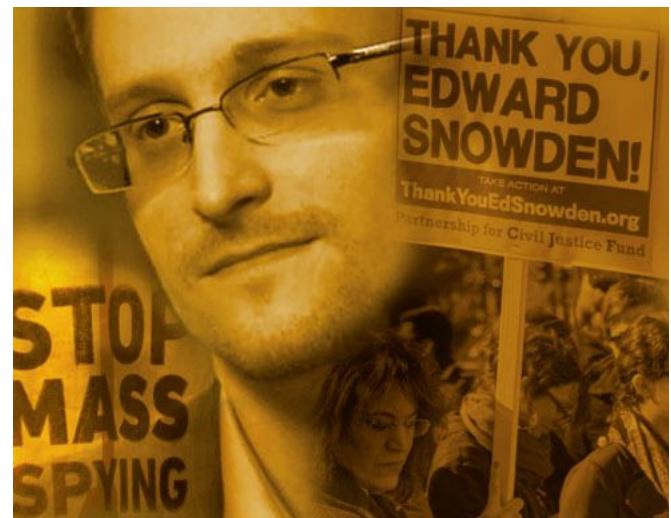
This all occasioned more thorough searches of suspicious individuals crossing borders, and of thousands of innocuous-looking letters that might contain invisible messages. Much of it led nowhere. Most of the telegrams MI-8 decoded during the war were of no value. There was one notable exception, a 424-letter cryptogram found sewn into the sleeve of a suspected German agent as he attempted to cross the Mexican border with a Russian passport. Yardley's best cryptographer cracked it, showing it identified the bearer as a "German secret agent". The man turned out to be Lothar Witzke, who was connected to the sabotage of munitions at a navy shipyard in San Francisco in 1917 and who probably helped engineer a massive, deadly explosion of a munitions depot in New York harbour in July 1916.

With the incriminating cryptogram used as evidence against him, Witzke became the only spy sentenced to death by America during the war, though he was never executed. On the strength of such achievements, and with Yardley urging that American cryptography continue in peacetime, the State Department and the War Department decided jointly to provide \$100,000 (\$1.4m today) to fund a secret civilian agency. Yardley moved to New York in the summer of 1919 and leased a nondescript office building on East 38th Street near Fifth Avenue. Employees were told to say they worked for the War Department's "translation section". Under deep cover, what Yardley came to call the American Black Chamber was born.

Despite his claims that the Black Chamber never had an equal, the level of cryptography remained behind that of the allies. Yardley's cryptographers never moved much beyond searching for patterns in letters and numbers by eye, and trying to match sequences that appeared frequently with commonly used phrases. They also had less material to work with, as Western Union and other cable companies balked at handing over copies of all the messages that were asked of them. They had complied in wartime and for a while after the war, but soon Yardley had to resort to bribery to get cables he wanted, putting cable-company employees on the payroll. European powers did not have these limitations, Mr Kahn notes: in Britain after 1920 telegraph companies had to hand over telegrams requested with a warrant. It was in America that privacy was valued most, perhaps because it had not been the battleground for a world war.

Yardley's breakthrough was the cracking of Japanese codes ►►

Edward Snowden tapped into the fear that too much knowledge in too few hands could destroy Americans' freedom



► before a disarmament conference in Washington in 1921. Japan was the rising power causing most worry in Western capitals. He promised after setting up the Black Chamber in 1919 that he would solve Japanese codes in a year. That he knew no Japanese seems not to have bothered him. He studied its system of transliteration into a Western alphabet, and a deputy studied the language itself. They guessed correctly that distinctive words in the news might be in the diplomatic dispatches. With such trial and error, and intuitive "cipher brains", they pieced together Japan's complex code in a matter of months.

At the arms conference the United States and Britain hoped to hold the size of Japan's navy to six ships for every ten in their respective fleets; Japan wanted seven. American officials were kept abreast of Japan's thinking by the Black Chamber's decryption of its communications. A telegram intercepted in November 1921 spelled it out: if pushed, Japanese negotiators should give in to the allies' preferred ratio, as "it is necessary to avoid any clash with Great Britain and America". It was a coup for the United States, which got the deal it wanted. Yardley gloated: "Stud poker is not a very difficult game after you see your opponent's hole card."

In 1922 Yardley would receive the army's Distinguished Service Medal, with the real reason being kept a secret. This, though, would prove the high point of his cryptographic career. Friedman, his rival, was helping to prepare America for the age of (temporarily) unbreakable cipher machines, including Enigma, that would later play a vital role in the second world war. In the 1920s, however, it was peacetime, and in the lull Yardley became distracted with other pursuits, according to his biographer, trying to make money with schemes such as buying and selling property in New Jersey.

It was his own government that suddenly put an end to the eavesdropping programme. In 1929 the new secretary of state, Henry Stimson, upon learning of the Black Chamber's existence, deemed it unethical and un-American. "Gentlemen do not read each other's mail," he is supposed to have said, as he put Yardley and his team out of work. It came as a rude shock. America's first professional cryptographer felt abandoned and disillusioned.

They read each other's books, though

The Black Chamber was shut down on the eve of the Great Depression. Now Yardley needed money all the more. He had a wife and son and his property speculations were not paying off. In 1930 he approached George Bye, a literary agent in New York, and, with no prior writing experience, rather quickly delivered a manuscript of a book, which would be called "The American Black Chamber". He hoped it would convince the government and the public of the importance of his work.

The publisher consulted a lawyer, and Yardley changed a few names and removed a few details, including that he had broken federal laws. The book was a blockbuster nonetheless. It sold 18,000 copies in America and at least 40,000 more around the world, by his biographer's count, earning Yardley some \$10,000 in royalties (\$156,000 in today's money). Pirated copies were also sold in China, as Yardley would later find for himself.

He embellished wildly. "Spies were hiding behind every bush," he wrote at one point. At another: "The Black Chamber, bolted, hidden, guarded, sees all, hears all." (His flair for drama would serve him well in future, when he wrote spy novels and screenplays, invariably featuring a thinly veiled version of him-



self as "a man to be reckoned with", a beautiful damsel ending up in his arms.) The book sold best in Japan, where the public was outraged, mostly at America but partly at its own government for having been outsmarted. Norway was moved by it to get into cryptography. Made aware of the power of government eavesdropping, societies were starting to grapple with its moral ambiguity.

In America Yardley became a celebrity. He toured the country for speaking engagements. William Powell, a Hollywood star, played a character based on him in a film called "Rendezvous". One writer called him "a living Sherlock Holmes". Many in government, including Friedman, were less impressed. They wanted his head. The *New York Evening Post* wrote: "We wish Theodore Roosevelt were alive to read to the author of this book a lecture on betraying the secrets of one's country." But he was never charged with a crime, as it was not clear he had broken any law (a new one was soon passed).

Yardley was free to work for the highest bidder, and foreign governments were willing to pay. In 1938 he went to Chongqing, China, on a salary of \$10,000 a year, to form a "Chinese Black Chamber". Chiang Kai-shek's Nationalists, at war with Japan's occupying forces, wanted the famous breaker of

Japanese codes. Yardley would later claim that he exposed a plot to kidnap Chiang, unmasking a Nazi spy not by decrypting cables but by playing poker with him.

It was poker, oddly enough, that would ultimately provide Yardley with lasting fame, respect and financial reward. In 1957 his final book, a memoir called "The Education of a Poker Player", became an instant success and was eventually considered a classic, remaining in print long after his death in 1958. He had turned to it at the end of a frustrating late chapter of his life. After returning from China in 1940 he was hired to help set up Canada's wartime code-breaking operation, a job he clearly loved and which earned enthusiastic reviews from his Canadian staff. But British and American officials insisted they would not work with him; he was let go, never trusted to do intelligence work again.

There may have been more reason for distrust than was apparent at the time. After Yardley's death it emerged in Japanese official documents that he may have sold his cryptographic secrets to Japan. A review by the NSA concluded that he probably did so in 1930, when he was out of work, a year before he published his book. What damage had he done, by writing the book or selling his secrets? Friedman maintained that Yardley had done serious harm to national security. Japan upgraded its encryption systems.

But as the NSA notes in an official biography of Yardley, American cryptographers still managed to crack "the best systems the Japanese could devise", even if time might have been lost. Yardley, for his part, had always insisted it was the government that, by shutting the Black Chamber, had endangered national security. He hoped his revelations would push America to invest in cryptography and surveillance. Frank Rowlett, who would help break Japan's advanced "Red" and "Purple" ciphers, told the NSA that Yardley's indiscretions had proved to be a great boost to American cryptanalysis – fulfilling, in a way, Yardley's wishes.

The NSA was born in 1952, under Harry Truman. America during the cold war was no longer the naif of before. The "puzzle palace" became the world's most advanced cryptographic bureau. After the attacks on September 11th 2001, its powers only expanded. Eavesdropping went far beyond anything Yardley could have dreamed possible. Then, along came Mr Snowden. ■

Cuban baseball crisis

HAVANA

The downside of warming relations
with America



LOOK for the Che Guevara mural on a pitch-black street corner in Lawton, a run-down district on the outskirts of Havana. Turn left, walk up the concrete steps and give the password (today it's "I sell green dwarfs"). Inside, around 20 Cuban men sit silently. Despite the humidity, the ceiling fan is still, allowing puffs of sweet tobacco smoke to hover in the flickering fluorescent light. The newcomers are asked for a "solidarity contribution" of 25 Cuban pesos, or \$1. After the customary first drops are spilled to sate the thirst of the saints, a \$3 bottle of clear rum makes its way around.

It could easily be a clandestine political gathering. But this group has far more important business: the first game in the Major League Baseball (MLB) semi-final series between the Kansas City Royals and Toronto Blue Jays. For half a century after Cuba's revolution in 1959, the island's sports fans knew little of professional leagues beyond their shores. But today, thanks to the internet's belated arrival and a wave of Cuban players defecting and starring in MLB, in-depth knowledge of American baseball is a badge of honour for baseball-loving Cubans—that is, nearly all the men and plenty of the women, too. "You didn't know Kansas City won? You're an embarrassment," one attendee teased a friend during the ride to Lawton in an exhaust-spewing 1950s taxi, whose shock absorbers were no match for the area's cavernous potholes.

The easiest way for Cubans to follow MLB in real time is at hotel bars in Vedado, a central Havana district packed with middle-aged American tourists taking advantage of the recent relaxation of travel restrictions. But few Cubans can afford a beer priced in dollars.

And if a woman happens to be running a shift at the bar, locals say, there's always a risk she will put a soap opera on the TV instead. So baseball fans gather in speakeasies like this decrepit flat, whose owner has managed to acquire an illegal satellite broadcast signal and hook it up to his 1980s Japanese television.

The group try to keep quiet, lest the neighbours snitch to the local Committee for the Defence of the Revolution (a network of government informants in every town). But they are rooting for the Royals because of the team's first baseman, Kendrys Morales, who fled Cuba on a raft in 2004 after serving several stints in jail for his seven previous failed escape attempts. Every time he comes up to bat they allow themselves a muffled cheer. A round of high-fives follows Kansas City's 5-0 victory.

The next day a big game is scheduled in the domestic baseball league, at Havana's rickety 55,000-seat Latin American Stadium. It pits the hometown Industriales, Cuba's answer to the New York Yankees, against a visiting club from nearby Matanzas. A few years ago the stands would have been packed. But today the outfield bleachers are empty, and only the rows of seats closest to the action appear even half-full. Bored-looking police drag on cigarettes. A group of hometown fans tries to rouse the crowd by blaring on hand-held air horns, but it is well short of critical mass.

One reason for the apathetic mood is that the government has banned alcohol sales in stadiums to stop fights. A bigger problem is the poor quality of the play. Last year 11 Industriales players left for the United States; Matanzas lost ten. Only the weaker players

► remain, and they are demoralised: runners seem content to jog around the base-paths, and fielders let the ball skip past them on difficult plays. In recognition of the depleted rosters, the Cuban league now disbands half of its teams at mid-season and shares their players among the eight clubs that are doing best.

Today's game is painfully lopsided, as the Matanzas hitters pound the Industriales starting pitcher for seven runs. The biggest attraction is Rey Ordóñez, who defected in 1993, played in MLB for nine years and is catching a game on a visit home. Fans pose with him for pictures.

"It's very hard for the team," says Lourdes Gourriel junior, the 21-year-old shortstop for the Industriales, following his team's defeat. "It's weird seeing someone on TV [in MLB], and just yesterday they were here with you. But that's everyone's individual decision. We're still friends with those who left."

South American football fans are accustomed to their countries' brightest sporting stars decamping to richer European leagues. But for Cuban baseball fans the exodus is new. Less than a year after the United States and the government of Raúl Castro, Fidel's younger brother and successor, announced they would re-establish diplomatic relations, this brawn drain is the most visible consequence of rapprochement with the yanquis, and an indication of what might be lost as the Cuban economy liberalises.

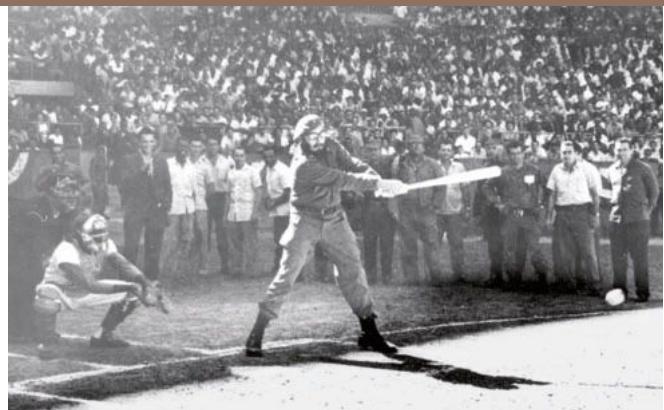
Bottom of the nineteenth century

Although baseball originated in the United States, the sport arrived in Cuba during its infancy in the 1860s. Within a decade of the first recorded match on the island, Cuba had established the first professional league outside America and put its adopted national game at the service of political aims: the league's organisers funnelled its profits to guerrilla groups fighting for independence from Spain, and the movement's spies posed as baseball players when shuttling messages and funds to and from supporters in the United States. "Baseball is more Cuba's national pastime than it is America's," says Roberto González Echevarría, the author of a history of Cuban baseball. "It was considered modern, democratic and American, while the Spaniards had bullfighting, which was retrograde and barbaric. It's as if the American Founding Fathers had been wielding Louisville Sluggers [an iconic brand of bat]."

After Cuba gained its independence in 1902 baseball became one of its principal means of exercising soft power. It was Cuban athletes, not American soldiers, who spread the sport across the Spanish-speaking Caribbean, helping to form a shared cultural identity with the Dominican Republic, Puerto Rico, Venezuela and eastern Mexico, and earning the Cuban players the nickname the "apostles of baseball". And it was baseball players who became the best-known Cubans in the United States. Of all the MLB players born in Latin America who started playing before 1959, two-thirds were Cuban, even though most of the island's stars were black and banned from MLB until the league's colour barrier was broken in 1947. (In 1912, in response to inquiries about the lineage of two olive-skinned Cuban players, the Cincinnati Reds conducted an "investigation" which declared them "two of the purest bars of Castilian soap [that] ever floated to these shores".) During the same period Cuba was putting black and white talent on the same fields in its racially integrated winter league, establishing the country as an exemplar of moral leadership in sports.

After Fidel Castro (pictured, swinging) took power and became the island's baseball-fan-in-chief, the sport's tacit political role became explicit. He proclaimed athletes to be "standard-bearers of the revolution playing for the love of the people, not money". He banned professional sports and founded the National Series, a wildly popular amateur league in which each province fielded a

*Fidel Castro
might be proud
of Cuba's
ability to export
baseball
players, were
they not going
to America*



team of players from its territory. He also established a formidable player-development system, with scouts identifying talented children and academies to train them once they became teenagers.

American fans, who then, as now, paid attention only to MLB, were unaware of the stars Cuba was producing, since they never played for a team in the United States. But Cuba's athletic assembly line yielded a national team that dominated the weak competition in international events like the Olympics (in which MLB players do not participate): from 1987 to 1997, the squad won 156 straight games. The elder Mr Castro made such successes central to his propaganda strategy. "The only way Cuba could raise its head in the world was in sports," says Ismael Sené, who ran the sports department of the Communist Youth in the early 1960s. "There was a campaign against us from the outside, saying that we were all needy, that we didn't have food. Well, look at our athletes!" The fact that baseball, America's "national pastime", was Cuba's strong suit made each victory extra sweet.

But setting so much store by its baseball players left the government vulnerable to shifting geopolitics. In 1991 René Arocha, a pitcher in the national team, walked out of his hotel room during a tournament in Miami, made his way to his aunt's house, and never returned, making him the first team member to defect in history. He had not been planning on playing baseball afterwards, because he had assumed that MLB players were far superior to Cuban ones. But after connecting with a Cuban-born agent, he was given an MLB contract with a six-figure salary, and the next year became the St Louis Cardinals' second-best pitcher.

After Mr Arocha had proved that Cuban players were of MLB quality, and the fall of the Soviet Union plunged Cuba into a "special period" of unprecedented poverty, more defectors began to leak out. Two half-brothers, Liván and Orlando Hernández, left the island separately in the 1990s, one at a tournament, the other on a rickety boat. Both played starring roles for World Series champions in their first years in MLB, providing Miami's Castro-hating exiles with a remarkable narrative about the risks Cubans will take for a taste of freedom and the chance to play America's game. To reduce the risk of further defections, the Cuban team put its players under tight surveillance whenever they travelled abroad, making their national treasures feel like prisoners and encouraging more defections.

Squeeze play

The government responded to early defections with stoicism. "When one leaves, another ten better players emerge," Fidel Castro once said. But in the past few years, the trickle of defections has become a torrent. As recently as 2007 there were just ten Cubans in MLB. Today there are 27. And whereas some of the early defectors had undistinguished careers, the current crop is making an impact that, were it to occur anywhere but in the reviled United States, Fidel Castro would probably regard as his greatest accomplishment. Yoenis Céspedes, a burly outfielder with a pronounced uppercut swing, single-handedly powered the New York Mets to the World Series this year. His deadly accurate throws to

► home plate from distances of 300 feet (91 metres) or more have earned him the nickname the Cuban Missile. José Fernández, who fished his mother out of the ocean after a wave swept her overboard during their escape to Mexico when he was 15, is the toast of Miami's Little Havana for his unhittable array of blazing fastballs and knee-bending curves. Aroldis Chapman holds the record for the fastest pitch in MLB history at 105 miles (169km) per hour. At the "Esquina Caliente" (Hot Corner), a bench in a downtown Havana park where die-hard fans have gathered daily for decades to talk baseball, the regulars today come prepared with the latest statistics on how Cuban players—and even the American-born children of Cuban exiles—are performing in MLB. They use websites like CubanPlay, a new, locally run site, by connecting their phones to public hotspots accessible with \$2-an-hour Wi-Fi cards.

Major-league success has been accompanied by major-league riches: the 27 Cuban MLB players earn an aggregate annual salary of \$100m. As the rewards have grown, a sophisticated infrastructure to smuggle more players has built up. Almost all recent defectors have escaped with the help of sinister human-trafficking syndicates. These hire boats to bring players to nearby countries, bribe the Cuban coastguard to let them depart, and Dominican or Mexican authorities to grant residency papers, pay tribute to organised-crime groups for the right to operate on their turf, and hold players hostage until they sign an MLB contract and provide a return on the gangsters' investment, perhaps from their signing bonus. Yasiel Puig, a star right fielder, was held at a motel in Mexico's Yucatán peninsula for months while his captors, associated with the fearsome Zetas mafia, argued over payment. Leonys Martín, an outfielder, was held at gunpoint in Mexico and forced to sign a contract in which he promised to pay 30% of his earnings to a front company; his smugglers are now in a Florida jail.

Since Raúl Castro became Cuba's president in 2006, he has cautiously tried to relax state controls. But the defections have forced the pace when it comes to baseball. In 2013 Cuba said it would allow athletes to play professionally in foreign leagues—if they paid a 20% tax and returned for international tournaments and the winter National Series. A handful have gone to the Japanese league in the summer and earned seven-figure salaries.

Both MLB and the Cuban government now say they want a "normalised" system, in which Cuban athletes can travel to America legally and safely, play for MLB teams on a work visa and return home in the off-season. Antonio Castro, one of Fidel's nine acknowledged children, an international baseball official and the national team's doctor, has publicly called for such a change.

In an echo of the 1970s "ping-pong diplomacy" in which table tennis helped restore relations between the United States and China, MLB is encouraging a thaw between Havana and Washington.



From defection to a \$36m deal

It has applied for an American government licence to do business in Cuba, is sending former players on a pre-Christmas goodwill tour of the island and is trying to organise an exhibition game in Havana featuring one of its teams next March. Meanwhile, Cuban baseball stars are giving Americans a new perspective on a country many perceive as nothing more than a totalitarian dystopia.

Yet the defections continue, for two reasons. The first is that the Cuban baseball authorities' proclamations that players are now "free to go" ring hollow. It is the government, not athletes, that determines who can leave and for how long, to which country and team, and how much they will be paid. It generally selects older stars who have shown loyalty to the regime.

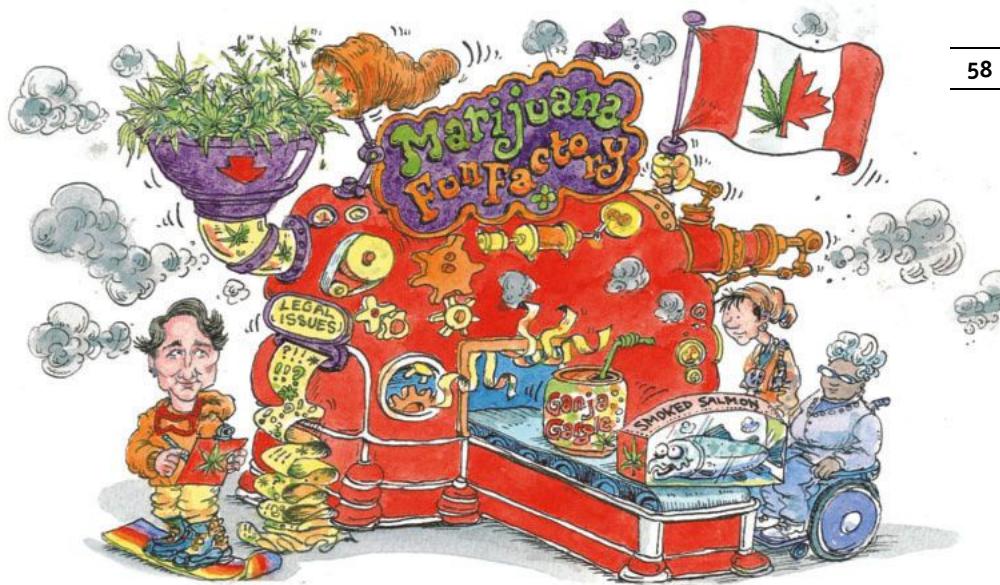
The second is the continuing influence of ageing "cold warriors" in the United States. Although Barack Obama has streamlined much of the bureaucracy required to authorise contracts with Cuban players, they must still establish residency outside Cuba and sign an affidavit saying that they "do not intend to, nor would [they] be welcome to, return to Cuba". And America's trade embargo, which can only be lifted by Congress, bans transactions with the Cuban government. That precludes any arrangement in which athletes would pay a modest tax on their foreign earnings in recognition of the state's investment in training them, just as the United States taxes its citizens on their worldwide income. Cuba's requirement that its players working abroad also participate in the National Series and be available to the national team represents another stumbling block, since MLB clubs would never allow their stars to skip out for an international tournament during the season, or risk injury during a long winter campaign in Cuba.

Socialism with American characteristics

Yet for all the Cuban government's rhetoric about America's athletic imperialism, it may have an unlikely ally in MLB on the issues that concern it most. Despite MLB's reputation as a fiercely capitalist industry worth \$9 billion a year, the game's economic model has much in common with Cuban-style socialist principles. To maintain fans' interest, MLB needs a competitive balance between its rich and poor clubs. It accomplishes this by levying a tax on teams with high payrolls, and via an annual draft that routes the best young players to losing franchises. Cuban players aged over 23 with at least five years in the National Series are exempt from these rules. That enables them to auction their services to the highest bidder, undermining MLB's carefully calibrated system of economic redistribution and reducing club owners' profits. As a result, MLB is likely to advocate a tightly controlled system of acquiring Cuban players, rather than a free-for-all.

Moreover, MLB clubs and agents are already warning that after so many defections, the Cuban baseball pipeline is running dry and will need to be replenished. At the Premier12, an international tournament held last month in Taiwan and Japan, Cuba finished an embarrassing sixth. The unique baseball culture Cuba has developed over 50 years of isolation has proved to be a formidable manufacturer of outstanding players. The Dominican Republic and Venezuela serve as providers of raw athletic material for MLB. Ordinary Cubans, by contrast, have grown accustomed to a remarkable closeness to world-class athletes, who play only for their home provinces and for almost no pay. "I'm just another fan," says Reinier Reynoso, a 27-year-old pitcher for Industriales who is hanging out with the faithful outside the ballpark before a game. Fans and players "party together", he says.

Since MLB has a keen interest in producing a new generation of Cuban superstars, it is reluctant to meddle with this potent combination of popular encouragement and state support. "We have no interest in going to Cuba and taking all of their players," says Dan Halem, MLB's chief legal officer. "We want Cuban baseball to thrive. We're perfectly happy for Cuba to develop their own stars and keep them for a period of time. If they lose all their stars, fans will lose interest. There aren't enough countries where baseball is played for this to just be a feeder for Major League Baseball." ■



Legalising pot in Canada

Justin Trudeau and the cannabis factory

OTTAWA AND VANCOUVER

Converting a medical-marijuana industry into a recreational one will not be easy

AT A former Hershey's chocolate factory just outside Ottawa a company called Tweed now produces a rather different confection: marijuana for Canada's tightly regulated medical market. Under the gaze of surveillance cameras, scientists in lab coats concoct new cannabis-based blends in near-sterile conditions. A repurposed candy mixer does the blending. Only in the growing rooms does the spirit of Cheech and Chong, a stoned comedy duo, seem to preside: the plants have names like Black Widow, Deep Purple, Chem Dawg and Bubba Kush.

The market, though growing fast, is still tiny: just 30,000 registered patients buy their supplies from licensed firms like Tweed (short for therapeutic weed). Its parent company had sales of C\$4.2m (\$3.1m) in the six months that ended on September 30th. But the promise by Justin Trudeau, Canada's new prime minister, to legalise marijuana could widen the customer base to well beyond the 3m Canadians thought to consume it now. The government's first "speech from the throne" on December 4th named legalisation as one of its priorities.

The existence of companies like Tweed, which obtained a stockmarket listing in 2014—long before Mr Trudeau, a tattooed former snowboarding instructor, looked likely to become prime minister—suggests that Canada's transition from remedial to recreational pot will be smooth. It probably won't be. "It's going to be a lot harder to

implement than you think," said Lewis Koski, until recently the director of marijuana enforcement in Colorado, to a Canadian news agency. Colorado is one of four American states to have legalised the drug. Canada, likely to be the first large country to take that step, faces bigger obstacles.

Its legal pot industry got its start in 2001, after courts ruled that sufferers from epilepsy, AIDS, cancer and other ailments had a constitutional right to light up. The federal government of the time, led by Mr Trudeau's Liberal Party, developed a hybrid system to supply and regulate it. The health ministry acted as dealer and doctor,

certifying patients and selling marijuana to them at a subsidised price of C\$5 a gram. One company, Prairie Plant Systems, was the ministry's only supplier. Patients could grow their own, with a licence.

Stephen Harper's Conservatives, who replaced the Liberals in 2006, abhorred narcotics but couldn't close the medical-marijuana industry. Instead, they privatised it. Under rules that took effect in April 2014, responsibility for certifying patients passed to doctors and nurses. The government freed prices and licensed 25 tightly regulated private firms, including Tweed, to compete with the sole supplier. They can deliver only by parcel post or to a doctor. Domestic "grow-ops" were outlawed.

These buttoned-up regulations govern just a sliver of the medical-marijuana market; elsewhere, anarchy reigns. The 30,000 registered patients are a small fraction of the 1m people thought to take for medicinal purposes. Some 25,000 still legally grow their own weed while they await a decision on a lawsuit brought by four home-growers who say they cannot pay the higher prices.

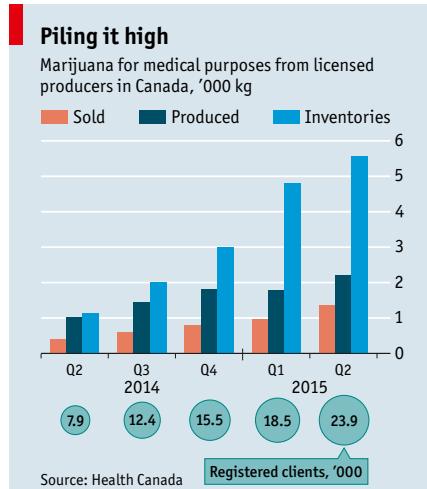
Rather than take delivery by post, many consumers—both patients and partiers—obtain their marijuana through storefront "dispensaries", which have sprung up across Canada, encouraged by liberalisation in the United States. Vancouver has the liveliest retail sector, with 176 dispensaries, or "compassion clubs", which buy the surplus produced by home-based herbalists. These hope to become the basis of a legal distribution network.

But unlike Colorado's distributors of medical marijuana, which became the basis for its recreational retail network, Canada's dispensaries operate in a treacherous grey zone. REDMED, located on a seedy street in Vancouver's Gastown district, resembles an indie record shop more than a ►

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Bello is away



► dispensary. A poster at the till advertises a rap concert. Music-themed t-shirts hang on the walls. Jars labelled Girl Scout Cookies, Crystal Coma and Soccer Mom display the shop's main merchandise alongside bowls of pretzels and crisps.

Despite appearances, REDMED will not sell it to just anyone hoping to get high. People think they can walk in off the street and buy marijuana, says Jessica Jade, who came in as a patient and now works at the shop. "We can't just serve you if you don't have your documents at hand," she says. Other dispensaries are less fussy.

In June Vancouver's city council decided to regulate them, even though they remain illegal in the eyes of federal law. Better that than lose the business to Washington state, which has legalised pot and is 90 minutes away by car, the councillors reckoned. Other local authorities—and parts of the marijuana industry—are not so tolerant. Police in Saskatoon, a city in central Saskatchewan, shut down its only storefront dispensary in October. Smokers caught with "a leftover roach" could be charged, they warned.

Legal producers hold the dispensaries and other illegal distributors responsible for their puny sales. If they are sidelined, a stodgier breed of retailer might take over: provincial-owned monopolies that sell alcohol for domestic consumption everywhere except Alberta. Ontario's is the biggest buyer of booze in North America. The province's premier, Kathleen Wynne, says it is "very well-suited to putting in place the social-responsibility aspects" of selling marijuana. But the provincial distributors worry that lovers of the bottle will look askance at devotees of the bong. Their chiefs are due to meet in mid-2016 to talk about whether to stock buds of Jamaica Gold alongside Chianti.

Licensed producers should find the transition easier. They are stockpiling a surplus in anticipation of legalisation (see chart on previous page). The medical side will provide some growth. Tweed and Prairie Plant Systems have sales teams like those of pharmaceutical companies, which call on doctors directly. CanniMed, a subsidiary of Prairie, is conducting clinical trials to see whether cannabis might relieve osteoarthritis, potentially a source of growth as Canadians get creakier.

But fun is probably the bigger opportunity. Tweed's boss, Bruce Linton, dreams of cannabis-infused sugary drinks and marijuana-smoked salmon, though it is not clear that such products will be allowed. Although advertising is banned, Tweed is boosting its brand by selling t-shirts and mugs and sponsoring events. It said no to a stoner Santa but sponsored the Jamaican & World Cannabis Cups, "the world's foremost ganja festival", which took place in November. Cheech and Chong were there, in spirit at least. ■

West Indian cricket

Gone with the Windies

Why a dazzling team has faded

AFTER sun and sand, the West Indies Test cricket team may be the best known symbol of the English-speaking Caribbean. From 1980 to 1995, the side was unbeaten in 29 consecutive series it played. The Windies' success helped forge a sense of unity among the 16 countries and dependencies the team represents, paving the way for other joint efforts like Caricom, a regional organisation. Viv Richards, a captain of the glory days, called the side, hyperbolically, "the only sporting team of African descent that has been able to win repeatedly against all international opposition," bringing "joy to our people."

But these are joyless days. On December 10th-12th the Windies lost a Test match to Australia by an innings and 212 runs, one of the most lopsided defeats in history. Since June 2000 they have won just 14 Test matches and lost 81 against the top eight countries—a record so miserable that the team's very survival is now in question. There is speculation that Trinidad and Tobago will leave the West Indies team and form its own. On November 4th a review by Caricom called the West Indies Cricket Board (WICB), which runs the team, "obsolete" and recommended its dissolution.

There is no shortage of theories about why West Indian cricket has declined so precipitously. Globalisation is one culprit. In the 1980s, national Test teams were seen as the pinnacle of the sport. But the advent of for-profit domestic club leagues playing

shorter Twenty20 (T20) games, particularly the Indian Premier League (IPL), has lured players away from Test cricket. Competition from T20 has hit the West Indies particularly hard. The WICB pays far lower salaries than rivals do, encouraging Caribbean players to jump to club teams. Moreover, the WICB's home season is at the same time as the IPL's, forcing players to choose between employers. Six of the Windies' leading players are now in Australia—competing for domestic T20 clubs rather than their Test side.

The WICB is guilty of self-inflicted wounds. In 2014 the Windies withdrew from a tour of India to protest lower salaries. Coaches routinely disagree with the WICB over the selection of players. And its Byzantine structure has made even simple tasks, like scheduling matches, difficult.

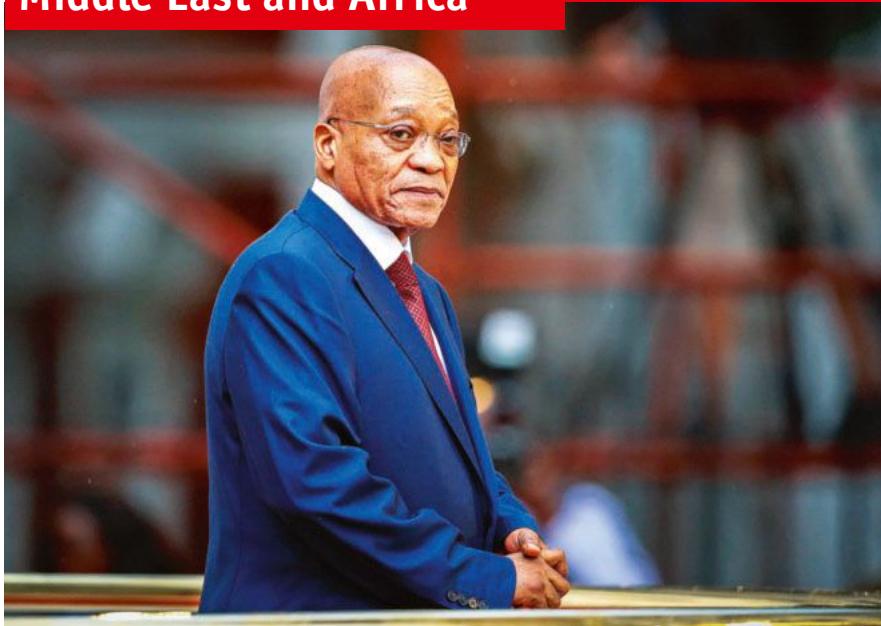
These errors matter. But the main explanation for the Windies' collapse is that their golden age was unsustainable. Three of the world's six leading Test sides are from rich countries (England, Australia and New Zealand). Two more (India and Pakistan) have gigantic populations. Some decline was probably inevitable.

With reform, the Windies can arrest their fall. Some progress has been made: the domestic league was recently strengthened. It will offer 95 professional contracts to employ players year-round, rather than for six months or so. The WICB has vowed to avoid conflict with the IPL.

But without more money, victories will be sparse. Control of revenue from international cricket lies with the International Cricket Council (ICC). In 2014 the sport's three economic titans (India, England and Australia) forced through changes to the ICC that gave them more revenue than all other members combined. The result: the giants may soon have no one to play against but each other. ■



Down and out



South Africa's democracy

The hollow state

JOHANNESBURG

Two decades after South Africa's transition to non-racial democracy, its institutions are being sorely tested by President Jacob Zuma. Can they hold?

THE words *a luta continua* shine in garish orange neon from the artwork in the lobby of South Africa's Constitutional Court. The Portuguese slogan, "the struggle continues", was popular during the country's fight for non-racial democracy. It remains apt. A fierce battle is now being fought for the survival of that democracy.

There has not been a coup, or anything like that. But the president, Jacob Zuma, rules in a way that perturbs even many of his former allies. Consider the events of the past week. On December 9th, without warning or explanation, he fired his respected finance minister, Nhlanhla Nene, and replaced him with an obscure backbencher and former mayor so unpopular that his townsfolk had burned his house down in protests against changes to a provincial boundary.

Mr Nene's sacking was seen as an attack on fiscal prudence. He had, for example, objected to Mr Zuma's unaffordable plan to buy nuclear power stations costing 1 trillion rand (\$65 billion) from Vladimir Putin's Russia. It was also seen as an attempt to capture the Treasury, a part of the state that has stood firm against corruption and cronyism, by a president who has stood firm against neither.

Shortly before Mr Nene was sacked he had blocked attempts by Dudu Myeni, the chair of South African Airways (SAA), to re-negotiate a deal to buy aircraft. Ms Myeni is an ally of Mr Zuma. (Indeed, she is such a

close pal that Mr Zuma's office issued a statement denying that he has a "romance and a child" with her.) Her plan was to insert a local middleman between SAA and Airbus, which was neither in the interests of the airline nor the taxpayers who guarantee its debts.

On news of Mr Nene's sacking, the currency dropped by 9% and South Africa's bonds posted a record slump, driving up the country's cost of new borrowing by about 15%. After four days of panic Mr Zuma reversed course, fired his new finance minister and brought back an old hand, Pravin Gordhan, who did the job capably between 2009 and 2014.

All this left many South Africans as perplexed as they were relieved. Had Mr Zuma seen sense? Or had senior members of the ruling African National Congress (ANC) clipped his wings? Was this a triumph for democracy or a Kremlinesque subversion of it, with real power now residing behind the throne?

The great subordination

That no one knows shows how opaque the Rainbow Nation has become. This was the country that in 1994 inspired democrats the world over when it avoided a racial war, ended the world's most notorious system of racial segregation and elected the magnanimous Nelson Mandela as its president. The flowering of freedom in a place that had seen precious little of it helped

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seed a great bloom of democratic change across much of Africa. South Africa's efforts to reconcile abusers of human rights and their victims galvanised others to do the same.

South Africa's changes ran deep. This was partly because of the ANC's determination that the terrible abuses of human rights under apartheid would never be repeated. When talks were held on the country's new constitution, the party was an enthusiastic supporter of limits on state power. Its view came through experience. Thousands of its supporters had been detained, tortured and killed.

After 1994 the security forces were overhauled and retrained to protect rather than oppress civilians. A parliament reserved for whites was filled with the country's many tribes and races. A judiciary that had energetically upheld immoral laws was subordinated to a Constitutional Court sworn to protect human rights. In some ways it put more mature democracies to shame. In 1995 the court abolished the death penalty; a year later it ensured South Africa was among the first countries in the world to allow gay couples to marry.

Yet, after more than two decades in charge, the ANC's wariness of untrammeled state power has turned into frustration at the checks on it. The party is now undermining some of the democratic institutions that it fought so hard to establish.

In 2012 the police massacred 41 striking mineworkers, shooting some in the back. In February armed police stormed into parliament to remove members of the opposition, who were heckling Mr Zuma about the colossal mansion he had built for himself at taxpayers' expense. In June the government flouted the rule of law when it ignored an order of its own high court to detain Omar al-Bashir, the blood-soaked ruler of Sudan, for whom the Inter-

► national Criminal Court had issued an arrest warrant.

These examples are part of a deeper malaise. The distinction between the ruling party and the state has been eroded. The executive arm of government (and its state-owned firms) is being corroded into incompetence by corruption and cronyism. Independent bodies meant to safeguard democracy are being subordinated.

Lawson Naidoo, who runs the Council for the Advancement of South Africa's Constitution, a pressure group, frets that the country is sliding "towards majoritarianism at the expense of principled constitutionalism". Kgalema Motlanthe, who served as president in 2008 and 2009, recently said the ANC had abandoned its democratic principles. Desmond Tutu and FW. de Klerk, both Nobel laureates, have lambasted the government, too. Justice Malala, a journalist and former ANC activist, summed it up well in a recent book: "One day you look around and realise that everything is broken, that your country has been stolen."

For the moment South Africans worry more about the economy than about the health of democratic institutions. Growth has slumped to little more than 1% this year, a rate that does not keep pace with the increase in population, of about 1.3%. Unemployment has climbed above 35%, if you include the millions of people who have given up looking for work.

The indebted country

Anaemic growth is largely the result of policy failures. The performance of Eskom, the state-owned electricity company, provides a useful illustration. Back in the 1990s its planners realised that it would have to build many more power stations to meet rising demand, or the country would suffer power cuts. It failed to do so. Power shortages now often shut factories and mines. Economists reckon that this has trimmed a whole percentage point a year from economic growth.

One reason why Eskom is so badly run is that many of its managers and engineers had been replaced by unqualified political appointees. This was partly owing to a policy of promoting blacks, who in some cases lacked experience. But a more pernicious subversion of meritocracy is the ANC's insistence on appointing party hacks to senior positions. The government calls this "cadre deployment". "I've said to [Mr Zuma], 'you don't deploy cadres to play in the national football team, so why do you deploy them to Eskom?'" says a grandee of African politics. "He just won't listen."

Cronyism hobbles the 700 or so firms owned by the state. Congested railways and ports—also run by state-owned monopolies—have constrained exports, trimming another percentage point or so from



From unchecked power to power cuts

South Africa's annual growth

Stagnation, coupled with wanton spending, threatens to create a fiscal crisis. Pay for civil servants has increased far faster than inflation. Perks for ministers have ballooned. Over the past decade the number of civil servants has increased by about 25%, even as all other non-farm employment has stayed reasonably stable. A whopping one in five working people now works for the government. Over the past 15 years state spending has increased from 23% of GDP to 29%. That is dangerous in a country with a thin tax base. More than 50% of personal income tax is paid by less than 5% of taxpayers. If the country goes sour, many of these people could emigrate—as many whites already have.

Sustained deficits of about 4% of GDP mean that debt has climbed rapidly from

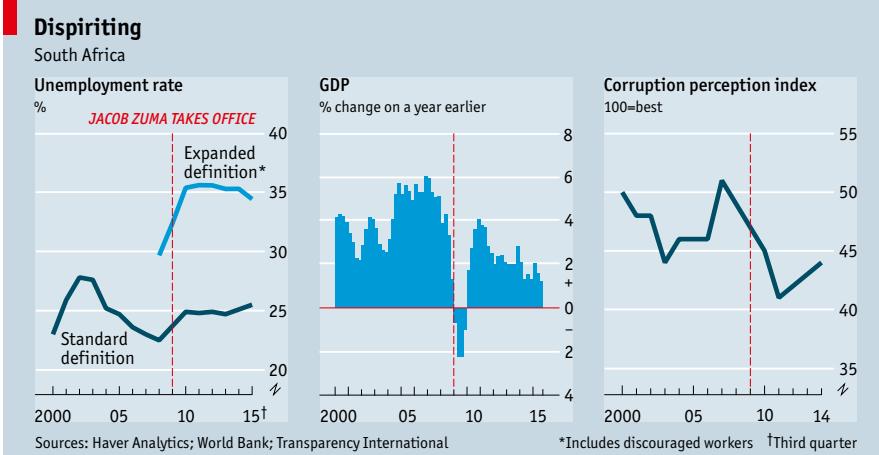
about 26% of GDP in 2008 to almost 50% in this fiscal year. Investors fret that the country's liabilities may soon become unsustainable. Its credit rating is one notch above junk. Without a change in course, further downgrades are likely. The ensuing sell-off would probably send interest rates soaring and force the country to ask the IMF for a bail-out.

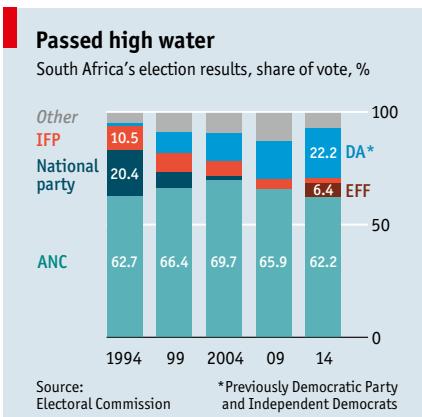
Until recently the main reason to think that South Africa would avoid this fate was that macroeconomic policy was in the hands of a credible central bank and a sound finance minister who had pledged to contain spending. The recent game of musical chairs in the finance ministry makes many wonder if that is still true.

Rotting from the top

Cronyism and corruption are hollowing out the foundations of the state itself. Government procurement at all levels is now riddled with graft. Start with schools. Corruption Watch, an NGO, says it has received more than 1,000 reports over the past few years relating to crooked school principals, many of whom have been stealing cash from their school's bank accounts or looting funds intended to feed hungry children. Their jobs are now so lucrative that they are worth killing for. In 2015 one head teacher was hacked to death and another was shot after they refused to make way for people who had "bought" their posts. Officials of the teachers' union have also been implicated in selling posts. At least the bribe-takers can do sums, unlike many of their pupils. A 2011 study into the maths and science knowledge of children around the world ranked South Africa second from last.

Officials feel a sense of impunity, since few are ever fired, let alone jailed. The auditor general has given "clean" audits to less than one-fifth of local governments and a third of the national government's departments. Some of the money set aside for Nelson Mandela's funeral in 2013 simply vanished. "Nothing was sacred," laments R.W. Johnson in "How Long Will ➤





► South Africa Survive?", a polemic.

The National Prosecuting Authority (NPA) has been under sustained attack since the end of 2007, when Mr Zuma was elected head of the ANC (although he became president only in 2009). At the time the NPA had charged Mr Zuma with 783 counts of corruption, fraud, money-laundering and tax evasion. These charges were dropped just weeks before his election as president.

Since then, Mr Zuma has tried to defang the agency, usually by appointing compromised people to run it. Mr Zuma's first appointment was subsequently ruled "irrational" by the Constitutional Court and overturned after his cat's paw was caught lying to a commission of inquiry. His next appointee was forced to step down after it transpired that he had previously been convicted of assault. Many interpret Mr Zuma's efforts to get the ANC to nominate his ex-wife, Nkosazana Dlamini-Zuma, to be his successor as an effort to ensure that his protection from prosecution will outlast his term.

Other institutions that have been tarnished include the Independent Electoral Commission. In December 2015 the Constitutional Court ruled that it had endorsed rigged local elections two years earlier. The Office of the Public Protector, an anti-corruption watchdog, is being starved of resources. Its fiery head, Thuli Madonsela, has been accused by the ANC of being "counter-revolutionary" and a CIA agent.

"Zuma has a pre-capitalist notion of power," says one insider. "He just can't understand why he can't have access to state resources." Another says that Mr Zuma complained after a tour of African capitals that his counterparts were not required to appear before parliament to answer questions. "Why do I have to?" he apparently said. His view of economics is far from the mainstream, too: he recently said that the value of commodities should depend on "the labour time taken in production".

Given Mr Zuma's foibles, it is unfortunate that the framers of South Africa's constitution, for all its checks and balances, granted enormous powers to the presi-

dent. "When we wrote the constitution we had in mind figures like Mandela," says Patricia de Lille, who led the Pan Africanist Congress delegation in talks over the constitution ahead of the 1994 election and is now a leading figure in the opposition Democratic Alliance (DA).

Parliament has also proven toothless, partly as an unfortunate consequence of the transition from white-minority rule. When the constitution was being negotiated, whites worried that they would be swamped in a first-past-the-post system. So instead the country adopted proportional representation. This means that MPs owe their positions to those who draw up party lists, rather than to voters in a constituency. If they annoy the president, they may lose their jobs—and the opportunities for patronage that come with them.

That leaves the judiciary, civil society and a vibrant free press with a tradition of raking muck. The government is attempting to restrain the last of these, both with repressive laws (one act awaiting a presidential signature, for instance, threatens whistle-blowers and journalists with long prison terms) as well as more subtle means. Among these was using money from a government employees' pension fund to help an ally of Mr Zuma buy Independent Newspapers, a large media group.

Judges are still fiercely critical of the government. The Constitutional Court often rules against the executive. Partly because the courts function so well, there has been a dangerous reliance on them to settle matters that would normally be dealt with through politics. NGOs often ask the court to force the government to provide citizens with free housing, electricity and water, for example.

Thus far the appointment of judges has remained remarkably free from political interference and the courts have been resilient. When Mogoeng Mogoeng was named chief justice by Mr Zuma, many worried that he would be a patsy. Yet he has steadfastly overseen rulings that

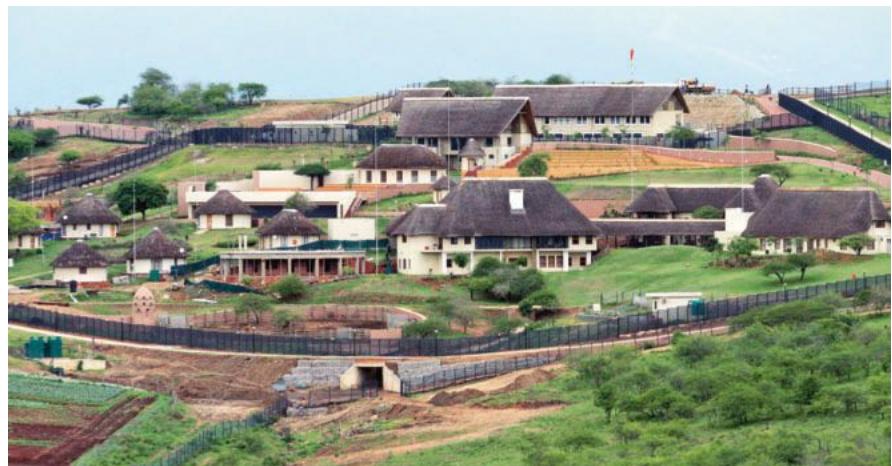
thwart or chide the president.

A worry, though, is that the government may ignore rulings. Stuart Wilson, a lawyer at the Socioeconomic Rights Institute, an NGO that often sues the government, says it now has court orders issued against named officials rather than departments: that way, judges can hold the individuals in contempt of court if their orders are not honoured.

Yet when a court ordered the arrest of Mr Bashir, the government brazenly looked the other way as he stepped onto a plane. And at some point soon the courts are expected to rule on whether prosecutors erred in dropping corruption charges against Mr Zuma. An order to reinstate the charges and press ahead with a prosecution would "test to destruction" the constitution, says Alison Tilley of the Open Democracy Advice Centre, an NGO in Cape Town. A second case that may be as controversial is over whether Mr Zuma should be ordered to repay the state for money spent on his home (pictured below).

South Africa's democratic institutions are battered. But as long as the courts can uphold the law there is hope that other arms of government can regain their vigour under a new and (with luck) more democratically minded president. In next year's local elections the ANC is likely to lose its majority in most of the big cities, including Johannesburg, Pretoria and Port Elizabeth, to the DA (which won 22% of the national vote in 2014) and a newer party, the populist Economic Freedom Fighters (EFF), which won 6%. Mr Zuma will probably hang onto power until his second and final term expires in 2019, unless a crisis prompts the ANC to replace him with his able deputy, Cyril Ramaphosa.

The challenge for democrats will be to protect the independence of the courts and what remains of other institutions. Mr Zuma has shown an inclination to wreck them. Unless checked, the danger is that when he goes he will leave only the husk of a democracy behind. ■



In Nkandla did Jacob Zuma a stately pleasure-dome decree



Skiing in Iran

Off piste in the Islamic Republic

TEHRAN
Halal holidays

IT IS not a regular in skiing magazines, but it soon could be. With pistes higher than most European resorts, and lift passes much cheaper, Iran is a bit of a downhill paradise. Its north-facing slopes and high altitudes ensure crisp powder between December and May. After the country's nuclear deal with the West, not to mention the first heavy snowfall in mid-November, Iranian ministers hope to attract fat-walled tourists to the white peaks outside the smoggy capital.

The resort of Dizin, the pick of the bunch, boasts lifts that soar to almost 3,600 metres (12,000 feet). A day-pass costs a mere \$20. The slopes are agreeably deserted, except on Persian weekends (Thursday and Friday). Where better for adventurous snowboarders to get snow in their beards?

Travelling to Iran has rarely been easier. The government of President Hassan Rouhani has simplified the entry system. Citizens of all but 11 countries (America, Britain and Canada top the exclusion list) can obtain a 30-day visa on arrival.

Since the Islamic revolution of 1979 the ruling mullahs have dismissed tourism as a Western indulgence. Foreign holidaymakers, after all, may undermine Iranian morals. Now the regime is having second thoughts. Accor, a French firm, signed a deal in September to open its IBIS and Novotel hotels close to the airport. Rotana, an

Saudi Arabia

One (very) small step for a woman

CAIRO

For the first time, women have been elected in Saudi Arabia

LIKE its thimble-sized cups of coffee, democracy in Saudi Arabia comes in doses that are tiny, yet capable of packing quite a punch in a politically parched landscape. People power was on display, for example, at a poetry reading in the port city of Jeddah on December 12th. When Ashjan Hindi, a woman poet, took to the podium, religious conservatives rose to cut her off. "Do you accept this, brothers?" cried one of the bearded vigilantes, expecting that the audience would share his outrage against such a breach of the conservative kingdom's ban on public "mixing" of sexes. Instead, a chorus shouted back "Yes we do!" as organisers hustled the astonished would-be guardians of virtue from the room. Within hours the Twitter hashtag "Yes we do" was trending in the kingdom, as Saudis gleefully shared cellphone videos of the vigilantes' humiliation.

A day later, Saudis exercised a more formal kind of democracy in a nationwide vote for some 2,100 elected seats on town councils. These are the only elections to political office in the kingdom, and they cover just two-thirds of the seats for the country's 284 councils, up from half the last time the councils were chosen. The other third are still appointed, and in any case the boards wield little real authority. Small wonder, therefore, that only a small fraction of eligible voters had registered to vote, and of that paltry number, less than half, some

700,000 people out of a population of 30m, bothered to cast ballots.

Still, this was a historic moment. For the first time in the kingdom's 83-year existence, women were allowed to vote, and to run for office. Nearly 1,000 women entered the race, braving such obstacles as the vetting of candidates by the Ministry of the Interior, the ban on "mixing" which prevented them from addressing male voters except from behind a screen, a ban on displaying their own photographs, and loud disapproval voiced in conservative quarters. Religious police in the city of Taif issued a statement claiming that to vote for a woman was a violation of Islamic law.

Some Saudis clearly disagreed. About 106,000 Saudi women voted in the election, and 20 women won council seats. (The female voters relied on their husbands and brothers to take them to the polling stations, since women are not allowed to drive.) Their victories came not just in relatively liberal cities such as Jeddah, but in some of the most conservative corners of the country. Even though that proportion is just one in a hundred of the council seats, it represents the biggest step forward for equal rights since the kingdom moved, in 2013, to reserve a fifth of the 150 seats in the Shura Council, an all-appointed proto-parliament, for women. The government may now use a similar quota to fill the appointed seats on the town councils.

Abu Dhabi-based firm, is also building four hotels in Iran, to be ready by 2018.

Tourism bosses know they are playing catch-up. The capital's best hotels date from the Shah's time. Masoud Soltanifar, a vice-president and the head of Iran's cultural heritage, handicrafts and tourism organisation, wants to increase the number of visitors from 4m now to 20m by 2025. That will require 20-25 new hotels to be added every year for a decade. A bit of training may also be needed. In Iran it is common for a check-in desk to have a sign that reads: "If you would like your room to be cleaned, please ask."

With 19 world heritage sites—one, the Imam Square in Isfahan, Iran's top destination, is second in size only to Tiananmen Square in Beijing—options abound. Isfahan's Abassi Hotel is a jewel. Here, you will find relaxed foreigners, even Americans, quietly discussing the Middle East over afternoon tea in a shady 300-year-old tree-filled courtyard. After a decade of difficult

ties, business picked up after July's agreement under which Iran pledged to rein in its nuclear programme in return for sanctions relief.

Besides skiing, tourists can gawp at ancient mosques, hike in the desert and gorge on cheap caviar. There are snags, however. Women must wear headscarves (though female skiers tend to bend this rule). Men may not wear shorts. Alcohol is forbidden (though booze and indeed drugs do circulate, so the après-ski is not as tame as you might expect). Until sanctions are lifted, credit and debit cards won't work, so visitors must carry large wads of cash.

"It looks nice from the outside and the people were wonderful but once you got inside it's a room from 1980," says a German businessman who recently stayed at the Esteghlal Hotel in Tehran. The welcome rug has been unfurled. But some holidaymakers may find Iran's aggressive morality police and death penalty for homosexuality a bit off-putting. ■

Faith's archivists

BAMAKO

Catholic monks in Minnesota are helping to save a trove of Islamic treasures in Mali

THE secret evacuations began at night. Ancient books were packed in small metal shoe-lockers and loaded three or four to a car to reduce the danger to the driver and minimise possible losses. The manuscript-traffickers passed through the checkpoints of their Islamist occupiers on the journey south across the desert from Timbuktu to Bamako. Later, when that road was blocked, they transported their cargo down the Niger river by canoe.

It formed part of a fabulous selection of Islamic literary treasures that had survived floods, heat and invasion over centuries in Timbuktu. But in April 2012 Tuareg rebels had occupied the city. They were soon displaced by the Islamists with whom they had foolishly allied, a group linked to al-Qaeda in the Islamic Maghreb. The militants issued edicts to control behaviour, dress and entertainment. Music and football were banned. They destroyed Sufi shrines that had stood for centuries. It was assumed books would be next.

Such fears were not overblown. Islamists had been ruthless with libraries and holy sites in Libya earlier in the year. So in October, the evacuation began. By the time French troops liberated Timbuktu in January 2013 and journalists saw a wing of the city's grandest new library still smouldering, most of the precious manuscripts had already been spirited away.

The man behind the plan was Abdel Kader Haidara. Born in Timbuktu in 1965, he had grown up surrounded by the treasures: his father, an expert on ancient manuscripts, had inherited a 16th-century Islamic collection and spent his life expanding it. Dr Haidara's ambitions were even broader. Since 1996 he had run an organisation called SAVAMA (Sauver et Valoriser les Manuscrits). In his office in Bamako, elegantly bound Korans line the bookshelves. Manuscripts lie in stacks, on tables, in corners. He has become their steward.

Dr Haidara describes Timbuktu as the Sahara's capital of

manuscript study. But the city was just one of several where north African Islamic learning flourished at the same time as the European Renaissance. Books were exchanged as caravans came through Timbuktu and, beginning in the late 16th century, they were copied there, too. Men who cared about learning bought or produced libraries full of books about the grammar, logic and rhetoric of the Koran and its teachings; the positions of stars; remedies and music. One 16th-century collector, Ahmed Baba, left behind such a wealth of notation and bibliography that historians call his period a scholarly zenith.

Leo Africanus, a Moorish traveller who visited Timbuktu early in the 16th century, said books from abroad traded at higher prices than fabrics, animals or salt. As it fell again and again over the centuries, families held tight to their collections. The city gained a boost from generous donors after independence from France in 1960, when scholars around the world, supported by agencies such as UNESCO, saw its potential as a centre for pan-African historical research. But in 2012, as the Islamists' grip tightened, Dr Haidara appealed for donations to help evacuate the treasures.

Turning the page

The evacuation was funded by, among others, the Dutch lottery, the German government and private donors, to the tune of a reported \$1m. Some \$70,000 more was raised through crowdfunding. The details remained opaque until well after the operation was complete.

The cars travelled through the night on the bumpy roads of central Mali, their drivers sworn to secrecy. As they arrived in Bamako after more than 12 hours of driving, they were greeted by Dr Haidara, who distributed the documents to loyal friends to be stored. The drivers then turned around to make the trip all over again. Each of the hundreds of volunteers took these risks willingly, and

► often. More than 370,000 manuscripts now sit in safe houses in Bamako—roughly 95% of the total previously held in Timbuktu, Dr Haidara estimates. They are stored in extra rooms in secret apartments, stacked from floor to ceiling in windowless closets. In one room in Bakodjikoroni, a neighbourhood of Bamako, sit 200 of the metre-long metal cases, glittering with hand-painted filigree, each containing tens or even hundreds of books.

As he looked at the saved manuscripts, Dr Haidara saw another opportunity that his father could never have imagined: to preserve their contents in perpetuity. In 2013 he put out a request for help to digitise them. He received an answer from a monastery on the other side of the world.

Somewhere in the frozen north

There can be few places more different from Timbuktu—geographically, culturally or spiritually—than Collegeville, Minnesota. Swept by winds as icy as the Saharan ones are baking, it is encrusted with snow for more than half the year. Towns called St Michael, St Augusta and St Joseph along the 80-mile road north from Minneapolis hint at the region's deep Christian roots. St John's Abbey is the last turn-off on the right before St Cloud. When Dr Haidara put out his call for help, it passed via several intermediaries to a member of the abbey's board, who delivered it to Father Columba Stewart. It had reached the right monk.

In the basement of the Hill Museum and Manuscript Library (HMML) at St John's, Father Columba flicks on the fluorescent lights. "It's basically the manuscript culture of Europe in here," he says, looking at four rows of long metal cabinets containing as many as 100,000 rolls of microfilm. He pulls out the first roll from the first drawer and snaps it into a reader. A white light projects a document on the screen. "This is a Codex," he says as he rolls through the pages, "Benedictine sermons from the 13th to the 15th century, 880 pages."

Father Columba has run the HMML for 12 years. He had known of the Mali manuscripts for some time, and was intimately familiar with both the centuries-long quest to preserve them and their immediate peril. The institute is blind to the borders of geography, language and faith.

Born in Texas in 1957, Father Columba attended both Harvard and Yale and received his doctorate in theology from Oxford University. Before taking his vows he imagined a life in law, but the call was stronger, and St John's Abbey has been his home since 1982. He reluctantly admits that he holds diamond status on Delta Air Lines, earned from spending much of his time travelling from Minnesota's enormous airport to monasteries in Ethiopia, India, Iraq, Israel and Lebanon.

St John's Abbey was founded in 1862 and moved here in 1865. Its monks make honey, candles and fine furniture, but have not brewed beer since a temperate Minnesota archbishop forbade it



Dr Haidara, with priceless treasures

in the 1880s. They spend each day gardening and teaching, following rules set down by St Benedict of Nursia in the sixth century that call for a balance of prayer and work in everyday life. Occupying a great deal of their affection, and most of Father Columba's time, is the abbey's library.

The Benedictines' longevity is rooted in their intellectual instincts. "We had scriptoria for very practical reasons," Father Columba says, referring to the "writing places" of medieval European monasteries. "You can't do theology without philosophy," he says, standing in his own 21st-century equivalent. "You can't try to be a self-sustaining monastery if you can't take science seriously." So, as a policy, any relevant text was copied. Over one and a half millennia, knowledge has been a matter of survival for the Benedictines, allowing one collective to pick up where another left off, in low times and in high. Today, thanks to machines, the library is copying more efficiently.

There have always been threats. The Vikings, the Reformation, Napoleon's looting spree and the second world war all scarred the writing places of Europe. American soldiers used ancient Benedictine manuscript pages as kindling to make a fire in a freezing European castle; Russian soldiers used them to roll their cigarettes because newspaper was too expensive. Monte Cassino, St Benedict's original monastery, was bombed in 1944 as the Allies battled to take Rome.

So St John's has a team of latter-day scribes scattered across the world who follow a protocol created half a century ago by one of Father Columba's predecessors, a bibliographer named Oliver Kapsner who made the first backup of the Benedictine archives of Europe. After receiving a grant of \$40,000 in 1965 (\$302,000 in today's money), Father Oliver began knocking on church doors in Austria and asking to make copies of their ancient texts. He spent most of the next decade in unheated chambers indexing microfilm images. His task was to save them in case of another world war. "We are seeing what happened in Europe in the 20th century now happening elsewhere in the 21st," says Father Columba. It is the same mix of ignorance and barbarism, but more heavily armed.

Father Oliver's work was widely admired and soon others wanted their libraries copied. HMML built studios in Austria, Spain, Portugal, England, Germany, Malta and Ethiopia, clicking their Recordak microfilm cameras and sending undeveloped microfilm via local mail services. The collection reached 93,000 manuscripts, safely arranged in cabinets in a basement north of Minneapolis. Father Oliver hated computers, preferring card stock in neat drawers.

Later librarians oversaw the archive's growth until Father Columba took the position in 2003. He transformed the whole project through digitisation and from there it accelerated. His own ➤



► scholarship brought the library to the Middle East, where he launched projects in East Jerusalem, Turkey and Lebanon backing up Syriac Orthodox and Christian Arab libraries that could provide insight into neighbouring Benedictine heritages. He started projects in the Syrian cities of Homs and Aleppo in 2005, and in Mosul, Iraq, in 2009. The teams photographed 50,000 endangered volumes in a decade.

Sometimes things get dicey. The project in Syria had to hide its manuscripts in 2012. The workers in Iraq, who were archiving a Christian monastery, were evacuated from Mosul because of kidnapping threats. They went to Qaraqosh with the equipment and their remaining manuscripts, only to see it taken by Islamic State in August 2014. Today they are refugees in Kurdish Erbil. The fate of many thousands of manuscripts in Christian libraries in that region is unknown.

HMML had been interested in Timbuktu before, but had not pursued that interest because the city was saturated with donors. "They didn't need us," says Father Columba (pictured left, above). That changed in 2012 when al-Qaeda's affiliates invaded. After the French regained control, HMML was the first group to agree to do the digitisation work, funded by the Prince Claus Foundation, an Amsterdam-based organisation that aims to bridge cultures and which also contributed to the evacuation from Timbuktu. In terms of sheer volume, copying the Islamic manuscripts of Mali has become its largest project. It is a curious novelty: guided by a Christian teacher from the sixth century, monks of the 21st century archive texts about an Arabian prophet from the seventh.

Bamako was safe when Father Columba met Dr Haidara in August 2013. He brought his most trusted information manager with him to build a studio. They mounted lights and cameras over desks, and trained local cameramen to shoot pages quickly and accurately. It was the same protocol that the workers of St John's have been refining for 50 years. Father Columba checks in once a year. Hard drives with terabytes of high-quality manuscript images are shipped back to Minnesota. He jokes that the whole operation is run by DHL, a delivery service.

An additional digital copy is stored under a granite mountain in Utah, "just a canyon up from where the Mormons have all of their microfilm", Father Columba says with a wink. After two years of work, two of Timbuktu's 25 large libraries are backed up. The operation has cost about \$285,000 to date. The Arcadia Fund, based in Britain, which protects endangered culture, has made a large grant to support the monastery's work. Father Columba closes the library and settles down for dinner, sharing an inexpensive bottle of red wine. Outside the bells are ringing, gently calling the monks to evening prayers.

An open book

In Bamako the muezzins' call to prayer struggles to be heard over the din of animals and scooters in the busy streets. In the photo studio at SAVAMA, one of Dr Haidara's colleagues sits under the high-watt bulbs with a stack of paper covered in ancient handwritten Arabic text. "OK," he says to the woman sitting next to him at a computer. She fires the shutter using the space bar and the bulbs flash the room white. The operator turns the page; he can take 600 pictures every day. HMML now has six photo studios, producing 3,600 pages daily. At that rate the project may need 30 years to finish. Dr Haidara hopes it can be done in four. Father Columba says they will work for as long as they are welcome.

"We keep them in homes, Timbuktu-style," Dr Haidara says, looking at the 200 aluminium boxes in a small windowless room.



Guided by a Christian teacher from the sixth century, monks of the 21st century archive texts about an Arabian prophet from the seventh

He lifts a slim book from a small wooden crate and opens it to reveal colourful lines of Arabic in a large sweeping font. In some of the trunks there are tens of manuscripts, he says. In some there are hundreds; a few hold even more. A dehumidifier struggles to dry Bamako's damp air.

Dr Haidara opens the prayer book and reads: "Bismillah ar-Rahman ar-Raheem." In the name of God, the beneficent, the most merciful: Al-Fatiha, the opening of the Koran. "In this box", he says, "we have a complete Koran, written in the 16th century and not yet digitised." A note in the spine says the book is number 4969. "Look at the decoration." He opens to a page adorned with a blood-red banner criss-crossed with yellow ropes.

The vast majority of the Mali manuscripts are Korans, Hadiths, and studies on grammar and rhetoric. But the scanners capture everything, including those dealing with human rights, health and law. Paper was precious, so rare glimpses of daily life were jotted in the margins, before Europeans ever set eyes on Saharan cities. There they remained for centuries, preserved by the desert's dryness.

The manuscripts are owned by different families, and they will decide whether or not to share their scanned copy with scholars. "We have our treasure in this place, and we will keep it hidden until the manuscripts go home," Dr Haidara says. Of the 35 family owners, he says none has asked for them back. Even though the jihadis were pushed out of Timbuktu in 2013, they still lurk. The treasures will be sent home, says Dr Haidara, when Mali is at peace. But there is no date yet for them to return.

On the other side of the world, Father Columba heads back to the monastery's guest house, where the windows are streaked with ice. "Benedictines are fundamentally optimistic about the human project. That's why we're not frightened by science or novelty," he says. "When people look at what we're doing with Muslim communities, they say, why do you do this? I say, this is the time God has given us. We can't pretend we live in the sixth century when Benedict wrote his rule, or the 13th, or the 1950s, before the sexual revolution. We live now. And part of the reality is cultures which are threatened trying to figure out how to work together on this fragile planet."

Booting up his laptop he opens an image of a poem in praise of the Prophet in Arabic, which could be 300 years old. Three years ago, it was at risk of being lost for ever; now backups exist in at least five places around the globe. "Isn't it beautiful?" he asks. ■



When the cameras arrive too late

Straddling two worlds

ISTANBUL

Worldly, pluralist,
hedonistic—and Muslim, too



ORHAN OSMANOGLU cradles a French handkerchief embossed with the letter H. "This is all I have left that's my great-great-grandfather's, the caliph's," he says. His family has fallen far since those illustrious days. Abdulhamid II lived in a palace, Yildiz, in the heart of Ottoman Istanbul; Orhan lives in a high-rise at the end of an Istanbul bus route. Europe's royals flocked to caliphal functions, but when Orhan's daughter married, Turkey's present rulers stayed away. Worst of all, an Iraqi impostor has stolen the title his family bore for hundreds of years. Abu Bakr al-Baghdadi's barbaric outfit, Islamic State (is), promises to restore the caliphate. Does Mr Baghdadi know what he is talking about?

For 1,300 years the caliphs, or "successors", prided themselves on developing the Islamic community the Prophet Muhammad left behind. The Ottoman Empire, which rivalled the Roman one in longevity, came to include not only the Middle East, but north Africa, much of the north Black Sea coast, and south-eastern Europe all the way to the gates of Vienna. Ruling from Istanbul, the caliphs kept polyglot courts, reflecting the multiple religions and races represented there. French was a *lingua franca* at the Ottoman court; Persian, Armenian and Arabic were also spoken.

The caliphs were far from doctrinaire. Abdulhamid II, who ruled from 1876 to 1909, was one of the more Islamist, but he loved music (forbidden by is) with a passion. He grew up in a court where the princesses played a piano coated in gold leaf given by Napoleon III, and Layla Hanoum taught the princes the cello. On Thursday evenings he would accompany Sufi masters in reciting the *dhikr* (rhythmic repetition of the name of God), and his imperial orchestra would play Offenbach on the way back from Friday prayers at the mosque. At state banquets the orchestra would match each course to a different concerto, including some by "Pasha" Giuseppe Donizetti, Gaetano's older brother, who was the court composer. The last caliph, Abdulmecid II, played the violin, entertaining a mixed audience of men and women at concerts.

Far from reading only the Koran and the Muslim Sunnah, Abdulhamid II had a taste for spy novels and Sarah Bernhardt, the greatest actress of her age, whom he brought several times to his private theatre. "In politics Abdulhamid was conservative," says Suraiya Farooqi, a professor of Ottoman history at Istanbul's Bilgi University. "In private, his tastes were distinctly Verdi." The Otto-

mans paraded in the latest fashions, often imported from Venice. Photographs in the vaults of the old Ottoman Bank show their clerks in pristine English frock-coats. In 1894 the governor of Smyrna, now Izmir, even banned the baggy trousers worn by mountain zeybeiks (militias) because he found them uncouth.

In their efforts to emulate other European rulers, the caliphs commissioned Europe's leading architects to design new palaces. Abdulhamid II's father, Abdulmecid I, abandoned the Topkapi Palace, perched on the heights overlooking the city, and moved to the Dolmabahce, a neo-baroque edifice with marble steps that were washed by the waves of the Bosphorus. Passengers on liners sailing past could glimpse through the windows its crystal balustrades and its chandelier, the world's largest, made in Birmingham. "The 19th-century caliph projected himself as a European emperor, like the Habsburgs or Romanovs," says Mehmet Kentel, the head librarian at Koc University's Research Centre for Anatolian Civilisations. Money was no object: Abdulhamid II's descendants are seeking to recover a legacy, excluding his estates, that they estimate at \$30 billion.

The iconoclasts of is sledgehammered human likenesses; the last caliphs fashioned them. Abdulhamid II appointed Pierre Désiré Guillemet, a French painter, and his wife to establish the empire's first arts school, and Fausto Zonaro, an Italian, as his in-house palace painter. Zonaro's students included Abdulhamid II, whose paintings are still in the Dolmabahce. In "The Pondering" Abdulmecid II painted his wife Sehsuvar reclining, unveiled, reading Goethe's "Faust" (pictured above). Another of his paintings, "Beethoven in the Harem", depicts her unveiled again, playing the violin, with a trio that includes one of his Circassian consorts on the piano and a male accompanist on the cello. The setting, again, is continental, with European furnishings and a bust of Beethoven. Neither the orientalist fantasy of the harem nor the zealously segregated purdah of the capital of is, Raqqa, are anywhere to be seen.

*Under the
19th-century
caliphs Istanbul
became a
metropolis of
modernisation*

Nor was Western culture confined to the palace. Abdulmecid I hired two Swiss architects, the Fossati brothers, to renovate the Hagia Sophia—the former seat of the Patriarch of Constantinople that became a mosque and is now a museum—installing a gallery for non-Muslims to observe the worshippers below. They designed the country's first opera house, its first university and new law courts, which are still in use. A Greek architect, Nikolai Kalfa, designed Abdulhamid II's favourite mosque, Yildiz Hamidiye. So many playhouses, shadow-theatres and concert halls surfaced in the city that "The Encyclopaedia of Istanbul Theatres" fills three volumes. Despite traditional opposition to football, the last caliph's son, Omer Faruk, was president of Istanbul's premier team, Fenerbahce, while the city was under British occupation.

Under the 19th-century caliphs, Istanbul became "a metropolis of modernisation", says Philip Mansel in his book, "Constantinople: City of the World's Desire, 1453-1924", which spans the five centuries the Ottomans ruled the city. The first official newspaper, *Moniteur Ottoman*, appeared in 1831, first in French and then in Ottoman Turkish, as well as Greek, Armenian, Persian and Arabic. Abdulhamid II Westernised oriental concepts of time by erecting clocktowers across his empire, often at the entrance to mosques. He furnished Istanbul with an underground metro, the second in Europe. And he introduced the telegraph, an intelligence service ➤

► and a rail network. The first Oriental Express steamed from Paris to Constantinople in 1889, almost two decades before the Ottomans completed their pilgrimage railway to Medina.

Ottoman attitudes to religiosity could be disarmingly liberal, too. The caliphs maintained multi-tier legal codes for their different communities. From 1839 Abdulmejid I revamped the legal system, introducing secular law alongside *sharia*. He gave non-Muslims equal rights with Muslims, abolished the right of the sultan to execute members of his court without trial, banned the slave trade and allowed the opening of taverns, which filled with European painters and composers on court stipends. Diplomatic diaries from the time record caliphal scions enjoying a tipple, particularly of drinks that had not existed in the Prophet's time and were therefore, according to more liberal readings, permitted. Mahmoud II was spotted sipping champagne at society balls.

Enjoying a tipple

Such practices were not aberrations. Drinking was a fundamental part of the pre-Ottoman early medieval caliphal courts, particularly Tamerlane's, says Hugh Kennedy, a professor of Arabic at London University's School of Oriental and African Studies, who is writing a book on their wanton ways. The greatest caliph of all, Harun al-Rashid (786-809), presided over an intellectual awakening and oversaw the translation of Greek Sophists in his House of Wisdom in Baghdad, but also partied with his debauched bard, Abu Nawwas, who composed drinking ditties as well as some of the Arab world's finest classical verse. Drunken dervishes roam "The One Thousand and One Nights", compiled during his reign.

Occasionally puritans howled. Caliph Walid II was killed in 744 after allegations he had organised drinking parties in Mecca. But dissolution was mostly taken as par for the course. Selim II (1566-75), who conquered Cyprus and Tunisia, died in a drunken stupor, after smashing his head on his Turkish bath.

For all that, the caliphs could be profoundly reverential. They saw themselves as defenders of the multiple faiths that sought their protection, not just Islam. When Spain's Christian rulers expelled their Jews, Bayezid, the then-caliph, sent boats to rescue them. Istanbul was an Armenian and Orthodox capital as well as an Islamic one. (In the Ottoman army, too, Iraqis fought alongside Albanians and Chechens.) Obedience was expected: Abdulhamid II is reputed to have slaughtered 30,000 Armenians to suppress a revolt around Adana, on the north-eastern Mediterranean. But those who proved docile and useful were welcome, whatever their origin. Abdulhamid II's foreign minister for a quarter-century was Armenian, as were the architect of his palace and the designer, along with Jean-Paul Garnier, of the clocktowers that became his hallmark across the empire.

Sisli's Darulaceze, the hospice for the homeless Abdulhamid II built in 1896, is easily missed. A highway zips past above the Golden Horn, too fast to catch the golden Arabic herald over the main hogany doors. But for those who pause there, the long courtyard shaded with cypress trees offers not just an escape from modern Istanbul's frenzy but a time capsule of caliphal values. It contains a mosque to the south, and a church and a synagogue, with stars of David, to the north. Even as Orthodox Christians and Zionists were seeking to slough off Ottoman rule and govern themselves, the caliph was still building them holy places.

Ultimately, of course, the caliphate, along with eastern Europe's other dynastic empires, the Habsburgs and Romanovs, was dissolved. After the first world war the British and French occupied Istanbul, along with all the caliph's remaining Arab lands. Turkish nationalists under Mustafa Kemal, an army general, took the Anatolian rump that remained. Had Russia not fallen prey to its own revolution, its army too might have held eastern Anatolia.

By that point, the caliphs were powerless. In 1923 Mustafa Kemal abolished the Ottoman Empire, proclaimed a republic and made himself president. A year later he abolished the title of caliph. Even a titular role was too threatening for the republicans—

and for the British, who feared that a Muslim revival in the Middle East might have repercussions for their rule in India. He stripped the imperial family of its Turkish nationality and possessions, took the Dolmabahce for himself and went on to proclaim himself "Ataturk", father of the Turks.

Turkish history books ridiculed the country's former leaders as anti-Western, anti-women, tyrannical and obscurantist. The family lived in penury, strewn across the world. Two became taxi-drivers in Beirut; another played the zither in Lebanese nightclubs. Only half a century later, in 1974, did Turkey let the first male relatives back. Mr Osmanoglu returned from Damascus, recovered his Turkish nationality in 1985, and opened an import-export business trading with bits of his forefathers' former empire. When Hosni Mubarak was toppled in Egypt, thugs broke into the ports and pilfered his containers, leaving him bankrupt.

Recently, under the Islamist-leaning president, Recep Tayyip Erdogan, Turkey has seemed to relent a little. Textbooks are less derisive. State television sometimes shows interviews with members of the clan. Mr Erdogan is pushing the country to reconnect with its Ottoman past. "Over the last decade people have begun to respect us more," says Mr Osmanoglu. The day your correspondent met him he had come from Bursa, a four-hour drive away, where he had taken part in the opening of the mausoleum of Murad II, an ancestor who ruled in the 15th century, before the Ottomans had even taken Istanbul. Still, he worries about raising his profile too much, lest Mr Erdogan covet the caliphate for himself. "If the Christians can have their pope, why can't we have our caliph?" asks the curator of Abdulmejid II's study in the Dolmabahce.

Mr Osmanoglu has toyed with forming a political party, if only he had the money. The last Ottoman leader stood for election in 1922, he notes, winning office for the first time in six centuries by the people's formal consent. Perhaps, he says, a little nostalgia for the family and the stability they brought the region remains.

In one of his last paintings, Abdulmejid II depicted a history tutorial. On the table lies a map of Rumelia, today's Balkans. The tutor covers his face with his hand, too grief-stricken or embarrassed to account for its loss. A ginger-haired girl stares at the map and a boy in a starched collar, cravat and suit points at it, determined to win it back. Beneath the frame, the caliph has added the caution: "Forget those who have caused you personal problems, but don't forgive the insult to your homeland."

When Mustafa Kemal dissolved the caliphate, the guards sent to give the household their marching orders are said to have found the caliph in his study beside his easel, perusing volumes of his favourite magazine. It was *La Revue des Deux Mondes*, exemplifying the Ottoman knack for straddling two worlds that has created such problems ever since. Within 24 hours he had boarded the Orient Express at Stambouli station, heading west to Europe. ■



Abu Bakr al-Baghdadi: less Goethe and champagne

A lot of people understand money. How many people understand families?

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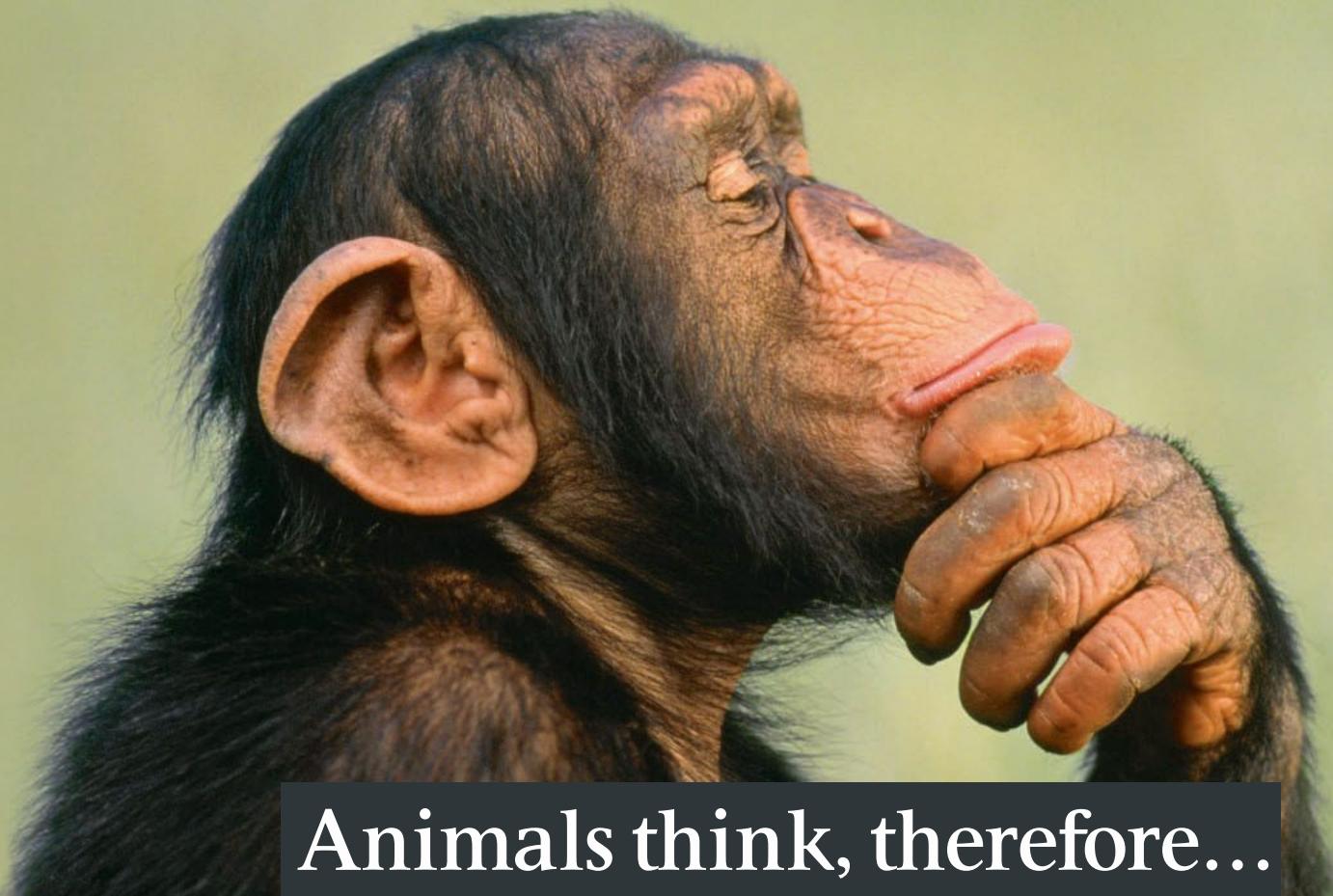


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Animals think, therefore...

The inner lives of animals are hard to study. But there is evidence that they may be a lot richer than science once thought

IN 1992, at Tangalooma, off the coast of Queensland, people began to throw fish into the water for the local wild dolphins to eat. In 1998, the dolphins began to feed the humans, throwing fish up onto the jetty for them. The humans thought they were having a bit of fun feeding the animals. What, if anything, did the dolphins think?

Charles Darwin thought the mental capacities of animals and people differed only in degree, not kind—a natural conclusion to reach when armed with the radical new belief that the one evolved from the other. His last great book, “The Expression of Emotions in Man and Animals”, examined joy, love and grief in birds, domestic animals and primates as well as in various human races. But Darwin’s attitude to animals—easily shared by people in everyday contact with dogs, horses, even mice—ran contrary to a long tradition in European thought which held that animals had no minds at all. This way of thinking stemmed from the argument of René Descartes, a great 17th-century philosopher, that people were creatures of reason, linked to the mind of God, while animals were merely machines made of flesh—living robots which, in the words of Nicolas Malebranche, one of his followers, “eat without pleasure, cry without pain, grow without knowing it: they desire nothing, fear nothing, know nothing.”

For much of the 20th century biology cleaved closer to Descartes than to Darwin. Students of animal behaviour did not rule out the possibility that animals had minds but thought the question almost irrelevant since it was impossible to answer. One could study an organism’s inputs (such as food or the environment) or outputs (its behaviour). But the organism itself remained a black box: unobservable things such as emotions or thoughts were beyond the scope of objective inquiry. As one such “behaviourist” wrote in 1992, “attributing conscious thought to animals should be strenuously avoided in any serious attempt to understand their behaviour, since it is untestable [and] empty...”.

By then, though, there was ever greater resistance to such strictures. In 1976 a professor at Rockefeller University in New York, Donald Griffin, had taken the bull by the horns (leaving aside what the bull might have felt about this) in a book called “The Question of Animal Awareness”. He argued that animals could indeed think and that their ability to do this could be subjected to proper scientific scrutiny.

In the past 40 years a wide range of work both in the field and the lab has pushed the consensus away from strict behaviourism and towards that Darwin-friendly view. Progress has not been easy or quick; as the behaviourists warned, both sorts of evidence can be misleading. Laboratory tests can be rigorous, but ➤

► are inevitably based on animals which may not behave as they do in the wild. Field observations can be dismissed as anecdotal. Running them for years or decades and on a large scale goes some way to guarding against that problem, but such studies are rare.

Nevertheless, most scientists now feel they can say with confidence that some animals process information and express emotions in ways that are accompanied by conscious mental experience. They agree that animals, from rats and mice to parrots and humpback whales, have complex mental capacities; that a few species have attributes once thought to be unique to people, such as the ability to give objects names and use tools; and that a handful of animals—primates, corvids (the crow family) and cetaceans (whales and dolphins)—have something close to what in humans is seen as culture, in that they develop distinctive ways of doing things which are passed down by imitation and example. No animals have all the attributes of human minds; but almost all the attributes of human minds are found in some animal or other.

Consider Billie, a wild bottlenose dolphin which got injured in a lock at the age of five. She was taken to an aquarium in South Australia for medical treatment, during which she spent three weeks living with captive dolphins which had been taught various tricks. She herself, though, was never trained. After she was returned to the open sea local dolphin-watchers were struck to see her “tailwalking”—a move in which a dolphin stands up above the water by beating its flukes just below the surface, travelling slowly backwards in a vaguely Michael Jackson manner. It was a trick that Billie seemed to have picked up simply by watching her erstwhile pool mates perform. More striking yet, soon afterwards five other dolphins in her pod started to tailwalk, though the behaviour had no practical function and used up a lot of energy.

Such behaviour is hard to understand without imagining a mind that can appreciate what it sees and which intends to mimic the actions of others (see “The imitative dolphin”). That in turn implies things about the brain. If you had to take a bet on things to be found in Billie’s brain, you’d be well advised to put money on “mirror neurons”. Mirror neurons are nerve cells that fire when the sight of someone else’s action triggers a matched response—they seem to be what makes yawning contagious. A lot of learning may require this way of linking perception to action—and it seems that, in people, so may some forms of empathy.

Mirror neurons are important to scientists attempting to find the basis of the way the human mind works, or at least to find correlates of that working, in the anatomy of human brains. The fact that those anatomical correlates keep turning up in non-human brains, too, is one of the current reasons for seeing animals as also being things with minds. There are mirror neurons; there are spindle cells (also called von Economo neurons) which play a role in the expression of empathy and the processing of social informa-

tion. Chimpanzee brains have parts corresponding to Broca’s area and Wernicke’s area which, in people, are associated with language and communication. Brain mapping reveals that the neurological processes underlying what look like emotions in rats are similar to those behind what clearly are emotions in humans. As a group of neuroscientists seeking to sum the field up put it in 2012, “Humans are not unique in possessing the neurological substrates that generate consciousness. Non-human animals, including all mammals and birds, and many other creatures...also possess these neurological substrates.”

But to say that animals have a biological basis for consciousness is not the same as saying they actually think or feel. Here, ideas from the law may be more helpful than those from neurology. When someone’s state of being is clearly impaired by a calamity of some sort, it can fall to the courts to decide what level of legal protection should apply. In such cases courts apply tests such as: is he or she self-aware? Can he recognise others as individuals? Can he regulate his own behaviour? Does he experience pleasure or suffer pain (that is, show emotion)? Such questions reveal a lot about animals, too.

The most common test of self-awareness is the ability to recognise yourself in a mirror. It implies you are seeing yourself as an individual, separate from other beings. The test was formally developed in 1970 by Gordon Gallup, an American psychologist, though its roots go back further; Darwin wrote about Jenny, an orang-utan, playing with a mirror and being “astonished beyond measure” by her reflection. Dr Gallup daubed an odourless mark on the face of his subjects and waited to see how they would react when they saw their reflection. If they touched the mark, it would seem they realised the image in the mirror was their own, not that of another animal. Most humans show this ability between the ages of one and two. Dr Gallup showed that chimpanzees have it, too. Since then, orang-utans, gorillas, elephants, dolphins and magpies have shown the same ability. Monkeys do not; nor do dogs, perhaps because dogs recognise each other by smell, so the test provides them with no useful information.

Recognising yourself is one thing; what of recognising others—not just as objects, but as things with purposes and desires like one’s own, but aimed at different ends. Some animals clearly pass this test too. Santino is a chimpanzee in Furuvik zoo in Sweden. In the 2000s zookeepers noticed that he was gathering little stockpiles of stones and hiding them around his cage, even constructing covers for them, so that at a later time he would have something to throw at zoo visitors who annoyed him. Mathias Osvath of Lund University argues that this behaviour showed various types of mental sophistication: Santino could remember a specific event in the past (being annoyed by visitors), prepare for an event in the fu- ►

The imitative dolphin



IT IS a rare animal that shows as much panache in its mimicry as a dolphin calf called Dolly did in the 1970s. The tank in which she and three adult dolphins lived at the Port Elizabeth Oceanarium in South Africa had portholes through which the animals could be seen by the public, and vice versa. The dolphins were trained to do a variety of tricks; but as reported by Colin Tayler and Graham Saayman in *Behaviour*, a journal, a lot of spontaneous imitation went on. The adult male, Daan, copied the diver who came to clean these portholes by picking up a seagull feather in the tank and stroking the glass with it. And Dolly, when she saw a man smoking on the other side of the glass, swam back to her mother, took a mouthful of milk, returned to the porthole and blew a cloud of milk towards the window, exactly replicating the cigarette smoke.

It is not surprising that calves join in training exercises in captivity; they copy their mother’s feeding techniques closely in the wild. Even by the standards of dolphins, though, Dolly’s playful pseudo-puffing seems particularly impressive.

ture (throwing stones at them) and mentally construct a new situation (chasing the visitors away).

Philosophers call the ability to recognise that others have different aims and desires a "theory of mind". Chimpanzees have this. Santino seemed to have understood that zookeepers would stop him throwing stones if they could. He therefore hid the weapons and inhibited his aggression: he was calm when collecting the stones, though agitated when throwing them. An understanding of the capabilities and interests of others also seems in evidence at the Centre for Great Apes, a sanctuary in Florida, where male chimpanzees living with Knuckles, a 16-year-old with cerebral palsy, do not subject him to their usual dominance displays. Chimps also understand that they can manipulate the beliefs of others; they frequently deceive each other in competition for food.

Another test of legal personhood is the ability to experience pleasure or pain—to feel emotions. This has often been taken as evidence of full sentience, which is why Descartes's followers thought animals were unable to feel, as well as reason. Peter Singer, an Australian philosopher and doyen of "animal rights", argues that, of all the emotions, suffering is especially significant because, if animals share this human capacity, people should give consideration to animal suffering as they do to that of their own kind.

Animals obviously show emotions such as fear. But this can be taken to be instinctual, similar to what happens when people cry out in pain. Behaviourists had no trouble with fear, seeing it as a conditioned reflex that they knew full well how to create. The real question is whether animals have feelings which involve some sort of mental experience. This is not easy. No one knows precisely what other people mean when they talk about their emotions; knowing what dumb beasts mean is almost impossible. That said, there are some revealing indications—most notably, evidence for what could be seen as compassion.

Some animals seem to display pity, or at least concern, for diseased and injured members of their group. Stronger chimps help weaker ones to cross roads in the wild. Elephants mourn their dead (see "The grieving elephant"). In a famous experiment, Hal Markowitz, later director of the San Francisco zoo, trained Diana monkeys to get food by putting a token in a slot. When the oldest female could not get the hang of it, a younger unrelated male put her tokens in the slot for her and stood back to let her eat.

There have also been observations of animals going out of their way to help creatures of a different species. In March 2008, Moko, a bottlenose dolphin, guided two pygmy sperm whales out of a maze of sandbars off the coast of New Zealand. The whales had seemed hopelessly disoriented and had stranded themselves four times. There are also well-attested cases of humpback whales rescuing seals from attack by killer whales and dolphins rescuing people from similar attacks. On the face of it, this sort of concern

The grieving elephant



IN 2003, in Samburu national park in Kenya, Iain Douglas-Hamilton, a zoologist, came upon Grace, one of a family of elephants called the Virtues, helping Eleanor, the matriarch of the First Ladies family, as she was dying. "Grace tried to get Eleanor to walk by pushing her," his field notes run, "but Eleanor fell again...Grace appeared very stressed, vocalising, and continuing to nudge and push Eleanor with her tusks...Grace stayed with her for at least another hour as night fell."

Eleanor died that night. Over the next few days various elephants visited her. A female called Maui "hovered her right foot over the body, nudged the body and then stepped over...rocking to and fro." All the while, Virginia Morell says in her book "Animal Wise", Eleanor's six-month-old calf was standing "like a tiny sentinel next to its mother's body, while the rest of Eleanor's family, bunched close together, looks on."

for others looks moral—or at least sentimental.

In a few examples the protecting animals have been seen to pay a price for their compassion. Iain Douglas-Hamilton, who studies elephants, describes a young female which had been so severely injured that she could only walk at a snail's pace. The rest of her group kept pace with her to protect her from predators for 15 years, though this meant they could not forage so widely. As long ago as 1959, Russell Church of Brown University set up a test which allowed laboratory rats in half of a cage to get food by pressing a lever. The lever also delivered an electric shock to rats in the other half of the cage. When the first group realised that, they stopped pressing the lever, depriving themselves of food. In a similar test ➤

The singing whales

DURING courtship and migration, male humpback whales sing songs which can be heard over dozens of kilometres, typically consisting of a repeated cycle of eight or so parts made up of between two and 20 whistling, moaning, grunting and rattling phrases. The songs have from time to time been voguish among humans; in the 1970s they were even among the recordings sent beyond the solar system by NASA.

If aliens ever hear them, though, they will be behind the times. Ellen Garland and Michael Noad have shown that, in the South Pacific, whales regularly change their songs, with novelties moving eastward over time. A song will appear one year among whales feeding off eastern Australia; the next year whales around New Caledonia (1,500km to the east) will start singing it; the year after it gets to Tonga, and so on until it reaches French Polynesia, 6,000km away—by which time another song will have started life in Australia. There is no environmental or genetic underpinning for this; the succession seems a matter of fashion. Dr Garland calls it "cultural change on a vast scale".



► on rhesus monkeys reported in the *American Journal of Psychiatry* in 1964, one monkey stopped giving the signal for food for 12 days after witnessing another receive a shock. There are other examples of animals preferring some sort of feeling over food. In famous studies by an American psychologist, Harry Harlow, rhesus monkeys deprived of their mothers were given a choice between substitutes. One was made of wire and had a feeding bottle, the other was cloth, but without food. The infants spent almost all their time hugging the cloth mother.

If animals are self-aware, aware of others and have some measure of self-control, then they share some of the attributes used to define personhood in law. If they display emotions and feelings in ways that are not purely instinctive, there may also be a case for saying their feelings should be respected in the way that human feelings are. But the attribute most commonly thought of as distinctively human is language. Can animals be said to use language in a meaningful way?

Animals communicate all the time and don't need big brains to do so. In the 1940s Karl von Frisch, an Austrian ethologist, showed that the "waggle dances" of honeybees pass on information about how far away food is and in what direction. Birds sing long, complex songs either to mark territory or as mating rituals. So do pods of whales (see "The singing whales"). It is hard, though, to say what information, or intention, goes into all this. The bees are more likely to be automatically downloading a report of their recent travels than saying, "There's pollen thataway, slackers."

The vocalisations of, say, vervet monkeys have more to them. Vervets make different alarm calls for different predators, demanding different responses. There is one for leopards (skitter up into the highest branches), for eagles (hide in the undergrowth) and for snakes (stand upright and look around). The monkeys need to recognise the different calls and know when to make which one. Animals brought up with humans can do much more. Chaser, a border collie, knows over 1,000 words. She can pull a named toy from a pile of other toys. This shows that she understands that an acoustical pattern stands for a physical object. Noam Chomsky, a linguist, once said only people could do that. Remarkably, if told to fetch a toy with a name she has not heard before placed in a pile of known, named objects, she works out what is being asked for. Betsy, another border collie, will bring back a photograph of something, suggesting she understands that a two-dimensional image can represent a three-dimensional object.

More impressive still are animals such as Washoe, a female chimpanzee which was taught sign language by two researchers at the University of Nevada. Washoe would initiate conversations and ask for things she wanted, like food. But evidence that many animals can, when brought up with humans, tell their thoughts to

others using a human language is not quite the same as saying they use language as people do. Few have a smidgen of grammar, for example—that is, the ability to manipulate and combine words to create new meanings. It is true that dolphins in captivity can distinguish between "put the ball in the hoop" and "bring the hoop to the ball". Alex, an African grey parrot, combined words to make up new ones: he called an apple a "bannery", for example, a mixture of banana and cherry (see "The talkative parrot"). But these are exceptional cases and the result of intense collaboration with humans. The use of grammar—certainly a complex grammar—has not been discerned in the wild. Moreover, animals have no equivalent to the narratives that people tell one another.

If language can still be claimed as uniquely human, can anything else? Until recently, culture would have been held up as a second defining feature of humanity. Complex ways of doing things which are passed down not by genetic inheritance or environmental pressure but by teaching, imitation and conformism have been widely assumed to be unique to people. But it is increasingly clear that other species have their own cultures, too.

In "The Cultural Lives of Whales and Dolphins", Hal Whitehead of Dalhousie University, Nova Scotia, and Luke Rendell of the University of St Andrews, in Scotland, argue that all cultures have five distinctive features: a characteristic technology; teaching and learning; a moral component, with rules that buttress "the way we do things" and punishments for infraction; an acquired, not innate, distinction between insiders and outsiders; and a cumulative character that builds up over time. These attributes together allow individuals in a group to do things that they would not be able to achieve by themselves.

For the first feature, look no further than the crow. New Caledonian crows are the champion toolmakers of the animal kingdom. They make hooks by snipping off V-shaped twigs and nibbling them into shape. They fashion Pandanus leaves into toothed saws. And in different parts of the island they make their tools in different ways. Studies by Gavin Hunt of the University of Auckland showed that the hooks and saws in two sites on New Caledonia differed systematically in size, in the number of cuts needed to make them and even according to whether they were predominantly left-handed or right-handed. To the extent that culture means "the way we do things around here", the two groups of crows were culturally distinct.

Chimpanzees are now known to manipulate over two dozen implements: clubs to beat with, pestles to grind with, fly whisks, grass stalks with which to fish for termites, spongy leaves to soak up water, rocks as nutcrackers. Like New Caledonian crows, different groups use them slightly differently. William McGrew of Cambridge University argues that the tool sets of chimpanzees in western Tanzania are just as complex as the simplest human tools, such ➤

The chatterbox parrot



ON THE night he died, Alex told Irene Pepperberg, a professor at Brandeis University in Massachusetts, "You be good. I love you." "I love you too," she replied. "You'll be in tomorrow?" "Yes, I'll be in tomorrow." Not bad for a bird.

Until Alex came along, scientists looking at animal language had concentrated on large-brained primates. But they cannot form words. Alex (his name an acronym for Avian Learning Experiment) could talk—and could, to some extent, make sense. At the time he died, Alex could pronounce over 100 words; could count to six; and understood abstract concepts such as bigger or smaller, same or different. He also grasped that two keys of different sizes were both keys. When he wanted to stop his laboratory tests and rest at a window overlooking the garden he would say "Wanna go tree." When other parrots mispronounced words he would correct them: "Talk clearly." How much he really understood remains controversial. Sceptics dismiss his achievements as a one-off, the work of an exceptional animal. On the last point, at least, they were right.

► as early human artefacts found in east Africa or indeed those used in historic times by native peoples in Tasmania.

The skill needed to make and use tools is taught. It is not the only example of teaching that animals have to offer. Meerkats feed on scorpions—an exceptionally dangerous prey which you cannot learn to hunt by trial and error. So older meerkats teach younger ones gradually. First they incapacitate a scorpion and let the young meerkat finish it off. Then they let their students tackle a slightly less damaged specimen, and so on in stages until the young apprentice is ready to hunt a healthy scorpion on its own.

Pretty much all meerkats do this. Elsewhere what is taught can change, with just some animals picking up new tricks. As the story of Billie the tailwalker implies, whales and dolphins can learn fundamentally new behaviours from each other. In 1980, a humpback whale started to catch fish off Cape Cod in a new way. It would slam its flukes down on the surface of the water—lobtailing, as it is known—then dive and swim round emitting a cloud of bubbles. The prey, confused by the noise and scared of the rising circle of bubbles, bunched themselves together for protection. The whale would then surge up through the middle of the bubble cloud with a mouth full of fish.

Bubble feeding is a well known way for whales to break out their food; so is lobtailing. Making the first a systematic set-up to the second, though, was apparently an innovation—and became very popular. By 1989, just nine years after the first Cape Cod whale started lobtail feeding, almost half the humpbacks in the area were at it. Most were younger whales which, since their mothers did not use the new trick, could not have inherited it. Researchers think young whales copied the first practitioner, spreading the technique through imitation. How the first one got the idea is a mystery—as is the question of whether it is actually a superior way of feeding, or merely an increasingly fashionable one.

Cultures rely not only on technologies, techniques and teaching but on rules of accepted behaviour. That things should be fair seems a widespread requirement among social animals. At a canine research centre at Eotvos Lorand University in Budapest, for example, dogs frequently chosen to take part in tests are shunned by other dogs. It turns out that all the dogs want to take part in these tests because they receive human attention; those which are chosen too often are seen as having got unfair advantage. Capuchin monkeys taking part in experiments keep track of the rewards they are getting. If one is offered a poor reward (such as a slice of cucumber), while another gets a tasty grape, the first will refuse to continue the test. Chimpanzees do this, too.

Most cultures distinguish between outsiders and insiders and animals are no exceptions. Orcas, also known as killer whales, are

The peaceful baboons



WHEN Robert Sapolsky and Lisa Share first started to study a particular troop of baboons in Kenya's Masai Mara in the 1970s it had the usual squabbling mixture of aggressive, high-ranking males, pacific, low-ranking ones, females and infants. In the 1980s the high-status males of the troop started to scavenge at a nearby rubbish dump; in 1983 tuberculosis, probably from infected meat at the dump, killed every one of them.

A decade later, the behaviour of the troop had changed out of all recognition. Gone was the bullying by high-ranking males; there was more grooming and lower levels of stress hormones. This was not because only the low-ranking, pacific males had been spared: many new males had joined the troop. But they seemed to have learned from the survivors a more placid behaviour. As Dr Sapolsky and Dr Share put it, a "pacific culture" had emerged.

particularly striking in this regard, having a repertoire of calls which are distinctive to the pod in which they live, a sort of dialect. Dr Whitehead and Dr Rendell compare them to tribal markings. Orcas are unusual in that different pods tend to feed on different prey and rarely interbreed. Most of the time, pods studiously ignore each other. But occasionally one will ferociously attack another. This cannot have anything to do with competition for food or females. Lance Barrett-Lennard of the Vancouver Aquarium attributes it to xenophobia—a particularly extreme and aggressive way of distinguishing between insiders and outsiders.

But if animals display four of the five attributes that go to make ►

The lonely orca



TO SEE the importance of its society to a social animal, look at the often sorry stories of those which are taken out of their natural communities.

In 1979 an orca called Keiko ("lucky" in Japanese) was captured at the age of about two off Iceland. He was shunted from one aquarium to another before ending up in a tank in Mexico City with no other members of his species for company. There he starred in a popular film, "Free Willy", about the capture and eventual happy release of an orca.

The film led to the setting up of the Free Willy-Keiko Foundation. Keiko was flown back to Iceland and put into a sea pen to get the hang of being wild again. But he never learned to hunt or interact with other killer whales—he would swim to the nearest boat if they approached him. When he was finally released, he followed a pleasure boat up a Norwegian fjord and stayed there. Eventually the foundation built another sea pen for him in the fjord, and he lived out his life as he had lived before the film, dependent on people for his food and care.

► up a culture, there is one they do not share. Perhaps the most distinctive thing about human cultures is that they change over time, building upon earlier achievements to produce everything from iPhones and modern medicine to democracy. Nothing like this has been observed in animals. Particular aspects of animal behaviour change in ways that might seem cultural, and disruptive change is certainly possible. In the 1990s, for example, South African culling policies that saw the oldest elephants shot and their children redistributed led to large changes in their normally orderly matriarchal societies. Young elephants became abnormally aggressive, since there were no longer any elders to rein them back. In other cases such disruption can seem, anthropomorphically, not so bad (see "The peaceful baboons"). But whether the shocks are good or bad, animal societies have yet to show steady, adaptive change—any cultural progress. Knowledge accumulates with the oldest individuals—when drought struck Tarangire national park in Tanzania in 1993 the elephant families that survived best were those led by matriarchs which remembered the severe drought of 1958—but it goes to the graveyard with them.

There is a great deal more to learn about animal minds. Grammatical language can pretty thoroughly be ruled out; learned toolmaking for some species is now indubitable: but many conclusions are in the middle, neither definitively in nor out. Whether you accept them depends partly on the standard of evidence required. If the question of animal empathy were being tested in a criminal court, demanding proof beyond reasonable doubt, you might hesitate to find that it exists. If the trial were a civil one, requiring a preponderance of evidence, you would probably conclude that animals had empathy.

Using that standard, one can hazard three conclusions. First, various animals do have minds. The physiological evidence of brain functions, their communications and the versatility of their responses to their environments all strongly support the idea. Primates, corvids and cetaceans also have attributes of culture, if not language or organised religion (though Jane Goodall, a noted zoologist, sees chimps as expressing a pantheistic pleasure in nature).

Next, animals' abilities are patchy compared with those of humans. Dogs can learn words but do not recognise their reflections. Clark's nutcracker, a member of the crow family, buries up to 100,000 seeds in a season and remembers where it put them months later—but does not make tools, as other corvids do. These specific, focused abilities fit with some modern thinking about human minds, which sees them less as engines of pure reason that can be applied in much the same way to all aspects of life as bundles of subroutines for specific tasks. On this analysis a human mind might be a Swiss army knife, an animal mind a corkscrew or pair of tweezers.

This suggests a corollary—that there will be some dimensions in which animal minds exceed humans. Take the example of Ayumu, a young chimpanzee who lives at the Primate Research Institute of the University of Kyoto. Researchers have been teaching Ayumu a memory task in which a random pattern of numbers appears fleetingly on a touchscreen before being covered by electronic squares. Ayumu has to touch the on-screen squares in the same order as the numbers hidden beneath them. Humans get this test right most of the time if there are five numbers and 500 milliseconds or so in which to study them. With nine numbers, or less time, the human success rate declines sharply. Show Ayumu nine numbers flashed up for just 60 milliseconds and he will nonchalantly tap out the numbers in the right order with his knuckles.

There are humans with so called eidetic, or flash, memories who can do something similar—for chimps, though, this seems to be the norm. Is it an attribute that chimps have evolved since their last common ancestor with humans for some reason—or one that humans have lost over the same period of time? More deeply, how might it change what it is for a chimp to have a mind? How different is having minds in a society where everyone remembers such things? Animals might well think in ways that humans cannot yet decipher because they are too different from the ways humans think—adapted to sensory and mental realms utterly unlike that of the human, perhaps realms that have not spurred a need for language. There is, for example, no doubt that octopuses are intelligent; they are ferociously good problem solvers. But can scientists begin to imagine how an octopus might think and feel?

All that said, the third general truth seems to be that there is a link between mind and society which animals display. The wild animals with the highest levels of cognition (primates, cetaceans, elephants, parrots) are, like people, long-lived species that live in complex societies, in which knowledge, social interaction and communication are at a premium. It seems reasonable to speculate that their minds—like human ones—may well have evolved in response to their social environment (see "The lonely orca"). And this may be what allows minds on the two sides of the inter-species gulf to bridge it.

Off Laguna, in southern Brazil, people and bottlenose dolphins have fished together for generations. The dolphins swim towards the beach, driving mullet towards the fishermen. The men wait for a signal from the dolphins—a distinctive dive—before throwing their nets. The dolphins are in charge, initiating the herding and giving the vital signal, though only some do this. The people must learn which dolphins will herd the fish and pay close attention to the signal, or the fishing will fail. Both groups of mammals must learn the necessary skills. Among the humans, these are passed down from father to son; among the dolphins, from mother to calf. In this example, how much do the species differ? ■





Spain's elections

Clean hands

MADRID

The economy is recovering nicely. Cronyism, alas, is rife

IN MAY 2014 Isabel Carrasco was murdered as she walked across a footbridge over the Bernesga river in the north-western Spanish city of León. Ms Carrasco, a controversial local bigwig in the People's Party (PP) of the prime minister, Mariano Rajoy, was shot at point-blank range by the mother of a young woman whom she had excluded from her political patronage network. (The young woman, the daughter of a local police chief, had been refused a government job.) It was an act of madness, but within the local political context it made a crazy kind of sense. "This was about cronyism, about her daughter's career," said Juan Carlos Fernández, a local spokesman for Ciudadanos, a political party that campaigns against corruption.

As Spain prepares for national elections on December 20th, cronyism is near the top of voters' concerns. Both the PP and the opposition Socialists, who have taken turns in government for the past 33 years, are viewed by voters as deeply corrupt. The Socialists once hoped that anger at Mr Rajoy's austerity programme would bring them back to power. But an economic recovery may allow the PP to hold on.

Many Spaniards have embraced two upstart parties that vow to drive cronyism from public life. The anti-austerity Podemos party, led by Pablo Iglesias, a left-wing political-science professor, once seemed ready to sweep to power. But over the past year it has been surpassed by Ciudadanos, a liberal party led by a 36-year-old lawyer,

Albert Rivera (pictured). Although voters worry most about the economy, "those going to the new parties are almost as concerned about corruption," says Pablo Simón, editor of Politikon, a politics blog. Together, the newcomers look set to win nearly 40% of the vote and deny both the PP and the Socialists a majority.

Ms Carrasco's power base was a part of León's government called the Diputación (housed in a 16th-century palace), an intermediate layer in some Spanish provinces that distributes public works and largesse to small municipalities. She gained a reputation for iron-fisted favouritism; her successor, another PP appointee, was arrested (and later released on bail) in an investigation into corruption. Both Ciudadanos and Podemos want to scrap the Diputación lay-

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er of government entirely. Ciudadanos also wants to merge many of Spain's 8,117 municipal councils, some of which represent just a few hundred villagers.

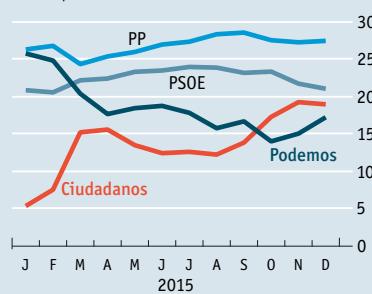
Such measures are popular in urban areas that are too big to receive Diputación money. But they are unpopular in León and other rural provinces. "You don't win the rural vote by telling people you will take away their local councils," says Ms Carrasco's successor as PP provincial boss, Eduardo Fernández. Besides, scrapping layers of government is difficult: civil servants have cast-iron job guarantees. And Spain's electoral system gives disproportionate weight to sparsely populated rural provinces. The state pollster, CIS, shows the PP winning 29% of the overall vote, but its strength in the countryside could give it up to 128 of the 350 seats in parliament.

A PP victory, however marginal, would be Mr Rajoy's prize for turning around the economy. It shrank by 4% in 2010-13, but has grown 3% this year. Unemployment is falling but still high, at 21%. Most new jobs are short-term and unstable. Labour reforms pushed through by the PP in 2012 have helped Spain devalue by means of wage reductions, but this has reached its limits, says Alfredo Pastor of the IESE business school. Ciudadanos's solution is to free up the labour market with a single, catch-all employment contract, to get rid of Spain's sharp insider-outsider divide between protected permanent workers and those on precarious short-term contracts. Podemos and the Socialists propose to repeal the PP's partial liberalisation.

Catalonia's desire for independence is a wild card. Neither the PP nor Ciudadanos has anything special to offer secessionist Catalans, which explains why Podemos, which supports an independence referendum, may win first place there. Mr Rivera is himself a Catalan; indeed, Ciudadanos began life as an anti-nationalist group in the ►

Citizens on the rise

Spain's voting intention, average of polls
% of respondents



► region. Although he opposes independence, he may be better placed to understand local sensitivities than Mr Rajoy, who has seen a leap in support for secession on his watch.

The new parties' strength shows how profoundly Spaniards want their system to change. It probably will. It is almost certain that no one party will gain an outright majority. Coalition government would require new skills of compromise and horse-trading from Spanish parties, which are used to governing alone. Yet the old politics has some life in it yet. Just 11 weeks before the election, the government shored up its support in León with a new high-speed rail link to Madrid, reminiscent of the dubious infrastructure projects that got Spain into trouble during the go-go years. Mr Rajoy himself cut the tape. ■

German immigration

All down the line

BERLIN

**Berlin's refugees wait to register.
Businesses cannot wait to employ them**

IN THE middle of Germany's capital, refugees—among them pregnant women and babies—are sleeping on the pavement in freezing temperatures. Many come early in the morning, hoping to make it to the head of the line by the following day, says Christiane Beckmann of Moabit Hilft, an organisation of volunteers who provide them with food, clothes and advice. One woman holds up stamps showing she has come unsuccessfully seven days in a row. Their goal is to get into the large, ugly office building of LaGeSo, the German abbreviation for Berlin's state office for health and social affairs. It is with this agency that ref-

ugees must register when they get to Berlin, and then re-register to obtain health care and services.

Germany is straining to cope with the 1m refugees who have arrived in the country this year, and for the most part it is managing. But in Germany's federal system, the 16 regional states must integrate refugees once federal officials have fingerprinted them. Berlin, with an estimated 90,000 refugees this year in a population of 3.5m, is the least competent. Even before the refugee crisis, the capital had a reputation for mismanagement. It is deep in debt and receives subsidies from other states. A new airport was supposed to open in 2011; the current target date is 2017. Its schools are among Germany's worst.

A humanitarian crisis has been building in plain sight, says Ms Beckmann, who puts in unpaid 17-hour days at LaGeSo despite her asthma. In October a German man abducted a four-year-old boy from the queues, then sexually abused and strangled him. Refugees, many with war trauma and health problems, wander about between the complex's buildings, grasping pieces of paper they do not understand. A young Syrian boy, speaking in broken English with his family behind him, seeks help from this correspondent to decipher a letter in obtuse German legalese.

The situation received national attention this month when Claudia Roth, a vice-president of Germany's parliament, wrote an open letter to Berlin's mayor, Michael Müller. The refugees at LaGeSo "are deprived of their human dignity", Ms Roth said, in violation of the German constitution. Mr Müller, a centre-left Social Democrat, blamed the responsible cabinet member, a Christian Democrat, who in turn accepted the resignation of LaGeSo's boss. The Social and Christian Democrats are coalition partners in Berlin's government, but with elections coming next September, they are starting to bicker.



Registrations and permits, please

The situation at LaGeSo has improved slightly. Heated tents have been set up as shelter for some refugees. Consultants are tweaking the queuing process. But Ms Beckmann notices no drop in misery.

Although Berlin's bureaucracy is sluggish and inept, civil society is brimming with energy. Moabit Hilft is only one of many volunteer efforts, as Germans donate their clothes, food and time. Some teach German to newly arrived refugees. Berlin's chamber of commerce, a business association, is asking refugees about their qualifications to place them in internships or jobs. It recently organised a "speed-dating" session where refugee chefs cooked for hoteliers (to mutual satisfaction).

Among the firms that have employed refugees, the reviews are good. Ingo Henning, a manager at a local branch of Edeka, a supermarket chain, is delighted by the work ethic of his Iranian intern. "We need people like that," he says. Marlies Poppe, a spokeswoman for Edeka, says the group would hire many more, were it not for the bureaucratic hurdles. Time for LaGeSo to get those queues moving. ■

European borders

A real border guard at last

The EU's much-maligned border agency could become far stronger

FEW institutions have been as overwhelmed by the numbers of refugees passing through Europe as Frontex, the European Union's external border agency. With a weak mandate, no equipment of its own and no power to hire its own border guards, the agency has floundered. On December 15th the European Commission came forward with a proposal, backed by Germany and France, intended to toughen Europe's border controls. The plan is long overdue—and is evidence of a growing realisation that far more needs to be done to manage the refugee crisis and preserve Schengen, the passport-free travel zone, which has come under great strain.

Under the proposal, a new European border and coast guard would be created. It would absorb Frontex, which at present cannot do much more than fingerprint and count migrants as they pass through a country. By contrast, the new border agency would have far more authority, with twice as many staff and the ability to buy its own kit. A reserve team of border guards would be at the agency's disposal, helping prevent shortages, while "liaison officers" would be posted to tricky spots in order to feed back information to the headquarters. Most strikingly, it would be given



We don't need no Frontex badges

► the power to intervene in a country whether the member state liked it or not. (At present, Frontex has to get permission before working in a country). It would also be able to gain access to European databases more easily, and have a far greater involvement in sending illegal migrants back.

Many are delighted by the proposal, including Fabrice Leggeri, the current boss of Frontex. ("It has everything I wanted," he says.) It is less politically toxic than the idea of a "mini-Schengen", a core group of member states, which has been mooted by several Dutch politicians but is disliked by most other countries. The plan would also deal with a weakness in the current system—the reluctance of "front-line" member states, such as Greece, to ask for help—by giving the commission the power to force them to accept assistance.

But other countries are less pleased by the idea of an agency with mandatory powers. Poland's foreign minister described it as a potentially "undemocratic structure". Greece cautiously welcomed the idea but insisted it should retain ultimate authority over its borders. Such grumblers may not have much power when it comes to voting, as the proposal requires only a qualified (weighted) majority among states to pass, rather than unanimous approval.

Yet even if it passes, obstacles remain. "There is a huge gap between what member states vote on and what they actually do," says Angeliki Dimitriadi of the European Council on Foreign Relations, a think-tank. For example, the EU passed plans in May and September to relocate 160,000 refugees over two years. Yet just under 4,000 places have been allocated and around 200 refugees moved. Without the political will to implement them, such ambitious plans are often stillborn. ■

French politics

Outflanking Marine

PARIS

The left backs the right to stop the far right. It could become a pattern

MARINE LE PEN and her far-right National Front (FN) began December looking like the leaders of a new wave of European populist nationalism. They were on the verge of winning two of France's regional elections and upsetting the country's traditionally bipartisan politics. Instead, mainstream parties manoeuvred to keep the FN out. Now some on France's centre-left hope this strategy could signal a deeper realignment. That is less far-fetched than it sounds. With many European countries facing populist insurgencies, parties of the centre-left and centre-right find themselves co-operating to hold off the upstarts.

The FN under Ms Le Pen, a softer version of the xenophobic party founded in 1972 by her father, Jean-Marie Le Pen, came top in first-round voting to regional assemblies on December 6th. The party notched up a record 40% in the north, where Ms Le Pen ran, and the south, where her 26-year-old niece, Marion Maréchal-Le Pen, did. These leads did not translate into a single victory at second-round voting on December 13th, chiefly because of a tactical decision by the governing Socialists to sacrifice their own candidates. Manuel Valls, the prime minister, ordered Socialists in three regions where the rival centre-right looked the stronger opponent to pull out (one refused). This, combined with some scaremongering—he warned of "civil war" should the far right win—helped to get voters out, and to thwart the FN.

It would be a mistake, however, to conclude that the FN has been fatally weakened. It drew 6.8m votes in the second round-up from 6m in the first, and 400,000 more than Ms Le Pen scored at the presidential election of 2012, when turnout was higher. Except in small constituencies, the party struggles to win a majority, and Ms Le Pen's chances of becoming president remain slim. But she did win 42% in her region, and her niece 44%. The FN's national second-round score of 27%, were it to be repeated in the first round of the presidential election in 2017, should be enough to secure Ms Le Pen a place in the run-off.

The bigger question is whether the rise of the far right could force mainstream parties to shift towards more bipartisanship. Mr Valls called this week for a different form of post-sectarian politics, in which opponents work together for the general interest. A centre-left politician with close links to Michel Rocard, a moderate former

prime minister, Mr Valls has long craved a larger political centre. He has argued that it was a mistake not to have opened up to François Bayrou, the leader of a centrist party, after François Hollande was elected president in 2012.

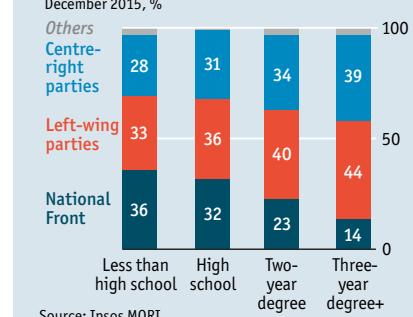
That French voters, especially the young, rallied to block the FN suggests that left and right can unite against a common opponent—as they did in 2002, when leftists voted for Jacques Chirac, the centre-right candidate, to defeat Mr Le Pen after he unexpectedly squeaked through to the second round of the presidential race. In many ways, voters who backed the two main parties differ less from each other than from FN supporters (see chart). Voters without a high-school qualification are more than twice as likely to plump for FN as those with a degree. Both left and centre-right, by contrast, are more favoured by the better-educated.

Conceivably, both in France and elsewhere in Europe, the left-right political split that has dominated the post-war period could eventually give way to a division between globally minded parties and nationalists. Already, the populist parties' rising vote share has at various times forced the centre-right and centre-left to co-operate in Finland, Italy, the Netherlands and Sweden. Such bipartisanship may be what France needs to form a political consensus behind more radical economic reform. Indeed the FN itself seeks to "refound French politics" along nationalist and internationalist lines, says Florian Philippot, a party vice-president, arguing that "there's no difference between left and right".

For now, though, it is hard to see how any formal political recomposition could take place. Both the centre-right, under Nicolas Sarkozy, and the left will treat 2016 as a pre-election year, when adversarial posturing is likely to prevail. It might take a systemic reform such as the introduction of proportional representation, which some close to Mr Valls advocate, to provoke a true realignment. This could come at a price. France tried it in 1986, and the upshot was the election of a record 35 FN deputies—among them Mr Le Pen. ■

Town v gown

French voting intention by level of education
December 2015, %



Charlemagne | Down but not out

It is too early to write off Europe's anti-austerity parties



LESS than a minute into his speech and Albert Rivera, the leader of Ciudadanos, a centrist party that has stormed the barricades of Spanish politics, is already speaking of *reformas estructurales*. Mr Rivera wants to liberalise Spain's labour market, clean out the public administration and overhaul the tax system. These tough prescriptions do not look like vote-winners in a country that has been through the economic wringer. Yet Ciudadanos has risen from single digits in the polls a year ago to around 20% today, and is set to act as kingmaker after Spain's unpredictable general election on December 20th (see page 75).

Like bronzed pensioners on the Costa Blanca, several political ideas are seeing out their last days in Spain. One of them is that liberals of Mr Rivera's sort cannot thrive in southern Europe. Another is the prediction, often heard during the darkest days of the euro crisis, that the cuts countries like Spain had to endure would generate a devastating political blowback. Yet Spain's ruling People's Party (PP), helped by buoyant growth and jobs numbers, remains on top of the polls, albeit much weakened.

It is a similar story elsewhere in the euro-zone periphery. Ireland's ruling Fine Gael hopes to win another term next spring on the back of a zippy recovery. Portugal's centre-right government came first in October's election, only to see a leftist alliance assemble a jerry-built coalition that will struggle to last a full term. In Greece Syriza's anti-austerity resolve crumbled on its first encounter with the German-led imperium. Even in Italy, which has failed to grow since joining the euro, Matteo Renzi, the centre-left prime minister, is just about keeping a ragtag of populists at bay.

But it was in Spain, the euro zone's fourth-largest economy, where the backlash was most feared. Unlike Greece, Ireland and Portugal, Spain (just) avoided a full bail-out. But its calamitous crash left over half of young workers unemployed. In January Pablo Iglesias, the leader of Podemos, another political newcomer, addressed vast crowds in Madrid on the iniquities of austerity while his brother-in-arms, Alexis Tsipras, led Syriza to victory in Greece. Europe's panjandrums feared the spread of political "contagion" from Greece across the periphery, starting in Spain.

What happened? A year later Mr Tsipras is dutifully executing the terms of Greece's third bail-out, Podemos's support has plummeted and Ciudadanos has waltzed through the door that Mr

Iglesias prised open. In Ireland Sinn Fein, a party rooted in terrorism that has tried to reposition itself as the voice of anti-austerity, is slipping in the polls after once leading them. Today the populist momentum in Europe is with right-wingers, who have exploited the refugee crisis to tap into cultural as well as economic fears.

A number of factors explain the left's struggle. In part, it is the difficulty of turning insurrections into political parties. Coalitions must be built and maintained, outrage transmuted into a policy platform. Podemos began life as a fusion of grassroots *indignados* and a cabal of hard-left political-science professors, and the fissures sometimes show: this year a gentle tack towards the centre has seen some senior figures quit in disgust. Sinn Fein's dark history renders it toxic for many Irish voters. In August an anti-euro faction split off from Syriza.

Europe's anti-austrians have also learned that their crusades are hard to conduct inside the euro zone, with Brussels supervising their every fiscal move. Grounded in internationalism, none of the new left populists wants to leave the single currency. Pablo Bustinduy, a Podemos candidate, says his party's attacks on austerity go "hand-in-hand" with a pro-European message. But he is scathing about the austere turn the euro zone has taken. The Europe that the new left professes to love often seems to be just an artefact of its imagination.

Despite this, the right is in no position to crow. European politics has not yet returned to its pre-crisis routines. Although Podemos's standing in the polls has faded, Spain's politics has fractured and Mr Iglesias's support may turn out to be vital in forming a government (he has had a good campaign). In Ireland, Spain and Greece once-stable systems have become primaeval political soups from which all manner of governments may emerge. The left's cause retains vitality: Podemos's dedication, grounded in the suffering of the *indignados*, could yet prove more enduring than Ciudadanos's clever but bloodless proposals.

Not barking, but growling

More to the point, Podemos's anger could prove useful, even if its reheated socialism is no cure for Spain's economic ills. The country's corrupt politics were crying out for the disruption that both Podemos and Ciudadanos have brought. Young Spaniards were walloped by the crash, but the PP has pandered to the old: last week Mariano Rajoy, the unpopular prime minister, pledged to slash income tax for Spain's pensioners. Little wonder, notes Jorge Galindo of Politikon, a Spanish website: the PP is polling first among voters over 65, and fourth among everyone else. This is not a strategy for the long term. Nor do the tired Socialists appeal to Spain's disaffected young.

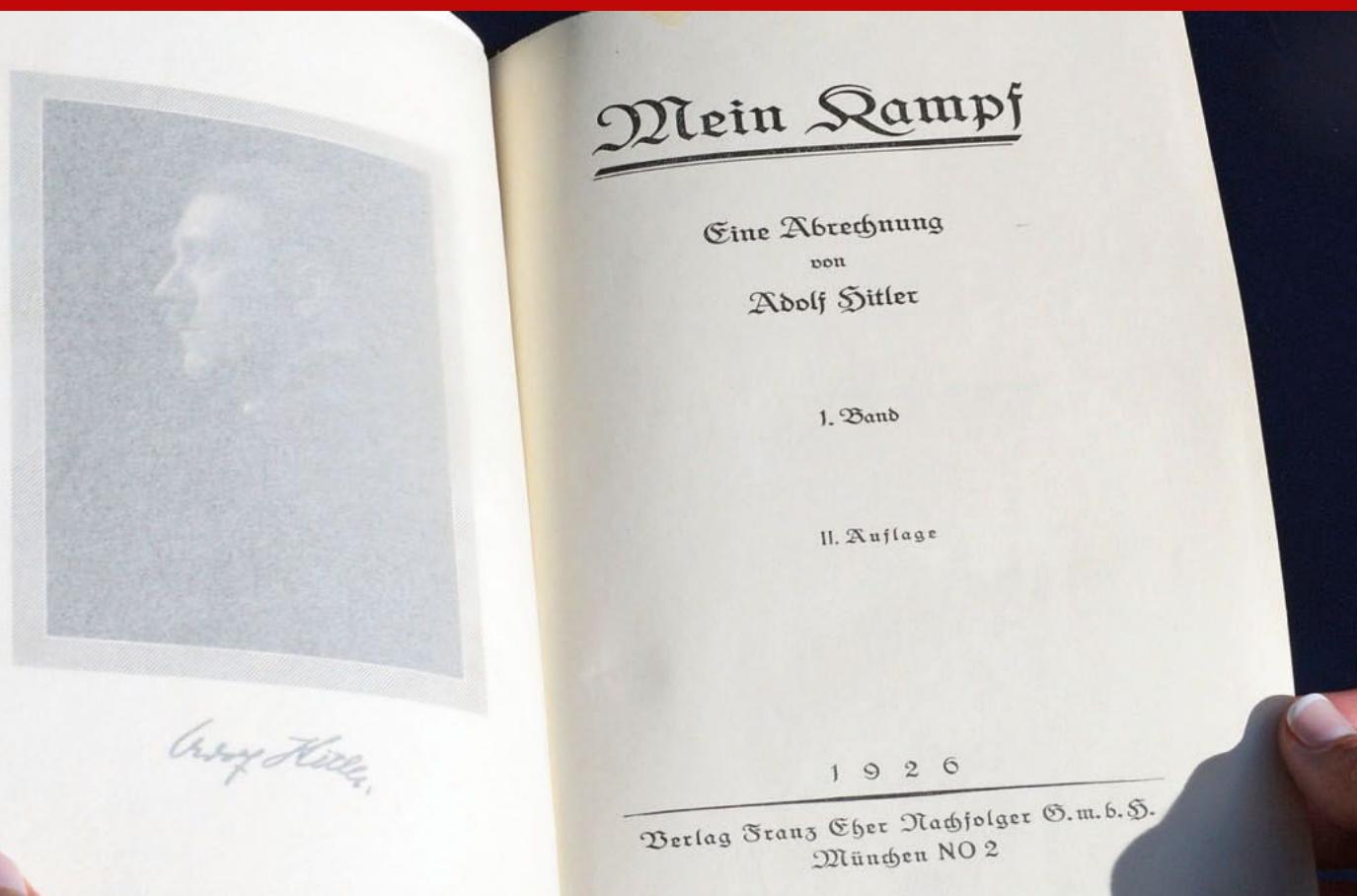
Despite the strong recovery, only 12% of Spaniards say they trust their country's institutions—the lowest figure in the EU—and over one-fifth of the labour force remains jobless. Even those in work often struggle to pay the bills. The PP's reforms have helped, but Spain is still a country stratified by age and status in which protected insiders enjoy secure employment and pension rights while young outsiders struggle to gain a foothold.

These conditions are ripe for any party that can credibly promise rupture and regeneration. Whoever takes office after Sunday's election will face difficulties, starting with yet more austerity: Spain's deficit remains the euro zone's highest. Podemos will still have lots to talk about. But in debt-ridden, over-regulated, high-unemployment Spain the real challenges lie elsewhere. Time to get moving on those *reformas estructurales*. ■

What the Führer means for Germans today

BERLIN

Seventy years after Adolf Hitler's death, how Germans see him is changing



IN GERMANY, as in the rest of Europe, copyright expires seven decades after the author's year of death. That applies even when the author is Adolf Hitler and the work is "Mein Kampf". Since 1945, the state of Bavaria has owned the book's German-language rights and has refused to allow its republication. German libraries stock old copies, and they can be bought and sold. But from January 1st no permission will be needed to reprint it.

Those living outside Germany may not immediately grasp the significance of the moment. "Mein Kampf" has always been available in translation and is now just a click away online. But that is not the point. For Germans, the expiry of the copyright has caused hand-wringing and controversy. The question, as they ring in the new year, is not what to do about "Mein Kampf" as it enters the public domain. Rather, it is what Hitler means for Germany today.

"Mein Kampf" is a mix of autobiography and manifesto that Hitler began writing during a rather comfortable prison stay after his failed putsch of 1923. It was first published in two volumes in 1925 and 1926. The title means "My Struggle", and Hitler certainly struggled with syntax, grammar and style. One contemporary reviewer ridiculed it as "Mein Krampf" (My Cramp). Much of it is dull or incomprehensible today. Some phrases demand parody: "Columbus's eggs lie around by the hundreds of thousands, but Columbus's are met with less frequently."

Woven into the prose are crude Social Darwinism and anti-Semitism that resonated even beyond Germany, as well as hints of the author's murderous potential. Having been gassed by the British in the first world war, Hitler writes: if some of the "Hebrew

corrupters of the people had been held under poison gas, as happened to hundreds of thousands of our very best German workers in the field, the sacrifice of millions at the front would not have been in vain."

It is not clear how many Germans read the tome. But after 1933, when Hitler seized power, it became a bestseller. From 1936 some municipalities gave it to newlyweds after their vows, and by the end of the second world war about 13m copies were in print.

After the war it fell to the Americans to decide what to do about the book, because Hitler's last private address, in Munich, was in their sector. The Third Reich was gone and the Federal Republic of Germany would not be born until 1949. So the Americans transferred the rights to the government of Bavaria. It banned printing of the book.

This approach reflected the first post-war phase in the German treatment of Hitler's legacy. The idea was to suppress anything that might tempt the Germans to fall back under his spell. The Allies and the new German government followed a policy of "de-nazification", under which known Nazis were banned from important positions. But as the cold war unfolded, West Germany was needed as an ally. For lack of alternatives, ministries, courtrooms and schools employed former Nazis again.

In the late 1940s and 1950s Germans avoided discussing Hitler. Many men were returning from captivity. Many women had been raped. People had been displaced, orphaned or widowed. Germans had been both perpetrators and victims, and had no words for their state of mind. Many were traumatised and could not bear

► to talk about their experiences. They found it psychologically easier to dwell in the present and keep busy with the *Wirtschaftswunder*, the post-war “economic miracle”. Many still denied the full scale of the Holocaust. According to Thomas Sandkühler, author of “Adolf H.”, a recent biography, a poll in the 1950s found that almost half of West Germans thought Hitler would have been “one of the greatest German statesmen” if he had not started the war.

A new phase began in the 1960s, after the Israelis captured, tried and executed Adolf Eichmann, a leading Nazi. This made more details of the Holocaust public. Starting in 1963, 22 former ss men were prosecuted in Frankfurt for their crimes in Auschwitz. The Germans were glued to these cases: 20,000 people went to the Frankfurt courtroom during the sessions. For the first time *Vergangenheitsbewältigung* (“coping with the past”) came to kitchen tables, where it split families.

Sons and daughters accused their parents and professors of complicity and rebelled at home and on campus. Their elders retreated into sanitised tales of what they had done or lived through. A husband-and-wife team of psychoanalysts, Alexander and Margarete Mitscherlich, called this pathology “the inability to grieve” in a book of that title published in 1967. This mired the Germans in an ongoing moral and psychological crisis, they thought.

Official Germany found two responses. East Germany adopted the fiction that its righteous communists had resisted the “fascists” all along. In effect, it never reckoned with the past. But West Germany accepted its guilt and atoned publicly. It became a pacifist society, often called “post-heroic” in contrast to the Allies’ warrior cultures. It also became “post-national”: West Germans rarely flew their flag and barely whispered their anthem at sporting events. The young sought identity either sub-nationally (as Swabians or Bavarians, say) or supra-nationally, as good Europeans.

But starting in the 1970s a pent-up fascination with Hitler began to re-emerge. Two biographies and a documentary came out, and in 1979 Germany aired “Holocaust”, an American television series, which shocked Germans into a new round of soul-searching. Many changed their perceptions in a way that Richard von Weizsäcker, then West Germany’s president, expressed in a historic speech in 1985, on the 40th anniversary of Germany’s surrender. May 8th 1945 was not the date of Germany’s defeat and collapse, he said, but of its liberation.

After reunification in 1990—the formal end of the post-war era—the German public became ravenous for more research. *Der Spiegel*, a weekly news magazine, featured Hitler on its cover 16 times during the 1990s. A book by an American historian, Daniel Jonah Goldhagen, in which he argued that ordinary Germans were “Hitler’s Willing Executioners”, became a hit. A museum exhibition about the Wehrmacht, Germany’s wartime army, argued that ordinary soldiers (rather than just the ss) had participated in the Holocaust. Germans queued around the block to see it.

But there was a parallel trend towards what Germans call “Hitler porn” and “Hitler kitsch”. The Führer became a marketing tool. It started in the 1980s when *Stern*, a magazine, published what it alleged was Hitler’s diary, a sensation that turned out to be fake. Since the 1990s the history channel on German television has aired almost nightly documentaries on Hitler’s women, henchmen, last days, ailments, table silver or German Shepherd dog (called Blondi). Any footage of the small man with the toothbrush moustache draws an audience. In that way, Hitler has become like sex and violence: bait to sell copies or to grab attention.



Germans were glued to Eichmann’s trial. The details of the Holocaust it revealed split families

But this fascination also suggests a new distance. Most of the audience, after all, now have no personal recollection of Hitler. This explains another genre: satire. During his lifetime, it was Germany’s enemies who parodied Hitler, as in Charlie Chaplin’s film of 1940, “The Great Dictator”. But in 1998 Walter Moers became the first German satirist to score a hit with a comic strip, “Adolf, die Nazi-Sau” (“Adolf, the Nazi pig”). Its producer called the character “the greatest pop star we’ve ever created”.

The latest bestseller is “Look Who’s Back” by Timur Vermes, translated into English this year. Hitler wakes up in today’s Berlin near his old bunker. Disoriented at first, he so amuses everybody he meets, including his Turkish dry-cleaner, that he is launched on a meteoric career as a comedian. His hip colleagues are convinced that he is a consummate “messed ekta” (Berlinish-English for method actor) offering a subtle critique of modern media culture.

For young Germans the Führer has thus receded far enough into the past to seem outlandish and weird rather than potentially seductive. In “Look Who’s Back”, he regurgitates inane phrases from “Mein Kampf”, such as: “The titmouse seeks the titmouse, the finch the finch, the stork the stork, the field mouse the field mouse...” But the words and the diction, with its famously rolled “r”, have no effect other than hilarity.

One by one, post-war taboos connected to Hitler are vanishing. Flag-waving is one. A breakthrough occurred in 2006, when Germany hosted the football World Cup. For the first time since the war the black-red-and-gold came out everywhere, draping balconies, prams, cars and bikinis. But so did the flags of the visiting countries, and Germany turned into one big street party. Hosts and visitors perceived it as nothing but fun.

In a poll by YouGov this year, Germans were asked what person or thing they associate with Germany. They named Volkswagen first (awkwardly, given subsequent revelations of its cheating). Then came Goethe and Angela Merkel, the chancellor, next the anthem, the national football team and Willy Brandt, a former chancellor. Hitler ranked a distant seventh at 25%. In the same poll 70% of Germans said they were proud of their country. About as many thought that Germany was a model of tolerance and democracy, and that it was time to stop feeling guilt and shame.

Forever abnormal

And yet 75% also said that Hitler’s crimes mean Germany still cannot be a “normal” country and must play a “special international role”. This means that many Germans somehow combine both pride and penance. Attempts to resolve this inner conflict shape much of German culture today, even when the subject ostensibly has nothing to do with Hitler.

Start with Germany’s political discourse. In contrast to the French, British and Americans, Germans worry a lot about surveillance by governments, whether foreign or German. The anxiety stems from memories of Hitler’s Gestapo (and more recently the East German Stasi). There is also a wide consensus that Germany has a special responsibility towards Israel. Pacifism runs through all mainstream political parties.

Indeed Germany is discomfited by power generally, especially its own. At home and abroad it advocates right over might. Hence its apparent obsession with rules, even to the exasperation of its partners (in the euro crisis, for example). Hence also its reluctance to act like a “hegemon”, as its allies often demand. Asked whether Mrs Merkel is “the most powerful leader in the European Union”, ➤

► her spokesman replies indignantly: “Those are not the categories in which we think.”

In political style, too, Germany seems to want constantly to prove that it has moved on from Hitler. Germans flocked to Barack Obama when he visited Berlin as a candidate in 2008 in part for his soaring oratory. But they would never accept such rhetoric in their own politicians, for it would remind them of Hitler’s demagogic charisma. Led by Mrs Merkel, “the entire German political class uses a kind of sanitised Lego language, snapping together prefabricated phrases made of hollow plastic”, says Timothy Garton Ash, a British Germanophile at Oxford University. “Because of Hitler, the palette of contemporary German political rhetoric is deliberately narrow, cautious and boring.”

Domestic life is governed by Germany’s post-war constitution, which was adopted in 1949 as a direct rejoinder to Hitler’s worldview and has become a source of patriotism today. Its first article stipulates that “human dignity shall be inviolable”. This translates into police practices that would count as touchy-feely in America, prisons that resemble low-budget hotels, and one of Europe’s most welcoming policies towards asylum-seekers, despite all the strain that this has imposed during the current refugee crisis.

But because of Hitler, the Germans “no longer dare to develop grand visions”, argues Stephan Grünewald, a German psychologist and author of “Germany on the Couch”. They resist getting excited about big ideas lest they succumb again to some obsession. Instead, Germans publicly don a “cool indifference” in an atmosphere of stultifying political correctness. They are willing to back big reforms—as in the country’s energy transition to renewables—only when there is no moral ambiguity. Part of them, says Mr Grünewald, still yearns to graduate from the “historical position of world destroyer to that of world saviour”.

This does not mean that Hitler made today’s Germans boring. Official Germany still displays virtues the world considers German, such as punctuality and reliability. But behind this “protective shield”, say psychologists at Rheingold Salon, a market-research firm in Cologne, many Germans adopt highly idiosyncratic lifestyles in everything from hobbies to sex. Contrary to stereotype, Germans are often secret eccentrics.

The hidden Schmerz and Angst

There is, however, an even more intimate domain in which Hitler continues to torment older and middle-aged Germans: their minds. One generation, defined roughly as those born between 1928 and 1947, is called the *Kriegskinder* (“war children”). The other, born between 1955 and 1970 or so, consists of their children and is called the *Kriegsenkel* (“war grandchildren”). These terms come from Helmut Radebold, a psychotherapist who is now 80 years old. As a war child he was evacuated from Berlin when it was bombed and then “overrun by the Russians”. At night his mother dug a hole in haystacks, curled up inside and made little Helmut lie on top of her to avoid being found and raped.

In the 1980s Mr Radebold was treating men of his generation for various psychological ailments. Gradually, he saw connections to the war, because these *Kriegskinder* had “never been allowed to grieve”. “I myself became depressed and often cried,” Mr Radebold recalls. “My own history caught up with me.” He began writing books about the phenomenon.

Much of what seems strange today about some older Germans has roots in these repressed memories, he says. Why do these peo-

ple squirrel away food amid plenty? Why are they scared of fireworks or sirens? Why do some women in nursing homes wail uncontrollably when male carers come to change their nappies at night? As the *Kriegskinder* age, he says, old traumas resurface.

Their children, the *Kriegsenkel*, have different problems. As they grew up, their parents were often emotionally frozen. The elders came out of the war in a sedated or numb state from which they never fully emerged, says Sabine Bode, another writer on the topic. This impaired relations with their children, who, by intuiting what must never be said or what was omitted with a sigh, inherited their parents’s trauma. Later, as adults, they asked—as Mr Radebold’s daughter did—questions such as: Why were you never interested in our little problems? And why do we have nightmares about your firebombings?

In recent years support groups have formed for the grandchildren of the war. Only about 40% of middle-aged Germans share such “transgenerational” trauma, says Mr Radebold. But much of the stereotypical German angst and yearning for order and stability originates here. Mrs Bode thinks that many of the *Kriegsenkel* today have “lower life energy”.

As “Mein Kampf” loses its copyright, German society is more complex than ever. One in five Germans today has immigrant roots and thus no family link to Hitler’s time. Many of the young know little history and find Hitler alien and fascinating. A few—somewhat more in what used to be East Germany—shout Sieg heil at neo-Nazi rock concerts because they are drawn to Hitler’s ability to shock the establishment. Other Germans have complex cocktails of emotions. They are extra-keen to do good—by helping refugees, for example. Yet they remain afraid of themselves and their compatriots.

And so Germany remains vigilant, if not quite paranoid. Most federal states ban licence plates with certain combinations (such as HH 88, code for “Heil Hitler”). An effort is under way to ban a neo-Nazi party called NPD, even though it won a mere 1% in the European elections of 2014.

Releasing “Mein Kampf” into the public domain was thus never going to be easy. In 2012 Bavaria convened Jewish and Roma representatives in Nuremberg for a discussion. They agreed that Bavaria should fund a scholarly edition to drive new right-wing publications out of the market and demystify the book. The state parliament approved the plan unanimously. A research institute was selected and got to work. But later that year Bavaria’s premier, Horst Seehofer, visited Israel, where some victims’ groups opposed the plan.

Faced with these conflicting attitudes, Bavarian officialdom took fright. In 2013 the state pulled out of the scholarly effort, which now proceeds without official backing. Meanwhile, the justice ministers of the 16 federal states have said that they will continue to prosecute anybody hawking the book for “incitement of the people”.

If a country can ever be said to be good, Germany today can. And yet Germans know that whenever others are angry with them, they will paint a Hitler moustache on posters of their chancellor. Many Germans are fed up with this—with being “blackmailed”, as Bild, the leading tabloid, complained this spring, when Greece unexpectedly brought war reparations into negotiations about bail-outs in the euro crisis. Other Germans, mainly on the left, fret about a new “post-post-nationalism”, as Germany tentatively articulates its self-interest abroad. For most countries, this would count as normal. For Germany, it remains complicated. ■



For the football World Cup in 2006 the black-red-and-gold came out everywhere

FUTURE WORKS: ASIA

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Industrial woes

The makers stumble

SHEFFIELD

They were supposed to carry Britain aloft, but manufacturers have had a hard year

INSIDE the cavernous manufacturing facility of Castings Technology International (CTI), on the outskirts of Sheffield, a manager is giving an animated tour of the company's latest automated techniques. His enthusiasm really takes wing, however, when he lifts a dirty plastic sheet on some scaffolding outside, for this is the site of what will be the country's first titanium-casting furnace. Financed largely by the government, it will be the largest such in western Europe, taking aeroplane components weighing up to 500kg (1,100lb). The foundry should help to maintain Britain's strength in its aerospace industry, the second-biggest in the world after America's.

This is the high-end, most successful bit of British manufacturing. CTI is one of several firms on the campus of the University of Sheffield's Advanced Manufacturing Research Centre, which helps companies from around the world apply new technologies to manufacturing processes. Here in 2011 the chancellor of the exchequer, George Osborne, announced a compact between government and the "makers" that was supposed to carry the new, shiny British economy aloft. The Catapult, as the government calls the place, has attracted big names such as Boeing and Rolls-Royce, creating high-paying jobs.

Yet its success is increasingly at odds with the gloom enveloping the rest of British manufacturing. Despite the rhetoric since the 2008 financial crash of "rebalanc-

ing" the economy away from finance in favour of industry, manufacturing's share of the economy has not budged, and remains low by international standards (see chart). This year has been painful. Though the economy has grown at a decent clip, the manufacturing sector has probably contracted slightly. Output slipped by 0.4% in October compared with the previous month; following three quarters of decline the sector is technically in recession. Output is 6% below its pre-crisis peak.

The steel industry has suffered badly. Thailand's SSI is closing its Redcar works with the loss of over 2,000 jobs, while India's Tata Steel is cutting production at its plants. Rolls has had an awful year, issuing several profit warnings, prompting speculation that its submarine business may be nationalised to guarantee the future of Brit-

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Bagehot is away

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ain's nuclear deterrent. On December 16th its new boss announced a management shake-up. Jaguar Land Rover saw big falls in its exports to China earlier in the year. EEF, a manufacturers' organisation, predicts further "weakening", particularly in export orders, early next year.

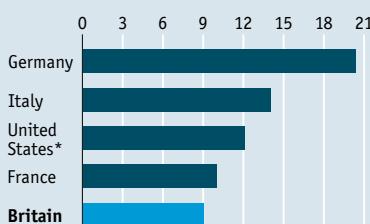
What's going wrong? One headwind is a stronger pound, which makes British exports less competitive in foreign markets (though sterling remains weaker than before the crisis). The steelmakers' woes have been blamed on a global glut of steel, caused by China's slowdown, which has caused prices to plummet. Weaker growth in emerging markets has also hit luxury carmakers such as Jaguar Land Rover.

And there is also a headwind turning into a gale: the plunging price of oil. Hundreds of engineering companies work for the oil and gas industry based in Aberdeen; many have seen orders cancelled as the industry has contracted. The price of Brent crude fell below \$40 this month, sparking more concern among manufacturers.

There are deeper, structural problems, the most persistent of which is Britain's inability to get its tens of thousands of small and medium-sized manufacturers to grow into larger, prosperous exporters, as Germany has done with its *Mittelstand*. Two-thirds of the manufacturing firms in Britain that employ over 500 people are foreign-owned, suggesting that indigenous management is poor. Too few of the government's initiatives to stimulate innovation at sites like the Sheffield Catapult percolate down to smaller firms. Accessing research funds is complicated for small companies. In any case, they are often unaware of the help on offer, says Terry Scuoler, head of EEF. He argues that more of the London-based bureaucracy to help businesses should be devolved to the regions, nearer to the manufacturers themselves.

Misstep of the makers

Manufacturing as % of GDP
January-September, 2015



since the 2008 financial crash of "rebalanc-

The shortage of skilled workers is another persistent problem. One-quarter of engineering companies report difficulties finding recruits, slowing their expansion. The government has been encouraging more apprenticeships in manufacturing; big companies hope that the £3 billion (\$4.5 billion) a year soon to be levied on them to pay for these schemes really will be used for this purpose.

As the government draws up plans to spend billions on infrastructure projects such as a new high-speed railway and extra airport capacity (see next story), British manufacturers are hoping some of the work might come their way. "We can still make big dirty things in Sheffield," says Keith Ridgway, co-founder of the city's Catapult. That is not in doubt. But despite everyone's best efforts, those big, dirty things are making up no larger a share of Britain's economy than before. ■

The Thatcher auction

The final sell-off

What an auction of Margaret Thatcher's effects reveals about her

IT WAS an eclectic set of items that went under the hammer at Christie's auction house on December 15th. They came from the collection of the late Baroness Thatcher of Kesteven. The auction raised over £3m (\$5m), six times pre-sale estimates, with buyers from as far afield as South Korea, Switzerland and Bermuda. There were brooches, books, pictures, letters and papers, a red dispatch box (sold for £242,500) and, inevitably, handbags. Yet what stood out were the frocks, gowns and coats, including her wedding dress (£25,000) and another believed to be the one she wore to address the House of Commons for the last time as prime minister, on November 22nd 1990.

All her life Thatcher was fond of clothes, as her biographer Charles Moore has noted. She spent freely on them even as a young barrister and aspiring MP. She was a political power-dresser, picking a Russian-style fur-trimmed coat for a meeting with Mikhail Gorbachev and an expensive-looking ball gown to dance with Ronald Reagan. She chose her outfits as carefully as her hairdos. Seeing so many together offers one clue to her oft-reported differences with the queen: there were bound to be costume clashes.

Another reminder from the sale was how bad she and her husband Denis were as parents. Having boy-and-girl twins at 27 was a typically efficient move, but her children were never much loved. Denis once said he "wished the little buggers had been drowned at birth". Carol, who put her mother's memorabil-

Airports

Stuck in a holding pattern

Britain spends its infrastructure budget well—but doesn't half take its time

EVERY airport suffers the odd delayed flight. In Britain, it is the runways that fail to arrive on time. No new full-length airstrip has been built to serve London since the second world war, as NIMBYs and tight budgets have scuttled successive plans to increase airport capacity in the south-east: at Cublington in Buckinghamshire in the 1960s; at Foulness in the Thames Estuary and Gatwick, south of London, in the 1970s; and at Heathrow, to the west, in the 1990s and 2000s.



£15,000, no visible bloodstains

ia up for auction, claimed that neither parent was comfortable with young children. Unsurprisingly, the sale has created a fresh family rift. Her brother Mark was said to be furious, wanting many items to go instead to the Thatcher archives at Churchill College, Cambridge.

Had Thatcher been an American president, most of this stuff, including the famous handbags, would surely have ended up in a lavish presidential library. Yet there is something appropriate about a free-market sale of personal effects left by a leader who did so much to pioneer privatisation. And it is unlikely to set a precedent: it is hard to see huge popular demand for David Cameron's suits and ties, Tony Blair's books—or anything at all linked to John Major. ■

After a commission chaired by Sir Howard Davies reported in July that a third runway should be built at Heathrow, the Conservative government promised to make a decision by the end of 2015. Of course, it hasn't: on December 10th the Department for Transport (DfT) announced that there would be no ruling until the summer. That postpones the decision until after London's mayoral election, due in May. Zac Goldsmith, the green-minded Conservative candidate, opposes the enlargement of Heathrow and had threatened to resign his west London parliamentary seat and force a by-election if expansion went ahead. Delaying the decision will smooth his path to City Hall.

The DfT says the extra time is needed for further study of the environmental impact of airport expansion. That is partly because the government's plan on how to meet air-pollution targets set by the European Union will not be ready until 2016. Many parts of west London already breach these limits, so a bigger Heathrow would face curbs on the number of flights it could handle—unlike Gatwick, which is more rural. If environmental rules were tightened up, the economic case for expanding Heathrow laid out by Sir Howard would be weakened. The government may try to find another way around the problem: on December 13th leaked documents suggested that it had been lobbying the EU to relax some of its air-quality standards.

In the meantime, the "gutless" postponement of the decision is "bad for Britain", the British Chambers of Commerce says. Heathrow has been operating at more than 98% of its capacity since 2003; Gatwick, the country's next-busiest airport, is full 80% of the time. The delay also undermines the mantra of George Osborne, the chancellor, that "We [the Conservatives] are the builders". A National Infrastructure Commission, announced in October, is intended to take awkward decisions out of the hands of ministers. The government's reluctance to act on Sir Howard's endorsement of Heathrow raises questions about how seriously it will take the advice of the new body.

Britain could do with an infrastructure splurge. As a percentage of GDP, government investment is the eighth-lowest of 28 countries tracked by Eurostat, the EU's statistics agency, and lower now than it was during the financial crisis. Yet Britain has few of the empty airports or roads-to-nowhere built in Spain and Portugal. And according to the World Economic Forum, British roads are better than those of the average rich country. So are its electricity supply, its ports and, funny enough, its airports. It may be too little, and often too late, but Britain's infrastructure budget is at least well spent. Something to hearten passengers as they await the arrival of their plane—or runway. ■



Organised crime

Bad blood

SALFORD

A northern city sees a ferocious outbreak of gang violence

MEMBERS of rival gangs were often taken aback when they met Paul Massey. A softly spoken, plainly dressed man, he did not seem like a typical gangster. His nickname, "Mr Big", referred to his local influence rather than his stature (he was barely five feet tall). He even claimed a moral conscience: despite reputedly controlling much of Salford's drug market, he professed to despise heroin and would put up flyers warning, "Use smack and get smacked". In 2012, with his criminal past avowedly behind him, he ran for mayor of Salford and won only slightly fewer votes

than the Liberal Democrat candidate.

So Massey's murder in July—gunned down outside his home as he got out of his BMW—was surprising. That his killer is still on the loose five months later is less so. There is a strong anti-snitching culture in Salford, which Massey himself did much to foster, notes Peter Walsh, author of "Gang War", a book on organised crime in neighbouring Manchester. Police found no witnesses to one murder in a pub in 2011, though dozens of drinkers were present. Those who do come forward sometimes have to go into protection, abandoning

their jobs and families, says Sir Peter Fahy, a former head of Greater Manchester Police.

This is partly a result of organised crime's deep roots in Salford. In the 1980s, gang conflict tended to be played out in Manchester, where groups from Salford vied with others from across the city for control of the drug trade. Fighting spread to Salford in the 1990s as new upstarts sought to challenge the supremacy of Massey's mob. But a recent outbreak of violence, which predates Massey's murder, is unprecedented. There have been 19 incidents in which a gun has been fired in Salford since January.

Until the latest clashes, gang violence had been on the decline. This was probably a result of implicit agreements between rival outfits to stay away from one another's territory, says Sir Peter. Violence is bad for business, since it attracts police attention, and "most drug dealers are committed entrepreneurs," notes Mike Salinas of Manchester Metropolitan University. Much of the recent fighting is said to have been caused by a split in one gang, prompted by personal disputes. In March a grenade was thrown into a family home; in October a seven-year-old boy was shot in the leg. A separate conflict in Little Hulton, a Salford suburb, adds to the chaos.

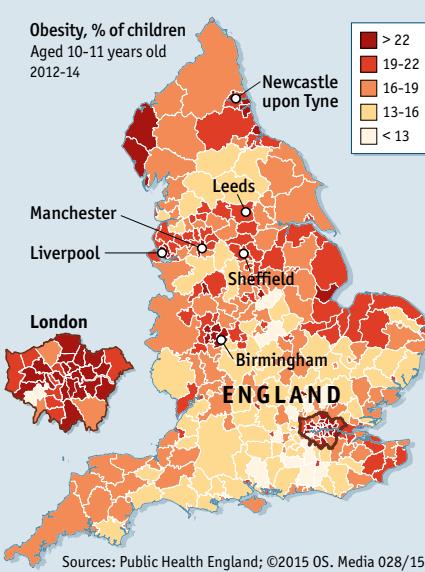
Although gangs rely mainly on drugs for income (the police have found around 40 cannabis farms in the past year), they also dabble in fraud and robbery. Salford's main shopping centre has suffered two "ram-raids" in the past nine months, says one shopkeeper. In one incident, the perpetrators drove into the middle of the mall before using their car to smash a jeweller's windows. "There's a police station across the road...They're not even scared," the shopkeeper adds.

Calming the situation is difficult. Locking up senior gangsters can further destabilise things by creating a power vacuum. The anti-authority culture in Salford makes other forms of outreach work tricky. As well as making 157 arrests and seizing £600,000 (\$900,000) of cash in the past year, the police have used more unusual tactics, including applying for civil injunctions to keep gang members away from one another and working with probation services to call members back to jail at the slightest hint of bad behaviour.

Moss Side, in south Manchester, provides one source of hope. In the 1990s the neighbourhood was riddled with gun crime, prompting the city's nickname of "Gunchester". Today things are quieter, thanks partly to the work of a coalition of community groups, churches and the police. But these efforts would have floundered without the determination of locals to change the reputation of the area, says Sir Peter. The lavish send-off given to Massey suggests that the resolve to change is not yet so strong in Salford. ■

The fat of the land

Obesity maps of America show slender cities and a bulging countryside. In England the opposite is true: the overweight are concentrated in urban areas and rural folk are slimmer. In both countries obesity is associated with poverty. The differing patterns may be explained by the fact that much of England's thin "countryside", particularly in the south, in fact lies in the well-off commuter belts of cities. Remoter, poorer rural areas, in the far north, south-west and east, are fatter. In both countries people underestimate how fat their fellow citizens are: most guess around half are overweight, when the reality is nearer two-thirds. On December 11th England's chief medical officer called for obesity to be classified as a "national risk". Food for thought over Christmas.



The gauge of history

ON THE MOSCOW-ARCHANGEL LINE

A train journey north shows how Russia has evolved—and regressed



AT TWILIGHT on a clear early-autumn evening, Moscow's Yaroslavsky railway station is an alluring place: all floodlit modernist turrets, gaudy tiles, folkloric decorations and a fairytale castle gate, like a triumphal arch, opening the way to the north. The playful station (*vokzal* in Russian) reflects the sparkling origin of the word in London's Vauxhall, the 17th-century amusement gardens beside the Thames. Russia's first railway line, built in 1837 by Franz von Gerstner, a Bohemian engineer, started in St Petersburg and ended in Pavlovsk, an English-style summer retreat for the Russian aristocracy.

Yaroslavsky station was designed by Fyodor Shekhtel, Russia's finest architect, in the art-nouveau style. He modelled it on a wooden pavilion he had built for the International Exhibition in Glasgow in 1901. The station opened a year later when the line was extended all the way to Archangel, the first port in the Russian empire to conduct trade with England in the 16th century, and an entry point for early travellers to Russia from Europe. Around the same time, Shekhtel was decorating the Moscow Art Theatre, where Anton Chekhov's plays were staged. In that era, the Russian intelligentsia considered itself an integral part of Europe. Now, Russia has seldom seemed farther away.

The journey from Moscow to Archangel is 1,134km (705 miles; see map on next page). It takes more than a day: plenty of time for conversation, reading and reflection. The four-berth compartment is warm and cosy. The rhythm of the train is accompanied by the calming sound of tea glasses clinking on the table of the compartment. Tea is served by Elena, the plump attendant, whose life is entirely the train. "We live on the train for 15 days at a time. We

sleep on the train, eat on the train, wash our clothes on the train. We meet and marry people who work on the train and when we get stressed, we knit," she says. She has been doing the job for more than 20 years.

Railways cut deep through the Russian psyche, and train journeys are woven into the nation's cultural life. They tell its story in ways large and small. A kink in the railway line from Moscow to St Petersburg, for example, is where—or so it is said—Tsar Nicholas I's finger got in the way of his ruler when he drew a line between the cities. Whatever the truth of that, over the centuries railways have represented the will of an authoritarian ruler, the supremacy of state power, the boom of private capital, the modernisation of the country, the terror of Stalinism and the mania for ruinous grand projects of Soviet times. All Russian history is there.

Soldiers, civilisers, poets

Railways are often referred to in Russian as "threads". They tie the country together and, in previous decades, civilised it. Vissarion Belinsky, an influential 19th-century thinker, found a strange consolation in watching the first railway being built. "I stand and watch, and it gives my heart some relief: at last we too will have one railway," he said. At last, he felt, Russia would be like Europe.

Trains propelled the country into the modern age, breaking social boundaries, spreading culture and making the population more mobile. Sergei Witte, the railway chief from the time of Alexander III, saw trains as "social mixers". "A railway", he wrote, "is a ferment that causes cultural brewing, and even if it encounters a completely wild population on its way, it can quickly civilise it to ➤

► the necessary level." Towns that were bypassed by the railway line were destined to turn into backwaters.

These bringers of modernity, like many others, had military roots. One of the first lines from Warsaw (then part of the Russian empire) to the border of Austria and Hungary, its strong ally, was used by Nicholas I to send Russian troops to help suppress a Hungarian rebellion in 1848. Lenin, who arrived from Germany by train to lead the Bolshevik revolution, considered railway stations, along with telegraphs, as major targets to be seized. After the revolution, armoured trains were used in the civil war by both sides: Trotsky turned one into his mobile headquarters. It is partly for defensive reasons, one theory goes, that Russian railway tracks have a wider gauge than European ones: whereas Russia could transport its troops to its borders, a train with foreign troops would not be able to roll into Russia. (To this day, a train journey from Russia to Europe involves a change of wheels.)

The job of railways chief was one of the most important in the country. Witte was also chairman of the Russian council of ministers under Nicholas II; Trotsky, who held the job after the revolution, was also in charge of the Red Army. Nikolai Aksenenko, the railways chief under Boris Yeltsin, was considered as a presidential candidate. Today the Russian railway monopoly, which employs 800,000 people, remains a semi-military organisation. "We have military ranks and are not allowed to go on strike," says Elena, the train attendant. "If a war starts, we will be the first to be mobilised." In the train's strict hierarchy its "chief" travels in a special carriage, which is called his "headquarters".

What makes trains weigh so heavily on Russia's consciousness is the sheer size of the land mass. European railway journeys, with their short distances between stations and the constant sight of human life outside the window, leave little time or space for thought or soul-searching. In Russia, however, train journeys are measured in days and nights rather than hours. It takes six days to travel from Moscow to Vladivostok, a distance of more than 9,000km. All one sees is forest, occasionally interrupted by a clearing or uncultivated fields cloaked, in winter, with snow. You can go for hours, sometimes days, without seeing a settlement or a soul. "In western Europe people die because their space is cramped and suffocating," Chekhov wrote in a letter. "In Russia they die because the space is an endless expanse."

As a result, trains rumble through Russian literature and poetry with remarkable frequency. Rail travel occupies the same place in Russian culture as the road trip in America. Tolstoy's Anna Karenina meets Vronsky at a railway station at the beginning of the novel and ends her life under a train. (Tolstoy, too, happened to die at a station.) In Boris Pasternak's "Doctor Zhivago", the comfortable, softly upholstered trains at the beginning of the novel give way to the freight trains in which Zhivago and his wife escape a Moscow devastated by revolution and civil war.

In "Moscow Circles", a late Soviet prose poem, an alcoholic intellectual reflects on history, philosophy and love as he travels by *elektrichka*—a suburban train—from Moscow to the provincial town of Petushki. The town becomes a Utopia "where birds never stop singing and jasmine never stops blossoming". (In the end Venichka, the narrator, oversleeps his stop and wakes up heading back to Moscow, where a gang of thugs murder him.)

The vast horizon outside the window contrasts with the confined space of the compartment, which makes the perfect environment for long conversations between strangers—a device widely used by Russian novelists. In Tolstoy's "The Kreutzer Sonata", the main character tells fellow passengers on the train the story of how he came to murder his wife. The Russian philosopher Fyodor Stepun, exiled after the revolution, noted how different Russian carriages are from those in western Europe, "both in the sound of the wheels and in the domestic atmosphere that reigns in them". His trains turned into homes, with a coal-fired furnace providing tea at any time of the day or night. "An hour or two into a journey, a lively discussion is heard from every compartment.

On the white tablecloths appetising food is laid out—golden roasted poultry, thin pieces of pale veal, white pots of black caviar..." Sadly, the modern restaurant car features tables with soiled blue cloths, where a drunken waiter serves a piece of rubber chicken and mushrooms drowning in sour cream and cheese.

A line to freedom

The other people in the compartment, a young couple from Archangel with a four-year-old child, strike up a conversation almost without prompting. Vladimir, who works in a shipyard, starts by talking about injustice and corruption. Someone has taken the money he paid for the repair of his car and vanished with it. A local policeman asked him for a bribe of 10,000 roubles (\$150) before he would investigate. The conversation turns to local politics in Archangel. "We have everything we need to live well: fish, timber, furs. We could survive without Moscow. If we had a leader, we would go our own way," he reflects.

An hour into the journey, the train passes through the village of Khotkovo. From here it is only a few miles to Abramtsevo, an estate once owned by Savva Mamontov, a 19th-century millionaire, philanthropist and railway tycoon who was responsible for building the line to Archangel under concession from the government. Mamontov was born in 1841 in western Siberia, one of nine children of the rich merchant who built the first part of the northern railway line from Moscow to Yaroslavl. He belonged to the new elite which, by building social and cultural institutions, came to transform Russia into a vibrant European country: not just by copying European ways, but by uncovering in Russia the enormous potential that made it part of the continent in its own right.

After spending time in Milan researching the silk trade and taking singing lessons, Mamontov started a private opera in Moscow which presented Fyodor Chaliapin to the world and first performed Rimsky-Korsakov's "Snow Maiden". At home he composed and staged his own comedies for his family and friends, competing with another amateur from a rich merchant family—Konstantin Alekseev, better known as Stanislavsky, who transformed the art of acting. Stanislavsky wrote of Mamontov: "We, the children of the great fathers and creators of Russian life, tried to inherit from them the difficult art of being rich. To know how to spend money properly is a very great art." Mamontov was described as a Russian Medici—someone who created not just art, but the atmosphere in which it could flourish.

He turned Abramtsevo into an artists' colony where traditional ►



► Russian themes and folk motifs flourished. The nation's finest painters, including Viktor Vasnetsov, Mikhail Vrubel and Valentin Serov—all sharing an interest in the subtle beauties of Russian antiquity—flocked to his estate, which nestled in a landscape of birch and pine trees with a winding river in the distance. Vasnetsov designed a small family church in Abramtsevo, a tribute to the spirit of artistic friendship that reigned around Mamontov. The artists who developed Russian themes in Abramtsevo were no less European than William Morris, who championed the Arts and Crafts Movement in Britain. Their quest for Russian antiquity and its European nature pointed them north, towards Archangel.

In the 1890s, a time of extraordinary cultural and economic vitality, Mamontov invested in the extension of the railway between Yaroslavl and Archangel. He was part of an expedition led by Witte. They travelled by railway to the medieval Russian city of Vologda, sailed up-river to Archangel and then along the coast of Norway, and finally returned through Sweden and Finland. "Emperor Alexander III was fascinated by the Russian north, partly because the peasantry there represented a special, pure Russian type, pure as a result of blood and history," Witte wrote in his memoirs. The Russian north was never conquered by the Tatars and Mongols and was free of serfdom, allowing farmers to own their land. Of all its regions, the north of Russia retained the most vivid memories of life before the Tatar invasion in the 13th century, and remained culturally close to Scandinavia.

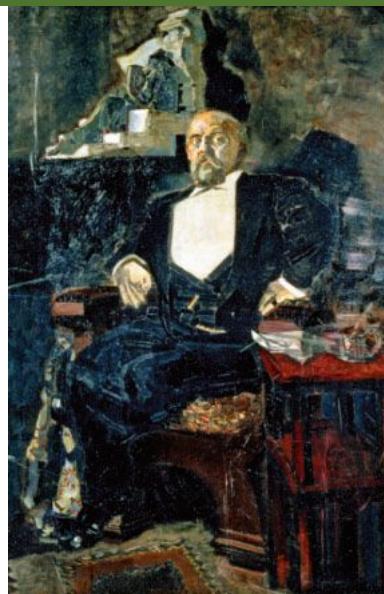
Unlike the Trans-Siberian railway, a state project built from 1891 to 1916 that followed the track trodden by prisoners to Siberian exile, the privately financed railway to Archangel was a road to the free land, to private initiative, to the dream of Russia as akin to prosperous Norway. "The road to the north was a road to the Russian West," says Inna Solovyova, a historian. For Mamontov the road to Archangel was as much an artistic enterprise as a commercial one. He dreamed about the revival of the north, about its beauty and riches, and wanted paintings of Archangel by his friends from Abramtsevo to decorate Yaroslavsky station.

The enterprise ended badly for him, however. In 1899, a year after the opening of the line, he was wrongly accused of embezzlement and arrested. His family and friends, including many Russian artists, came to his defence. He was acquitted, but his business was ruined.

A few hundred miles from Moscow, the train comes to a planned three-hour stop for track maintenance. All that is left of Mamontov's times is an elegant art-nouveau wooden station in Obozerskaya, where half the population of 5,000 work for the railway. A small statue of Lenin among birch trees, a wooden shack passing for a local hospital, a pile of rotting timber in a muddy backyard and a shop testify to the lasting legacy of the Soviet experiment that eliminated people like Mamontov as a class.

The railway was more than a physical concept. In the first years of Bolshevism trains became a metaphor for the nation's new life, roaring towards communism. "Our steam train is speeding ahead/ Our next stop is the commune/We have no other path/We are armed with guns," ran a popular song. The engine itself was an image of the future and the modernity promised by the Bolsheviks. Brightly painted carriages covered with slogans contained printing presses, libraries of revolutionary literature and even film-projectors, to show political newsreels to the masses across the country. The carriages were a precursor to television, enabling propaganda to reach even the most remote parts of Russia.

Russian history was often viewed as a track that was fixed from



Shekhtel, Yaroslavsky's architect

past to future, says Andrei Zorin, a professor of Russian at Oxford University. This led thinkers over the decades to ponder where the country had taken a wrong turn. Petr Chaadaev, an early-19th-century intellectual, lamented that Russia had made no original contribution to world civilisation because it had erroneously absorbed its Christianity from Constantinople rather than Rome. His "philosophical letter" was printed at the time of the first railway construction. Slavophiles saw the root of all evil in the reforms of Peter the Great, while Westernisers blamed the invasion of Russia by the Tatars and Mongols.

Soviet thinkers, too, were preoccupied with the right and wrong turns of history. "If you get lost on a road, you don't have to retrace your steps; you can turn off at the next junction and find an alternative route. But if history is a railway line, you have to go all the way back in order to get on the right track," says Mr Zorin.

Much of the energy of Mikhail Gorbachev's 1980s *perestroika* generation was spent looking for that crucial point where the Soviet Union had set itself on the wrong course. For the communist reformers, that happened in 1968 when the Soviet Union invaded Czechoslovakia. (In 1968, however, it was Stalin's "great leap forward" of 1929 that was seen as the mistake; Russia had to go all the way back to Lenin's roots, it was argued, in order to advance.) When communism collapsed in 1990, historians went even further back, fixing their sights on the short-lived era of Russian capitalism in the 1900s as the point from which they had to pick up again, as if 70 years of Soviet rule could simply be ignored.

For Vladimir Putin and his intimates the wrong turn was *perestroika* itself, and the Soviet Union's subsequent collapse. It is fitting that for much of Mr Putin's time in office the Russian railway monopoly was headed by a former KGB colleague, Vladimir Yakunin, one of the regime's ideologues, who has ardently proclaimed Russia's "special way" and the damage globalisation can do to national identity. As a result, Mr Putin's men have traced their way back to the late Soviet period of isolation.

This does not bother Elena, the train attendant. "I've never been abroad and don't want to go. Why would I go there?" Although her own salary has dropped by a third as a result of the present economic crisis, she still backs Mr Putin, who "brought our country up from its knees". Stories about the fabulous wealth and vast country estates of Mr Putin's cronies do not bother her either. "Look at me," she says. "I am not allowed to sell vodka, but if you come and ask me quietly I will sell it to you."

The wrong track

After nearly 27 hours the train arrives in Archangel, a city in the delta of the Northern Dvina river through which the first European traders entered "Muscovy", and to which British ships delivered food as part of the northern convoys during the second world war. In the city's elegant 17th-century merchants' yard, overlooking the steely waters of the Dvina, an exhibition is dedicated to the 70th anniversary of the Soviet victory against the fascists. It bristles with Stalinist posters and slogans and makes no mention of the Allies. One prominent poster shows a Soviet rocket striking an "imperialist" in the face and declares that "Our borders are unbreakable." Underneath is a quote from Stalin: "Those who try to attack our country will be dealt a deadly blow, to stop them sticking their snouts into our Soviet backyard."

The city that was meant to open Russia to the world now marks the frontier of an increasingly isolated country. The train terminates here, and then returns to Moscow. ■



The Paris agreement on climate change

Green light

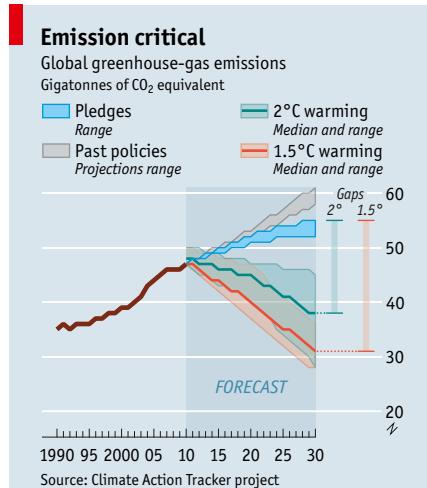
PARIS

What to expect after a deal that exceeded expectations

“WE’VE shown what’s possible when the world stands as one,” declared Barack Obama after UN climate talks in Paris ended with an agreement on December 12th. “Our collective effort is worth more than the sum of our individual effort,” said Laurent Fabius, France’s foreign minister, who oversaw the talks. “I can go back home to my people and say we now have a pathway to survival,” said Tony de Brum, the Marshall Islands’ foreign minister, voicing an opinion shared in other low-lying spots where people are terrified of rising sea levels.

The deal inspiring these eulogies was indeed stronger than had been expected. The 195 countries at the meeting agreed on the goal of keeping the increase in the global average temperature to “well below 2°C above pre-industrial levels and pursuing efforts to limit the temperature increase to 1.5°C above pre-industrial levels”. They will also pursue a goal of zero net emissions—removing as much greenhouse gas from the atmosphere as is being added to it—by the second half of the century.

In all, 187 countries have vowed to make “intended nationally determined contributions” (INDCs). Their pledges are lodged with the secretariat of the UN Framework Convention on Climate Change (UNFCCC), which convened the Paris talks. The limits these place on future greenhouse-gas emissions are too weak to ensure that the agreed limit on warming will not be breached (see chart). Yet the



deal still signals progress on a number of fronts. It is the sort of success, those urging climate action insist, that will start a virtuous circle for further progress.

The main sticking points were deciding who should do what—and who should pay. The UNFCCC, which dates from the 1992 Rio Earth Summit, calls on nations to act “in accordance with their common but differentiated responsibilities”. This “differentiation”, which distinguishes between rich countries and the rest, was a feature of the UNFCCC’s first offspring, the ill-fated Kyoto protocol. That committed developed countries—responsible for almost all greenhouse-gas emissions to that

Also in this section

90 Forests and climate change

point—to emit less but demanded almost nothing of developing ones. For big developing economies, maintaining this distinction has long been a priority.

In Paris the line started to blur, partly because holding the world’s biggest emitter (China) and second-biggest (America) to drastically different standards was hard to sustain. The new agreement requires a flow of \$100 billion a year from developed countries to developing ones by 2020, much of it to be spent on adapting to climate change, rather than attempting to stop it. The total is to be reconsidered in 2025, and donor countries are required to provide explicit updates on what they will be giving, and to whom, every couple of years. Though most of the money is expected to come from rich countries, others are “encouraged” to pitch in, too, if they can afford to.

Diff’rent strokes

That is a big step away from the previous hard line on differentiation. Similar progress was seen elsewhere, for example in the framework that lays out how to ensure that countries are doing what they say they are. It looks as though efforts in large developing countries will be subject to more scrutiny than in the past.

But there remains the awkward fact that the INDCs are not remotely strong enough to ensure the 1.5°C pledge is honoured. This serious flaw was foreordained. The experience of Copenhagen, six years ago, showed that insistence on a pre-set goal would make agreement impossible: in a zero-sum game all players will want others to do more while they do less. Having countries sign up only to what they think they can do made agreement in Paris possible—but ensured that it would be weak.

The actions outlined in the Paris pledges would be expected to lead to global warming of around 3°C. Given that ➤

► there has already been about 1°C of warming, the measures required to stay below 1.5°C would be beyond heroic. Work by Joeri Rogelj of the International Institute for Applied Systems Analysis near Vienna and colleagues suggests that it would mean net emissions having to fall to zero in at most 40 years.

The 1.5°C limit is thus a symbol rather than a goal: a demonstration that the risks of climate change are being taken seriously. The 3°C implied by the INDCs, however, is not the last word. The Paris deal includes mechanisms to ratchet up the ambitions of national pledges. Fresh talks will be held in 2018 to take stock; countries will set themselves a new set of goals in 2020. The stock-taking and goal-setting will be repeated every five years. That process should become easier as low-carbon energy becomes cheaper. The existing INDCs include a lot of renewables: the pledges from China and India alone could double the world's wind and solar capacity within 15 years. As these plans are carried out, and new technology projects start to bear fruit, the next generation of investment should provide more bang for the buck.

Even so, most experts agree with John Holdren, Mr Obama's science adviser, that limiting warming to 1.5°C will require that some of the carbon dioxide emitted in the first half of the century is sucked back out of the atmosphere in the second half. Reforestation could help (see box). But to soak up really large amounts of carbon will require technologies capable of storing carbon dioxide deep underground.

One idea is to grow plants—thus sucking carbon dioxide out of the atmosphere—burn them in power stations and bury the resulting carbon dioxide. But doing this at the scale required would mean growing fuel over millions of square kilometres. The world does not have that land to spare. An alternative would be some sort of industrial process. At present, though, there is no proven technology capable of working on anything like the scale required, let alone at a reasonable price.

When the dust settles

Even so, the undeniable progress made in Paris has led boosters to hail it as the beginning of the end of the fossil-fuel era. Though some parts are not binding, analysts say that the prospect of demand for oil peaking in the next few decades and then declining may have added to the bearishness that has recently pushed oil prices below \$40 a barrel. A long rout in shares of coal-mining firms has deepened. On December 14th Peabody Energy, America's largest coal miner, fell by 13%.

Coal firms, however, are clinging to the hope that developing countries will provide enough new demand to persuade investors not to dump their shares. India, for example, generates 71% of its electricity

from coal. Its INDC makes no commitment to cut total emissions; its pledge to install 100 gigawatts (GW) of solar power capacity by 2022, up from just 5GW now, would require reforms to its electricity sector that stretch credulity. Such weaknesses in pledges may stem the rush out of fossil fuels. China's emissions-trading scheme, due to start in 2017, may well fail for lack of transparency. And its offer to ensure that emissions decline after 2030, though perhaps plausible, is somewhat undermined by the fact that no one quite knows how much carbon it emits now. Recent research has come up with wildly varying figures. Ener-

gy markets may respond only when national governments are seen to be serious at home about the environmental pledges they have made abroad.

Meanwhile Paris may inspire leaders of cities and companies to redouble their efforts. Firms including Apple, Google and Unilever are taking steps towards cutting their emissions by large amounts, as are some big cities, including Hong Kong, London and Rio de Janeiro. An agreement marking international acceptance of the risks of climate change, and the necessity of co-operating to tackle them, will bolster such efforts. ■

Forests and climate change

Hope for the trees

PARIS

Modest progress has been made on saving forests—it needs to accelerate

UNTIL the 1960s, forest-clearing accounted for most anthropogenic carbon emissions. Now it causes around 10%—a decline that led many at the UN climate summit in Paris to focus their efforts elsewhere. Though Norway, Germany and Britain said they would make a billion dollars a year available for averting tropical deforestation until 2020, America, France and Japan refused to chip in. Australia trumpeted a pro-tree plan of its own, but has not pledged more money for it. There was little mention of Indonesia's devastating wildfires, or of a 16% uptick in deforestation in Brazil.

Yet the 10% share hugely understates the importance of forests to the fight against climate change. Just as shrinking forests contribute to global warming, growing ones can counter it. During the 2000s tropical forests are estimated to have sopped up and stored carbon equiv-

alent to 22-26% of carbon-dioxide emissions from human activity. Ending tropical deforestation and letting damaged forests recover could cut net emissions by almost a third, creating a space for industrial emissions to fall more slowly.

The Paris agreement failed to create mechanisms, such as carbon markets, that could generate the much larger sums necessary for conservation on that scale. That was expected; on a more realistic measure of progress, forests did pretty well. Reducing deforestation and forest degradation—REDD+, in the jargon—has finally been enshrined as a mainstream climate policy. Over 60 countries included it in their commitments. It got its own clause in the final deal, with an approving nod to ways of designing and running REDD+ schemes agreed on in previous climate talks. Schemes can be funded publicly or privately, with payment for success in leaving trees standing.

Whether REDD+ can fulfil its potential remains unclear. By one measure, the net global deforestation rate has fallen in recent years. Yet, despite improvements in monitoring tropical deforestation and establishing baselines against which it can be measured, REDD+ probably played a minor part. Brazil dislikes the idea of “offsetting”—letting other countries or even firms emit more in return for paying to keep its trees standing. Indonesia has, in effect, downgraded the REDD+ agency it set up in a deal with Norway, and failed to spend most of the billion dollars that the Norwegians provided.

Rich countries say this shows that what is mainly lacking is political will. Those with tropical forests retort that the failure to cough up the large sums they were once promised vindicates their wariness. Both are right: for now, REDD+ is almost as notional as it is necessary.



Rays of light in the forest

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Lèse humanité

What happened when slaves
and free men were
shipwrecked together



BY THE standards of boats built by desert-island castaways, the Providence was a thing of beauty. Thirty-three feet long, and made of timber from the shipwreck that had stranded them, she was simple but seaworthy. She also offered the only viable route back to civilisation for more than 200 refugees. As a first step, that meant a westward journey of 500km or so to Madagascar, where the wrecked ship had come from. If you arrive on a ship—a brand-new transport three-masted schooner belonging to the French East India Company—you cannot all leave on a raft.

Whether the castaways were on land controlled by the Company, which projected France's imperial ambitions in the eastern hemisphere, was anybody's guess. The charts used by the captain of the doomed ship, *L'Utile*, on July 31st 1761 indicated nothing but ocean for hundreds of kilometres. Coming off a fortnight of unfavourable winds, he had little time for officers fretting about a probably mythical "île de Sable"—sandy island—in the area. At half past ten on a moonless night, a coral reef stopped the ship in its tracks. By sunrise, *L'Utile* had been lost.

The île de Sable, if indeed this was it, was not hospitable. It is so small that a swift walker can get round it in an hour, and so barren, bar a few bushes, that it can barely support human life. Winds and waves, rolling uninterrupted from Antarctica 5,000km to the south, batter it incessantly. More recent study has established it as the tip of a dormant volcano rearing up from 4,500m below, in the depths of the western Indian Ocean.

As they landed on the island on the night of the wreck, some of the crew supposed it inhabited. But the dark-skinned "locals" they encountered had come on the same ship, just a different part of it. Below deck 160 or so slaves had languished, men, women and children. Nearly half of them had died in the night, probably

drowned under the nailed-down hatches. That still left 88, two-thirds of them men, now unshackled.

They had been a secret, albeit an open one. The captain had picked them up in Madagascar, as a bit of side business tolerated by the Company. He was knowingly flouting a French ban on slave-trading in its Indian Ocean territories—though one motivated more by concerns that a British blockade would leave extra mouths to feed on its precarious island colonies, than by common humanity.

Perhaps because of the French crew's numerical superiority—123 had survived—the social order that existed on *L'Utile* carried through on land. Even the ship's log was kept as before. It is now stored in the French ministry of defence's archive. It continued to note the wind and weather, but also recorded the island's new arrangements. In particular, it recounted how Barthélémy Castellan du Vernet, *L'Utile*'s first officer, emerged as the leader to replace the captain, shocked speechless by the crash. It was Castellan who had made the decision to scupper *L'Utile* by cutting her rudder in the hope that more men might be saved.

Within days Castellan, whose younger brother had died in the wreck, had sentenced a man to death for stealing some of the rations that had spilled out of the ship. *L'Utile* had disgorged 22 barrels of flour, 200kg of beef and other provisions; the island itself provided fish, turtles, birds and eggs. But there had been little water on the ship, and none could be found on the island—until, after three days of chipping through volcanic rock, a brackish, milky liquid welled up. The men rejoiced, and the condemned sailor was pardoned. By then, though, 28 castaways had died of thirst. All were slaves.

With water assured, things got easier. Members of the crew,

from cook to priest, resumed their roles on land. If tensions arose, they were not recorded in the ship's log, which soon resumed its focus on the weather. (Entries for August: "18th and 19th: Bad sea. 20th: Calm sea.") Using sails and fragments of *L'Utile*'s masts, the French set up camp on the west of the island, near a beach where one of the anchors from the wreckage protruded from the surf. The slaves huddled at the northern tip.

A ship was spotted far off on August 9th; it cannot have missed the noise and smoke from two barrels of gunpowder the castaways detonated as flares. But it continued on its way to India.

Castellan, who had sailed on slave ships before, knew there was a risk of disorder. A vessel had to be built, and quickly. But three problems arose. The ship's carpenter had no actual woodworking skills. There were no trees on the island; all wood had to be salvaged from the wreck, much of which was submerged. And the crew was disinclined to work, all but 20 preferring the more leisurely task of bird-hunting to manual labour.

Castellan shook off the first problem: though he had no naval architecture training, he skilfully sketched plans for the *Providence*. The problem of the slothful crew could be overcome with the help of the Malagasy slaves. "The slaves toiled with great zeal in this work," according to a contemporaneous account. Nothing suggests they were coerced into it. If the white man offered the only way off an uninhabitable island, reason suggested any enmity was best left aside until after the escape.

That left the second problem, of insufficient wood. Or rather, the right kind of wood. There was enough to build a seaworthy barge with sides five feet high. But Castellan's plans for the *Providence* were predicated on a 45-foot end-to-end beam underpinning the boat. *L'Utile* had not been that generous: the longest beam at hand was only 33 feet. Scale down a boat's beam and length in proportion, and her capacity shrinks by nearly half.

There is no record of any discussion of which half of the stranded island community should have first dibs on this smaller boat. It is hard to imagine one was held. On September 27th 1761, two months after the shipwreck, it was the 123-strong white crew who boarded the *Providence*—including around 100 who had played no part in its construction. The abandoned were left with three months' provisions and a letter recognising their good conduct: important if the slaves were to prove to a passing captain that they had not been ditched for having caused trouble.

But the most important reward they were given for their loyalty and their labour was also the most intangible: a promise that someone would come back for them. Castellan reckoned that might be possible in a couple of weeks, maybe a month if the weather turned. Whatever happened, the provisions he had left would be ample, he thought, to cover the time for the crew to reach Madagascar and return.

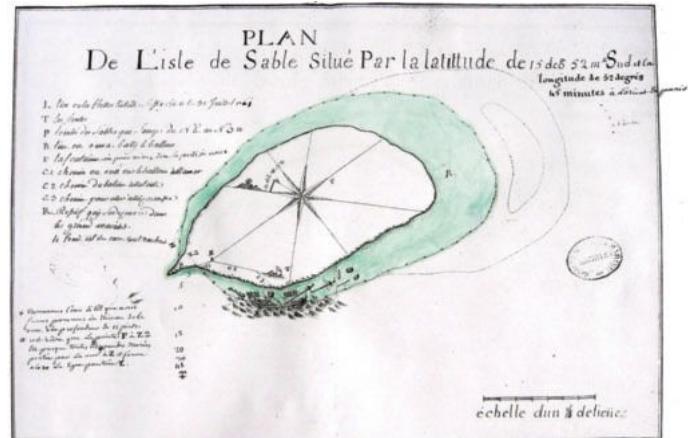
Weeks passed, then months, then years.

Desert island risks

"We affirm with truth that, after God, we owe our escape from that island to [Castellan] alone...we acted only to obey his counsel and orders," the crew unanimously proclaimed after they reached dry land. It had taken just four days for the *Providence* to arrive in Foulpointe, a port in eastern Madagascar. The men had travelled crammed together as the slaves once had, but just one died en route. They were greeted with amazement. But here Castellan's winning streak ended. The crew's declaration mentions his endeavours to retrieve the slaves. "However," it notes, "he couldn't secure the spare sails required to do so."

Castellan's abilities did not extend to the political realm. Everything suggests his desire to return was genuine. But it was not shared by Company higher-ups administering the islands. His inability to secure fresh sails—an unlikely impediment, given the constant coming and going from Foulpointe, a trading hub—was only his first hurdle.

A few days' deferment turned into weeks. As objects of curios-



The island they called home

ity, the entire crew was ordered to Île de France, now Mauritius, the local bastion of French power. By the time they arrived, on November 25th, the slaves had been stranded for two months.

Local grandees on Île de France saw no rush to intervene. The governor, Antoine-Marie Desforges-Boucher, in particular, displayed a palpable lack of enthusiasm for Castellan's flight of mercy. Ships had suddenly become scarce, he explained, not least since *L'Utile*'s wreck. Once a distant threat, Britain's navy now loomed more closely, threatening the security of supplies to the islands. And with all those delays already—not anybody's fault, of course—was it even likely the slaves were still alive?

Historians suspect ulterior motives. Desforges-Boucher is known to have had a sideline in trading slaves. A cargo of 200 Mozambicans he had ordered were on their way to the islands. The ban on trading had helped firm up prices and boost margins. There seemed no sense in bailing out a hapless rival at the last minute, especially when the British could be made to carry the can.

Whatever the reasons, the two men ended up at loggerheads. Desforges-Boucher promised a ship once the war with Britain ended (the Seven Years' War dragged on until 1763), while Castellan vowed not to leave the islands until the slaves had been retrieved. As so often happens, stalemate favoured the bureaucracy. While most of the crew returned home, Castellan took a position aboard a supply ship ferrying goods around the islands. He nearly scored an unlikely success: in January 1762, the captain of his new ship was amenable to a detour via Île de Sable. The plan was foiled when the Royal Navy landed on a nearby island.

By September of that year, 12 months after the *Providence* had sailed, Castellan realised the futility of his quest and returned to France. Yet his lobbying continued, if letters later found in various government archives are to be believed. His cause was aided by the publication of a real-life-adventure pamphlet printed in Amsterdam that turned the castaways into a minor cause célèbre. Mysteriously, a hastily added footnote even suggested a happy conclusion for the slaves: "A ship has been sent from Île de France to rescue these wretched souls."

It was not so. The suggestion of benevolence when none was forthcoming infuriated one reader. In the copy of the pamphlet held in the French Navy archives, the erroneous footnote is annotated by hand. "It had been promised one would be sent, it has not been done as yet." Irène Frain, a French author who has written a fictional retelling of the slaves' fate, is adamant the handwriting is Castellan's.

A decade later, he was still writing pleading letters. The bankruptcy of the Company in 1769—the cause of great financial hardship for Castellan—had led to new administrative arrangements in France's Indian Ocean territories. Perhaps that explained why in 1772, for no stated reason, the secretary of the navy was now willing to back a rescue mission. Nobody knew then, more than a ➤

► decade on, whether any slaves might have survived. In any event, the order was ignored for another three years.

A ship was dispatched in August 1775, 14 years after the original crash. It reached île de Sable, but heavy weather prevented it from doing much more. Worse, it added a castaway to the island; one of the two men aboard a dinghy launched from the ship was left stranded there.

The expedition at least answered any remaining questions of whether the island was inhabited. Lying offshore (he could get no closer), the captain saw that a community of sorts seemed to have endured. There were 13 people in all—14, with the newly added sailor. Buildings had been erected. The anchor from L'Utile still protruded from the surf. More surprisingly for a woodless island, a plume of smoke suggested fire.

A rescue mission looked harder than expected. But the new governor of île de France was made of sterner stuff than Desforges-Boucher. It helped that by 1776 Britain had bigger colonial problems to contend with than minor islands in the Indian Ocean; there, France ruled supreme. Still, the task required unexpected effort. Two more ships were commissioned to save the castaways, but failed.

The fourth succeeded. In November 1776, 15 years after Castellan had left, the *Dauphine*, a corvette captained by Jacques-Marie Lanuguy de Tromelin, at last got favourable winds. At île de Sable a dinghy was dispatched from it. By then, the only inhabitants were seven women wrapped in clothes made of birds' feathers. One of them—oddly, on an island with no men—held an eight-month-old baby boy.

With no pomp or ceremony, they were ferried to the *Dauphine* and evacuated. In the space of a morning, the island went from being inhabited and unnamed to being uninhabited and named after the man who had made it so: Tromelin Island.

Why had only seven castaways survived, when 14 had been spotted weeks before? It seems the newly marooned sailor had tried his luck as a latter-day Castellan. With the help of the now-natives, one assumes, he had salvaged whatever could still be used from L'Utile's wreck and built his own *Providence*. Sails were improvised from birds' feathers. Unlike Castellan, the unnamed sailor had taken some of the slaves: the last three men and three women. Also unlike his predecessor, he failed to reach Madagascar.

One little island an everywhere

Back on île de France, the women were declared free and baptised. Semiaivou, the mother of the child (and the only one whose name was recorded) was christened Eve. The boy was named Moïse, after the prophet who was born a slave and whose name means “drawn out of the water”.

Whatever meagre accounts of life on the island were collected—there was no great eagerness to do so—have been supplemented since by Max Guérout, a French naval researcher who calls himself an “archaeologist of distress”. With teams of volunteers, he has been on many expeditions to the island since 2006. Digging through metres of sand accumulated since the 18th century, they have unearthed a dozen buildings erected by the slaves. The stone walls are a metre-and-a-half thick to withstand the wind and make up for the lack of cement. With no materials at hand to craft a roof, the rooms are tiny. One of them had no entrance, for unknown reasons. They made unseemly accommodation: in Madagascar stones are used for tombs, not buildings.

In fact no tombs or bodies have ever been found. This makes it difficult to establish what happened to the other slaves. Of the 80 or so left behind, less than half are accounted for. Eighteen are

thought to have embarked on a raft shortly after they were abandoned; with no textile sails, it is assumed they never reached land. Most of the others died early on, including some women in childbirth. Moïse, as he later became, was the only child to survive. With his light skin, it was speculated but never confirmed that he was the son of the white sailor who had arrived the year before.

The same brackish well that had saved the sailors had slaked the slaves' thirst for 15 years. A fire started in Castellan's day had been kept burning since then, fed with scraps of wood gathered from L'Utile. The only cloth available consisted of birds' feathers woven together using ropes from the wreck, hence the women's attire that had startled the sailors. Basic metalwork—copper for eating implements, lead for water cisterns—had continued at a furnace set up to build the *Providence*.

The women declined to return to Madagascar, where they would probably have fallen back into slavery. Their wish for a quiet life on île de France seems to have been realised: nothing is known of them thereafter. Castellan, by then a hospital administrator in Brittany, may have heard of their rescue; his reaction was not recorded. He died in 1782. Desforges-Boucher, who stayed on the island after relinquishing the governorship in 1767, perished on the voyage back to France. Tromelin returned to France only to have his family's estate seized in the revolution of 1789.

That the story of Tromelin Island has survived at all is largely due to one of the revolution's central figures, the Marquis de Condorcet. He included the harrowing tale of the castaways in his pamphlet “Reflections on Negro Slavery”, published in 1781. His account is confused on the details, mentioning 300 slaves stuck on an island that was submerged by tides twice daily. But the gist of the story is damning of the behaviour of the French authorities: “Seven negro women and a child born on the island were found, the men having all died, either of misery, or hopelessness, or attempting to escape.”

The pamphlet galvanised anti-slavery campaigners, and was reissued seven years later. In only a matter of years, Desforges-Boucher landed on the wrong side of history. Debates in the new Assemblée Nationale in February 1794 decried the practice as *lèse humanité*, a precursor to today's crime against humanity. The new regime abolished slavery—a decision that was never properly implemented, and ultimately reversed.

As for Tromelin Island, little happened there for the next hundred years. In 1810 Britain seized control of île de France, and so, at least in theory, inherited its distant cousin as part of its empire. In 1867 the *Atieth Rahamon*, a three-masted ship carrying 10,400 bags of sugar, crashed into Tromelin, but the crew were rescued.

The island's precise co-ordinates were established only in the 1950s. France, keen to keep some sort of foothold in the Indian Ocean ahead of the impending decolonisation of Madagascar, established a weather station on Tromelin in 1954. There is now a cluster of modern buildings—erected, with no little irony, using labourers imported from Madagascar—and a runway of crushed coral runs the length of the island.

Today the weather station needs no staff, but French soldiers fly in every other month to rotate a crew of three people. Their presence serves mainly to weaken long-standing, if half-hearted, claims of sovereignty by Mauritius. One hut doubles up as a fully-fledged post office adorned, like all French municipal buildings, with a portrait of François Hollande, the island's nominal president. Mr Guérout and his archaeologists of distress arrive periodically to dig up some corner of the island. A plaque commemorating the betrayed slaves was erected in 2013: not far from L'Utile's rusting anchor, still stranded in the surf, battered by the waves. ■



The island provided fish, turtles, birds and eggs, but at first no water



Chinese business and the state

Another turn of the screw

SHANGHAI

The detention of Fosun's boss shows that even China's biggest tycoons are no longer safe from the regime's crackdowns

THE three-year crackdown overseen by President Xi Jinping against corruption and other threats to the leadership of China's Communist Party has taken aim at many targets: senior party figures and officials, the bosses of state firms, civil-rights activists, labour organisers and human-rights lawyers. This week in Beijing, outside the trial of Pu Zhiqiang, a free-speech campaigner, diplomats and foreign journalists were among those manhandled by organised goons. Until now, however, one group of Chinese citizens had seemed immune from such harassment: the country's self-made, private-sector billionaires.

But over the past week, Guo Guangchang (pictured), the chairman and majority shareholder of Fosun, one of China's most successful and globalised private conglomerates, suddenly disappeared and then just as mysteriously reappeared, having apparently been held for questioning by the judicial authorities in the interim. No official explanation has been given for his detention. That such a thing can now happen to one of China's most popular business figures—someone who accompanied Mr Xi on his recent state visits to Britain and America—should serve as a warning to investors that the regime's crackdown may now start to menace private businesses.

On December 10th local press reports suggested that Mr Guo had been bundled into hiding by security officials as he got off a plane in Shanghai. Fosun claimed its

missing boss was merely "assisting" the authorities with an investigation, but still asked for its shares briefly to be suspended from trading. That sent ripples across the globe, since Fosun now has billions of dollars invested in prominent firms and buildings in Europe and America. After a nerve-racking weekend, Mr Guo reappeared at an internal company conference on December 14th, but offered no explanation for his absence.

Fosun said that, in its directors' opinion, the inquiry that its boss is helping with did not threaten any "material adverse impact" on the firm's finances or operations. But if the company were to become the focus of any corruption investigation, the blow could be devastating. Although the firm has a history of sound management, it has splashed out to buy insurance companies and banks outside China, and spent a further fortune purchasing foreign firms—from jewellers to holiday-resort operators—with brands that it can peddle to the country's rising middle classes. In a report issued on November 30th, Standard & Poor's (S&P), a credit-rating agency, gave the firm its lowest grade in the category of "financial risk".

It may turn out that Mr Guo was simply giving evidence to an inquiry into corrupt officials, and is not himself under any suspicion. Even so, the high-handed treatment of such a prominent business figure is worrying. It is not just a reminder of the lack of due process and transparency in China's

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weak and politicised legal system; it also sends a message that the party can do what it likes, to whomever it likes.

T.J. Wong of the Chinese University of Hong Kong Business School points out that what he calls the "original sin" of Chinese private business provides a mechanism for the party leaders to take down any tycoon they choose to. Thanks to Mao Zedong's destruction of capitalism and the rule of law, most private businesses got started in legal limbo. "A lot of assets did not have defined property rights, and tax rates were often negotiated," notes Mr Wong. So even if an entrepreneur is not corrupt, there will be enough ambiguity in his past to paint him as a crook if that suits the leadership.

The risk posed by such an event is greater for investors in private firms than for those in state-backed companies. The *guanxi* (web of connections) of a state firm remains even if its boss is removed, but if the founder of a private firm is arrested, its *guanxi* may simply evaporate.

Already, this episode has jeopardised Fosun's bids for Phoenix Holdings, an Israeli insurer; BHF Kleinwort Benson, a British merchant bank; and Hauck & Aufhauser, a German private bank. On December 14th S&P warned that "an extended investigation of Mr Guo could potentially have a negative impact on the company's access to funding." The next day Moody's, another credit-rating agency, applied a "negative outlook" to the debt of Fosun International, the group's main listed arm—that is, it gave warning of a potential downgrade of its rating.

China's leading tycoons are now rushing to pledge loyalty to Beijing. This week Mr Xi hosts the World Internet Conference in Wuzhen, a pleasant river town in eastern China. Despite its name, the three-day event is not a celebration of the joys of the borderless internet. Rather, it is meant to promote China's view of "internet sover-

eighty", which Balkanises the web and throttles free speech. Predictably, a rogue's gallery of political leaders from illiberal states—Russia, Pakistan, Kazakhstan, Kyrgyzstan and Tajikistan—have confirmed their attendance. More to the point, so too have the founders of China's top internet and technology companies, from Alibaba to Xiaomi.

Indeed, the clearest sign of the current pressures on the private sector comes from Jack Ma, Alibaba's boss and the most visible of all Chinese tycoons. Mr Ma has long avoided political controversies, saying that he much prefers to date government than to marry it. So it came as a surprise when Alibaba confirmed recently that it was buying the *South China Morning Post*, a 112-year-old English-language paper in Hong Kong. The paper's vigorous reporting of the city's political protests has greatly upset Mr Xi's censors, who have blocked such content from readers on the mainland.

Will Mr Ma prove the saviour of free speech in Hong Kong? "Trust us," he says. But on December 11th, after securing Alibaba's bid for the paper, the firm let it be known that its leadership stands firmly with the censorious mainland regime. Joseph Tsai, Alibaba's vice-chairman (a sophisticated Taiwanese-Canadian with a Yale law degree), complained in uncharacteristically boorish language that Western media merely see China "through the lens that China is a Communist state and everything kind of follows from that." An "independent" editorial team at the Post, he vowed, will present things "as they are". But China is, in fact, a Communist state and, as the Fosun affair makes plain, things do very much follow from that. ■

Roll-ups

Serial thrillers

NEW YORK

The agonies and ecstasies of firms that are addicted to doing takeovers

IN MAY 2015 Bill Ackman, a hedge-fund manager, spoke at the Ira Sohn conference, a charity do at which Wall Street investors bat around ideas. Mr Ackman tried to rehabilitate an old concept, that of "platform" companies, which grow by continually buying others, finding their targets in the unloved and musty corners of the economy. Roll-ups, as they used to be known, were all the rage in the mid-1990s, before a series of blow-ups brought them into disrepute. Mr Ackman highlighted two firms that he said were modern masters of the strategy. Their fortunes have diverged widely since his speech, confirming that roll-ups are an enduring enigma.

Who is the fairest of them all?

Latest figures

	Valeant	Jarden
Market value, \$bn	32	12
Net debt/gross operating profit	7	6
Organic sales growth, latest qtr		
% increase on a year earlier	17	6
Free cash flow past 12 months, as % of sales	22	3
Share price		
% change on a year earlier	-23	21
Deal record		
Value of takeovers, \$bn	36	10
Cumulative takeovers as % of market value	112	81
Number of takeovers	50	28
Multiple of profits paid*	26	9

Sources: Dealogic; Bloomberg; company reports *Gross operating profit, five largest deals

One of Mr Ackman's exemplars was Valeant, which buys up obscure drugs. It is now reeling, after accusations in October of creative accounting (which it rejected). The other was Jarden, which owns a motley collection of brands, straddling baseball, angling and plastic cutlery, that seems barmy until you realise it has delivered shareholders a compound annual return of 28% since 2010. On December 14th Jarden said it would be taken over for a tidy premium by Newell Rubbermaid, which makes pens and household goods. The combined firm will be worth \$23 billion. From a mouse a decade ago, an elephant has grown.

As Potter Stewart, a Supreme Court justice, once said of pornography, roll-ups are hard to define, but you know them when you see them. Plenty of big firms have deal-making in their blood: think of Vodafone, a British mobile-telecoms operator, or Pfizer, a drugmaker. Some investment vehicles repeatedly buy whole companies. Berkshire Hathaway, Warren Buffett's outfit, or Blackstone, a private-equity fund, are examples. And many industrial firms continually make "bolt-on acquisitions" to gain new expertise or to gain market share in a particular product. Honeywell, an industrial conglomerate, aims to spend \$10 billion on such acquisitions over the next five years.

Roll-ups combine elements of all these approaches. Frequent dealmaking is an explicit objective. The cumulative size of these deals will ideally dwarf the roll-up's original value. They aim to integrate what they buy, to gain the benefits of shared overheads. Their targets are usually in similar industries. A roll-up is presented to investors not as a diversified investment fund, to be measured by such yardsticks as its net asset value, but as a unitary business, whose performance should be judged by its profits and cashflow.

Defined in this way, roll-ups in America

today have an aggregate value of perhaps \$100 billion. Some famous firms began as roll-ups and graduated to become giant multinationals. John Malone's Liberty, a media empire with a market value of \$65 billion, started out buying tiny cable-TV networks in rural America in the 1970s. AB InBev, a Belgian brewer which is buying its British rival, SABMiller, is arguably the greatest roll-up in history. It began with the marriage of two midsized Brazilian brewers in 1999 and has carried on buying beer brands faster than its customers neck pints. If the SAB deal goes through it will have wheeled and dealed its way to being the world's 13th-most-valuable firm.

In the 1970s and 1980s corporate swash-bucklers such as Sir James Goldsmith created conglomerates through a succession of audacious takeover bids. But roll-ups came of age in the 1990s. Between 1994 and 1998, 90-odd such firms floated in America, using the funds raised from outside investors to buy other businesses. They ventured into the corners of the economy where Wall Street did not deign to tread: hairdressing, funeral homes, vending machines, buses, video-rental stores and dustbin-emptying were all fertile territory for deals. This made sense on one level: fragmented industries were consolidated, and economies of scale achieved.

But the 1990s also demonstrated the dark side of roll-ups. Many played a dangerous game, stoking up investors' expectations so that their shares traded on high valuations. By using those highly rated shares (or debt) to buy the lowly rated stock of small firms, they could get an immediate boost to earnings per share, giving the illusion of growth. The game ended when their shares fell out of favour. Many roll-ups struggled with the sheer complexity of executing and then integrating a dizzying number of acquisitions.

Some were caught up in allegations of accounting shenanigans and fraud. Waste Management, a waste-disposal firm, was accused by regulators of inflating its profits by \$1.7 billion. Its alleged sins included neglecting to depreciate the value of its bin lorries. A study of corporate deals in the 1990s by Keith Brown, Amy Dittmar and Henri Servaes, three scholars, found that, overall, roll-ups lost investors money—but that there was a huge divergence between winners and losers.

So is there any way of discerning between roll-ups? It is surprisingly hard, as the cases of Valeant and Jarden show (see table). In some ways Valeant appears to be the superior firm. So far it has achieved faster underlying sales growth, after stripping out the benefit of acquisitions—though its increases in the price of drugs it has bought may provoke a backlash. For every dollar of sales it converts more into cashflow than Jarden—though in part it has done so by buying businesses that are al-

▶ ready strongly cash-generating. Both firms have similar leverage and have been similarly acquisitive relative to their size. The big difference is the number of acquisitions and the price that they have paid for them. Jarden has been selective and disciplined on price, whereas Valeant has been frantic and sloppy. It helps that Jarden is in simple industries, whereas Valeant is in pharmaceuticals, a complex business.

Jarden's co-founder, Martin Franklin, clearly believes in the formula. Though he is selling his biggest roll-up, he has started others, including Platform Specialty Pro-

ducts, which operates in the chemicals industry. There will always be a steady supply of targets for roll-ups. Big firms are always rethinking their strategies and shedding subsidiaries. Many industries are fragmented—think of the plethora of technology startups that may one day need a bigger home, or America's shale-energy industry, in which thousands of embattled, smallish firms need shelter from the storm. There are always entrepreneurs willing to sniff around underneath capitalism's carpet for bargains—and who love the thrill of the next deal. ■

props, which serve second-tier cities, were told to step on the gas to shave a few minutes off each flight, making it possible to squeeze in one extra trip each day. The steel brakes on the wheels of its Boeing 737s were replaced with lighter carbon brakes, cutting fuel consumption. The number of in-flight magazines on each aircraft was reduced, and attendants began serving meals in cardboard boxes instead of on plastic trays—again, trimming the aircraft's weight and cutting fuel burn.

More attention was paid to filling each plane's tanks with just enough fuel, with a suitable safety margin, but no more. Pilots now lower their planes' landing gear 7-8km from touchdown, instead of 14km as before; and on the ground they often taxi on just one engine. Stocks of spare parts were improved at the carrier's main bases, to get planes back in the air faster. SpiceJet's aircraft spend roughly 13 hours a day in the air, whereas for other Indian airlines the figure is just 10-12 hours, says Kiran Koteswar, the chief financial officer. On the revenue side, the airline has boosted its earnings from ancillary services such as on-board meals and seat selection.

That is all very well, say doubters, but the carrier's recent profits pale into insignificance compared with its earlier run of losses; and its accounts to the end of March, which have just been published, showed its total debt exceeding its assets by about \$192m. Mr Singh himself admits that "there's a long way to go."

However, the carrier is now able to think about long-term expansion. Mr Singh is in talks with Boeing and Airbus about potential orders for 150 planes over the next ten years or so; and the airline is expected shortly to seek shareholders' approval to raise \$750m of fresh debt to help pay for its fleet expansion. It is also preparing to make Al-Maktoum International Airport in Dubai its first foreign hub. As Amber Dubey of KPMG, an accounting firm, notes: "It has come a long way since that bleak December morning last year." ■

India's low-cost carriers

Ascending above the turbulence

MUMBAI

In the past year SpiceJet has made a remarkable comeback

ON DECEMBER 16th 2014 SpiceJet, an Indian low-cost carrier, suspended all flights after a late-night meeting at which its bosses had debated shutting it down permanently. The nine-year-old airline was struggling with \$300m of debt. Suppliers were refusing to refuel its planes unless they were paid upfront. Most of the 5,000 staff had not been paid their latest monthly salaries. SpiceJet had been cancelling so many flights that the government had banned it from taking bookings more than a month in advance, cutting its cashflow. SpiceJet seemed to be flying the same route as Kingfisher Airlines, an Indian carrier which went out of business in 2012.

A year after SpiceJet's near-death experience, things could hardly look more different. It is filling 93% of available seats and cancelling only 0.13% of scheduled flights each month. It has had three consecutive quarters of profits, having lost money in the previous five quarters. It has some way to go before it regains the 20% domestic market share it had in 2013; but with a share of 11% in the first ten months of 2015 it is the country's fourth-largest airline. SpiceJet's shares are now worth around six times what they had fallen to on the day after the temporary shutdown.

In part, the airline's revival is down to good fortune. The domestic price of aviation fuel has fallen by about a third over the past two years. Demand has perked up: Indian airlines carried a fifth more passengers in 2015 than in 2014. As a result, others are doing well, too. The market leader, IndiGo, raised \$459m in an initial public offering in October, valuing it at \$5.7 billion. Jet Airways is recovering after stumbling for the previous two years. A new local affiliate of AirAsia, a Malaysian budget carrier, is finding its wings. Even state-owned,

chronically loss-making Air India may turn a profit in its current fiscal year.

But SpiceJet's renaissance is not just due to luck. The scene was set for its 2014 crisis four years earlier, when one of its founders, Ajay Singh, quit and Kalanithi Maran, a media tycoon, took over as its controlling shareholder. Mr Maran did not demonstrate much understanding of the aviation business, says Dhiraj Mathur of PwC, a consulting firm. After the grounding of its fleet a year ago, Mr Maran decided to sell his 58% stake to Mr Singh, who embarked on a drastic turnaround. He started by negotiating with aircraft-leasing firms for better terms and with lenders for fresh finance, and by injecting equity capital of his own. He cut jobs—and managers' pay—and scrapped unprofitable routes.

Then came a slew of efficiency measures which added up to big improvements in the performance of the carrier's fleet. Pilots of its Bombardier Q400 turbo-



Back in the air

Schumpeter | Here comes SuperBoss

A cult of extreme physical endurance is taking root among executives



IN A crowded field, a contender for most absurd business-related tweet of the year must surely be the World Economic Forum (WEF) for its “14 things successful people do before breakfast”. They get up with the lark, avers the article being promoted in the tweet. They exercise furiously. They spend time on a “personal-passion project”. (“Novel-writing and art-making are easy to skip when you’ve been in meetings all day.”) They connect with their spouses. (“What could be better than pre-dawn sex to energise you for the day?”) They make their beds (because this is supposedly correlated with increased productivity). They spend quality time with the family. They network over coffee. They meditate to clear their minds. And so on. But they still find time to work on an important business project.

The tweet was quickly drowned in ridicule. One commenter said this represented a busy month for him. Another noted that it appears successful people don’t take showers or get dressed. But for all its inanity, the WEF’s tweeting does point to something real: a growing cult of extreme performance among the Davos crowd. In the pre-industrial world, elites abided by a code of conspicuous leisure. In the era of gentlemanly capitalism, they replaced this with a code of effortless superiority. Today’s code is all about effortful superiority: the successful deserve their success because they get on the treadmill and sweat.

Successful people make a great fuss about getting up early. Laura Vanderkam, a “time-management expert” who inspired the WEF’s tweet, says that, in a straw poll of 20 executives, 90% woke up before 6am on weekdays. Brett Yormark, the boss of the Brooklyn Nets basketball team, is said to get up at 3.30am; and Indra Nooyi, the CEO of PepsiCo, at 4am. Bob Iger of Disney reportedly rises at 4.30am; whereas Jack Dorsey apparently slouches in bed until 5.30am, despite running two companies, Twitter and Square. Your columnist once had a 7am breakfast with Michael Milken, the inventor of junk bonds. Offered a sticky bun, Mr Milken declined on the ground that “I’ve already had a pre-breakfast breakfast with a Nobel prize-winner.”

An early start is followed by furious exercise. David Cush, the CEO of Virgin America, is on his exercise bike shortly after getting up at 4.15am. Tim Cook of Apple is in the gym at 5am. However strenuous the workout, it is often combined with other tasks. Mr

Cush reads, makes phone calls and listens to a sports-radio station while cycling. Mr Iger once told the *New York Times* that, while exercising, “I look at e-mail. I surf the web. I watch a little TV, all at the same time.” And all while listening to music.

A striking number of bosses are going further and becoming devotees of extreme sports. John Rost, the president of Fiesta Insurance Franchise Corporation, has climbed the highest mountains on seven continents (the “seven summits”). Rick Davidson of Century 21 Real Estate spends his spare time climbing mountains, skydiving, scuba diving, racing NASCAR vehicles and flying fighter jets. Sir Rocco Forte of Rocco Forte Hotels and Michael Johnson of Herbalife are among the bosses who take part in regular “CEO Challenges”, in which they push themselves to their physical limits through such things as triathlons and 100-mile mountain-biking trails.

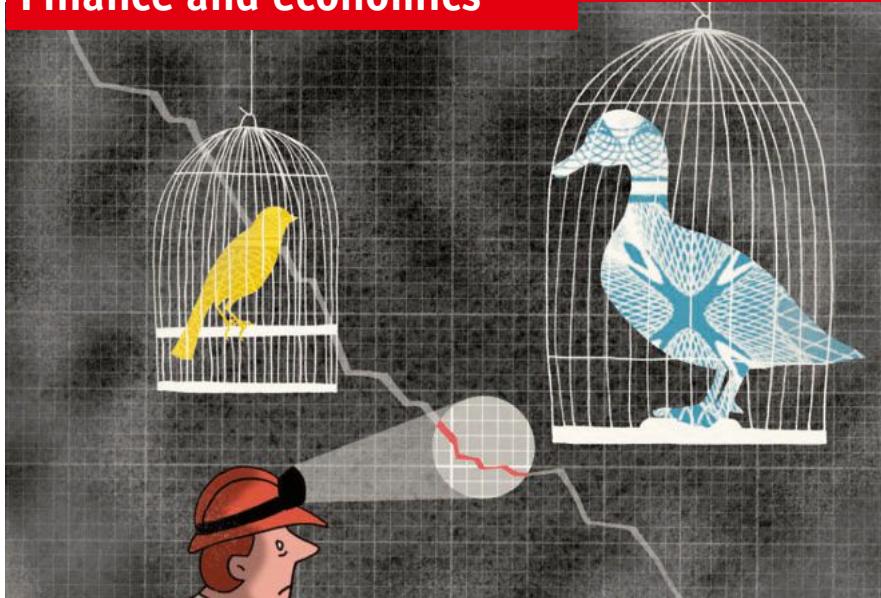
This cult of hyper-performance is nurtured by a growing army of personal trainers and yoga coaches who make their living by fine-tuning and de-stressing business leaders. For example, Ursula Burns, the CEO of Xerox, schedules an hour with a trainer twice a week at 6am. Business magazines bulge with articles on how to train like a Navy SEAL or how to achieve “cognitive fitness”. Business schools and corporate in-house “universities” compete to have the most expensive gyms. Deloitte’s new \$300m training facility, near Dallas, Texas, has a 12,000 square-foot (1,100 square metres) fitness room whose classes start at dawn; and SAS, a software firm, has run a 90-day “leadership and energy for performance” programme for its high-flyers.

Pill-popping

The cult of super-performance may now be spreading into more troubling areas. First, brushing privacy concerns aside, some companies are experimenting with using wearable devices to monitor their executives’ vital signs. One provider of such monitoring systems, Peak Health, lists Goldman Sachs, Bank of America and several hedge funds among its clients.

Second, according to one CEO, several of his peers are now dabbling in mind-boosting drugs such as Modafinil and Ritalin, which aid concentration. This trend is likely to intensify: surveys of American university students suggest that one in six now use mind-boosting drugs to get through their exams, a habit they may continue in their subsequent careers. Once again business is learning from both the sporting and military spheres. Sports teams routinely use biometric devices to track their star athletes (and occasionally drugs to boost their performance). America’s armed forces are experimenting with “go pills” that help fighters function for long periods without sleep.

It is time to call a halt on all this hyperactivity, before it gets out of hand. There is no doubt that many bosses have heavy weights resting on their shoulders. But are they likely to make these decisions better if they arrive at work exhausted and sleep-deprived? Working around the clock is probably a sign that you are incapable of delegating, not that you are an invincible hero. Frenetic multi-tasking—surfing the web while watching TV while listening to music—is a formula for distraction, rather than good management. And bosses who think of themselves as supermen and superwomen can weaken their companies. As Peter Drucker, a management guru, once pointed out, “No institution can possibly survive if it needs geniuses or supermen to manage it. It must be organised in such a way as to be able to get along under a leadership composed of average human beings.” ■



High-yield bonds

Canary or canard?

NEW YORK

The suspension of several speculative bond funds carries only faint echoes of the onset of the credit crunch

THE three investment funds from which BNP suspended redemptions in August 2007 held less than 0.5% of the money the French bank managed at the time. Yet these humble entities turned out to be the proverbial canaries in the coal mine: their spasm was one of the first signs of the impending credit crunch. The question of the moment is whether several similarly obscure funds that recently announced forced liquidations are canaries too. Do their woes reveal financial fault-lines, or did they just take exceptional risks?

The funds in question all invested in low-rated corporate debt. Investors have soured on such “high-yield” or “junk” bonds this year, causing prices to fall sharply and yields to surge (see chart). The best-known of the victims, a mutual fund managed by a firm called Third Avenue, specialised in distressed debt, on which average yields have risen from 8% in 2014 to an astronomical 18% now. The fund had lost 27% of its value this year and had seen big withdrawals, which together had caused its assets to shrink from \$3 billion to \$790m before Third Avenue suspended redemptions on December 10th. The firm said that the febrile state of the markets and the accompanying rush of withdrawals were forcing it to sell the fund’s holdings at fire-sale prices. An orderly unwinding, it argued, would serve investors better.

The next day a hedge-fund manager called Stone Lion Capital announced a suspension of redemptions from its junk

funds. And on December 14th Lucidus Capital Partners, a fund manager specialising in high-yield bonds, said it had liquidated all its investments.

Doomsters point in particular to a mismatch at the heart of Third Avenue’s model. Its high-yield fund’s prospectus promised investors quick access to their money but its bets were on illiquid and risky assets. Its second-biggest position was in the bonds of a bankrupt firm called Energy Futures Holdings Corporation. Unrated securities amounted to 40% of assets. Whatever the merits of these investments, they proved hard to shift in a skittish market.

That has prompted close scrutiny not just of other junk-bond mutual funds but also of exchange-traded funds (ETFs) that hold high-yield debt. ETFs are structured

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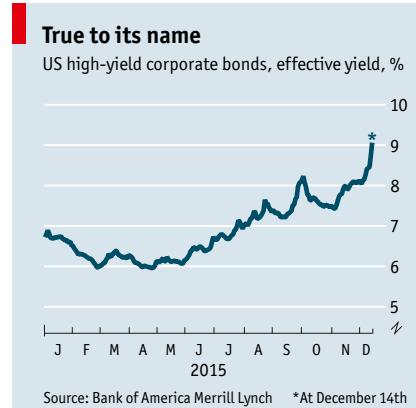
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so that they can be traded as easily as conventional shares, even though the underlying assets are often not nearly as liquid. (Shares in junk-bond ETFs have continued to change hands energetically this week.)

Yet junk-bond funds make poor canaries. For one thing, even their name conveys risk. Unlike the funds that buckled at the start of the credit crunch, they are not seen as relatively safe investments. Many of the concerns about credit centre on the debt of energy and mining firms, whose troubles have been widely aired during the year-long rout in commodity prices. These industries account for only \$225 billion or so of the \$1 trillion market for junk bonds, according to Wells Fargo, a bank.

Energy firms with good credit ratings continue to borrow relatively cheaply. On December 10th, for instance, Schlumberger, an oil-services firm, sold \$6 billion in bonds with an interest premium of just 1-2 percentage points over Treasuries. Blue chips in other industries can borrow even more cheaply: on December 9th Visa paid a premium of less than one percentage point to borrow \$16 billion.

Regulators have long worried that the illiquidity of corporate bonds could prove a problem for fund managers, and that fire sales at such funds may prove a systemic risk. Ironically, the bond market is less liquid than it used to be, in part because of more exacting capital requirements that have made it more expensive for banks to hold bonds. But the tentative solution regulators have proposed—classing some big fund managers and mutual funds as “systemically important” and thus subject to stricter rules—would not have helped in this case. None of the firms that are now in difficulties would have been big enough to qualify. Small funds did signal big tremors back in 2007. But given their explicit riskiness, the idea that today’s failing funds are canaries looks more like a canard. ■



Ukraine's prospects

Still on the edge

KIEV

The economy, although improving, remains in a parlous state

ON THE face of things, the worst is over for Ukraine. A ceasefire seems to be holding in the war that has left forces backed by Russia in control of much of the east of the country. The IMF has found a way to keep providing Ukraine with a financial lifeline, side-stepping a dispute with Russia that had threatened to sever it. The economy, which has shrivelled by about a fifth since 2013, even grew by 0.7% in the third quarter, relative to the second (see chart).

Yet the hryvnia, Ukraine's currency, which has lost 70% of its value over the past two years, is sliding again; government-bond yields are rising. Politicians in Kiev are busier brawling (at times physically) than fixing the country's problems. There is a risk that the hugely unpopular government may collapse, possibly paving the way for a resurgence of pro-Russian parties. For all the improvement in Ukraine's circumstances, the country's prospects remain horribly uncertain.

The present economic upturn was inevitable after such a big contraction. Sales of meat and poultry, which had fallen sharply

ly as Ukrainians economised in the depths of the crisis, have started to grow again. Vodka consumption is on the rise too. (Champagne sales are also up, suggesting that the government's attempts to stamp out Ukraine's endemic corruption are not going perfectly.) Firms are hiring again: the unemployment rate has fallen from 11% to 9% in recent months.

The government's finances also look much more healthy. That is largely thanks to Ukraine's creditors. In August most of them agreed to a restructuring that wiped 20% off its foreign debt. That paved the way for an IMF rescue. It has lent \$11 billion to Ukraine since the beginning of 2014, and plans to lend another \$11 billion by 2019. To that end, it changed one of its bylaws this month, freeing it to lend to a country that has defaulted on a sovereign lender. That manoeuvre was aimed at Russia, which lent \$3 billion to Ukraine in 2013 and rejected the August deal. Ukraine will default on the Russian loan on December 20th. A lengthy court battle looms, but will no longer imperil the IMF's aid.

Dramatic spending cuts have also helped right the government's finances. The budget is in surplus so far for 2015. Anders Aslund of the Atlantic Council, a think-tank, says that in two years it has reduced public spending from 53% of GDP to 46%. With private debt markets closed to it, the government has little choice but to cut. "In the last year we have reduced staffing of government by a fifth," says Natalie Jaresko, the finance minister. Spending on



A bleeding indicator

benefits and health care is down.

All this belt-tightening, however, further dampens demand. As it is, consumers are struggling. According to Euromonitor, a research firm, a quarter of outstanding consumer loans and a third of the mortgages are in default. Real wages have fallen by 25% in the past year and high inflation has diminished the value of savings. Even if the hryvnia recovered a quarter of what it has lost against the dollar since 2013—an optimistic forecast—Ukraine would need annual growth of 5% until 2022 to reach its pre-crisis dollar income per person.

Exports hold some promise. They powered the economy out of the recessions of 1999 and 2009, points out Tomas Fiala of Dragon Capital, an investment bank. At first glance the country looks set to repeat the trick. It has an educated workforce, fertile farmland, plentiful gas reserves and a dirt-cheap currency.

However, investment is needed to spur exports. In the past three years capital spending has fallen by 40%. It shrank yet ►

Festive splurges

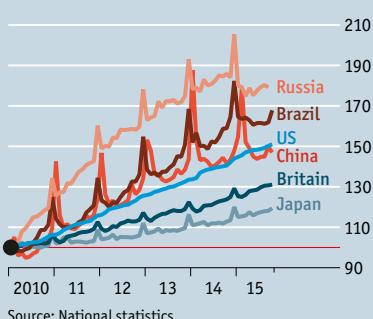
Bank run

It's the most cashed-up time of the year

IN PLACES that celebrate Christmas, retailers face the usual year-end scramble to keep their shelves piled high. They will not be the only ones facing a seasonal run on their inventory: banks need to stock up for Christmas, too.

A merry note

Currency in circulation, January 2010=100



Just like eggnog, fruitcake and reindeer sweaters, demand for cash peaks in December, as consumers withdraw money to pay for Christmas gifts, tips and holiday travel (see chart). In the weeks leading up to the holiday, banks stash extra cash in their vaults to meet the additional demand. In the weeks that follow, as the beneficiaries of the Christmas rush deposit their takings, the excess cash is sent back to central banks and removed from circulation.

In rich countries, where card payments have become common, cash in circulation tends to jump by less than 5% in December; in America it hardly rises at all. But in emerging economies such as Brazil and Russia, where cards are rarer, it increases by over 10%. The world's most cash-crazed consumers are in China. Chinese New Year, which typically falls between mid-January and mid-February, boosts demand for cash by over 20%.

From a very low base

Ukraine

GDP % change on previous quarter



► again in the third quarter. A malfunctioning banking system is partly to blame. Many banks borrowed in foreign currencies but lent in hryvnia, exposing them to the currency's collapse. Other banks were mere fronts for oligarchs who plundered the deposits for themselves.

So far the National Bank of Ukraine (NBU), the central bank, has done a good job of cleaning up the banks. In one-and-a-half years about 60 of the 180-odd banks that existed before the crisis have been shut down, says Mr Aslund. (Fifty more need to go, he adds.) Others are being recapitalised, with the NBU cajoling their

wealthy owners into footing the bill. Its efforts are paying off. Deposits of foreign currency are rising.

Efforts to tackle corruption are going less well. No prominent figures from prior regimes have been jailed, points out Timothy Ash of Nomura, a bank, unlike in many other eastern European countries. The government has failed to increase the derisory salaries of civil servants. Even senior officials are paid a measly \$300 a month, making corruption especially hard to resist (\$50,000 a month is said to be the going rate for a pliable one).

No one has cleaned up the murky but

lucrative system for claiming value-added-tax rebates on exports. "Some people are still claiming refunds for exporting air," says Mr Fiala. The finance ministry has put forward a sensible proposal for the budget in 2016, but it has been hindered by those who resist the abolition of dodgy tax loopholes. The fight has delayed \$4 billion of Western help.

The foot-dragging frustrates locals as well as foreigners. Reform-minded officials are fed up and have privately threatened to resign. Some already have. Despite some improvement, Ukraine is still at risk of long-lasting stagnation. ■

Buttonwood | Naughty, not nice

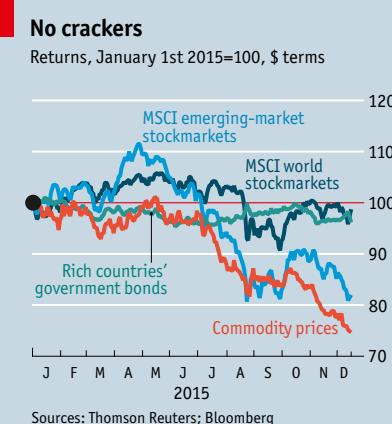
Dollar-based investors won't find many goodies in Santa's sack

CHRISTMAS tends to be the season of goodwill and investor optimism. A poll of fund managers by Bank of America Merrill Lynch (BAML) in December 2014 found that most expected stronger economic growth and low inflation in 2015. Investors were enthusiastic about equities (particularly in Europe) but negative on government bonds.

The consensus is often wrong and this was no exception. Not every bet soured, but most predictions went in the wrong direction. Global economic growth has disappointed once again, although largely thanks to a poor performance by emerging, rather than developed, economies. Forecasts have been steadily revised lower. The OECD's latest estimate for global growth in 2015 is 2.9%, well below the average rate over the past 30 years, of 3.6%.

When it came to predicting the best-performing asset class of 2015, investors had little doubt. Two-thirds of managers picked equities and just 4% government bonds. Alas, in dollar terms, equity investors have lost money (see chart). As of December 15th the total return from shares in the developed world (in dollar terms) was -1.4%. Government-bond markets have also suffered a small loss, roughly on a par with that suffered by equities. Those who put their money into the benchmark ten-year Treasury bond actually eked out a small gain.

Investors who opted for more exotic assets generally did badly. Emerging-market equities did terribly, with a negative return of 17.3% (including a calamitous 32% drop in Latin America). Those who bought high-yield bonds also lost money. To be fair, fund managers were pessimistic about commodities a year ago and, boy, were they right: gold fell by 10% on the year and the Bloomberg commodity



index dropped by 26%.

European and Japanese investors had a better time of it than their American counterparts. Euro-zone stockmarkets were up in local currency terms, as were shares in Tokyo. The decline of both the euro and the yen against the greenback means that these markets performed badly in dollar terms. But it also means that the international portfolios of European and Japanese investors look more profitable in local-currency terms (less so, of course, for those who hedged their currency exposure).

For dollar-based investors, this has been a disappointing year. Even the good news—a sharp fall in the oil price—has not been as helpful as might have been expected. Lower petrol prices have acted as a tax cut for Western consumers, spurring developed economies. But they are hardly booming. And the weakness of energy prices has put a dampener on investment (commodity producers were responsible for 39% of global capital-expenditure growth in 2014), and caused some wobbles in the corporate-bond market.

Corporate profits have also been affect-

ed. According to Société Générale, a French bank, fourth-quarter profits at S&P 500 companies are likely to have fallen by 3.6% year on year; even without financial and energy stocks, profits would be up by just 0.1%. In the absence of higher profits, stockmarkets need higher valuations if they are to generate positive returns. But Wall Street started 2015 on a cyclically-adjusted price-earnings ratio of 26.8, compared with the historical average of 16.6; it ends the year, according to Professor Robert Shiller of Yale University, on 26.6.

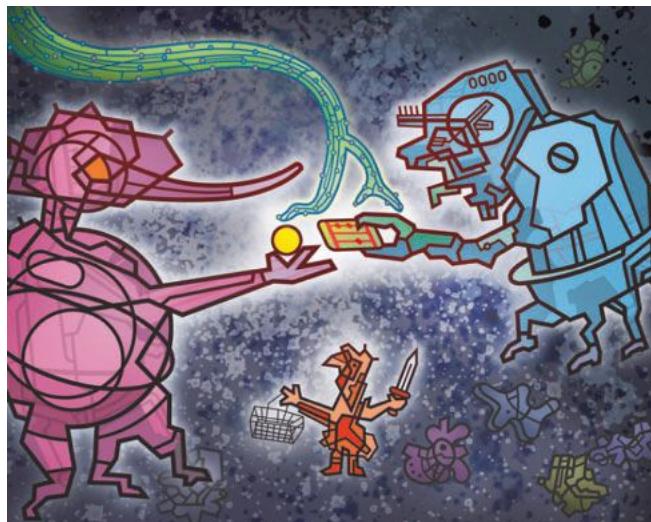
Investor sentiment has taken such a dent that, so far, December has failed to produce the traditional "Santa Claus" rally that drives up shares in the final weeks of the year. Perhaps the Grinch has stolen it. The much-anticipated tightening of monetary policy by the Federal Reserve, expected after *The Economist* went to press, may also have induced caution.

The latest BAML survey suggests investors are not quite so upbeat about 2016 as they were about 2015. More still think the global economy will strengthen than weaken and only 7% foresee a global recession. But China's economy is a big cause for concern, with a net 43% of fund managers expecting weaker growth there. Forecasts for profits growth are at their weakest since July 2012.

Despite those worries, investors are pretty much making the same bets. They are heavily overweight in equities (particularly European ones) and underweight in government bonds and commodities. That is not a completely coherent position. If commodities collapse further, that should help keep inflation low, which ought to be good for government bonds. And the big bet on equities may be a sign of desperation, not confidence: the prospects of every other asset class look dismal by comparison.

Free exchange | Wookienomics

Like the Force, economics binds the galaxy together



THE latest chapter in the "Star Wars" saga, "The Force Awakens", was due to open in cinemas worldwide on December 16th, after *The Economist* went to press. Most fans will queue up to watch nail-biting lightsaber duels and catch up on the lives of beloved characters. Economists, who can render the most exciting of material dull, will be more interested in the state of the galactic economy. Did the destruction of the Death Star at the end of the sixth film in the series trigger a massive financial crisis, as a recent paper* by Zachary Feinstein, a professor of financial engineering at Washington University in St Louis, speculates? What sort of structural reforms might the new galactic government adopt?

While awaiting answers to these and other important questions, *The Economist* undertook an exhaustive, popcorn-fuelled examination of the first six episodes of the saga, in search of broad economic lessons. The "Star Wars" galaxy is both technologically advanced and economically stagnant, plagued by inequality and ossified political institutions. It is not entirely alien, in other words. Though far, far away, it offers three important lessons for residents of the Milky Way.

The first is the value of trade: the freer the better. Fans moaned in dismay when the opening blurb of the first prequel (Episode I, released in 1999) dwelt on the details of a trade dispute. Yet in the distant galaxy, as in this one, trade conflicts are a rich source of dramatic tension. Among the most important technologies in the "Star Wars" universe is the hyperdrive, which allows travellers to evade the constraints of relativity and travel fantastic distances in a jiffy. Without the hyperdrive, moving between even the closest star systems would take years or decades, even assuming travel at near-luminal speeds—making trade difficult and costly.

Hyperdriven trade, in turn, enables a higher level of income per person than would be possible in a galaxy of planetary autarky. Some planets—those with a diversity of species and resources—would do well enough in a tradeless galaxy. But those like the desert planet Tatooine or the ice planet Hoth would be barren without the possibility of imports from other worlds.

Trade allows desolate planets to specialise in the production of valuable commodities—minerals in Tatooine's case. Others can turn their entire surface over to farming, or to urbanisation (the imperial capital, Coruscant, is a planet-sized city). Richly en-

dowed planets gain by specialising in industries in which they enjoy the biggest comparative advantage, using some of the proceeds to obtain goods or services they are not quite as good at producing themselves. At the same time, trade allows bleaker planets to export what resources they have in exchange for the imports needed to make them habitable—food, most obviously.

The gains from galactic trade are reduced, however, by the monopolies granted to powerful industry groups, such as the Trade Federation, which invades the peaceful planet Naboo in Episode I. Trade franchises are troubling for a number of reasons. They allow the monopolist to charge a premium, capturing benefits that would otherwise flow to producers or consumers. They encourage criminality by those seeking to circumvent the monopoly (like the smuggling of spice, a narcotic, by Han Solo, on behalf of the gangster Jabba the Hutt). And they encourage monopolists to devote valuable resources to rent-seeking. The Republic's bureaucrats, we learn from Naboo's then-senator, Sheev Palpatine, are "on the payroll of the Trade Federation".

Although globalisation, or rather galacticisation, is an economic boon, it presents all sorts of political challenges that are not easily managed. This is the second lesson. Dani Rodrik, an economist at Harvard University, argues that globalisation prevents countries from achieving more than two of three desirable goals: economic integration, national sovereignty and democracy. The inhabitants of the "Star Wars" universe face similar problems: the price of participation in the galactic economy is the acceptance of rules that irk planetary governments. In Episode II, a "Confederacy of Independent Systems" moves to secede from the Republic in response to regulations seen as placing an undue economic burden on poorer planets. The Rebel Alliance that battles the Empire in Episodes IV to VI is trying to restore democracy and planetary sovereignty, although that may well undermine the economic integration enabled by unitary government.

The droids we're looking for

The third lesson is for those pondering their career options in an era of machine intelligence. The humans in the saga still labour at dangerous and unpleasant tasks—flying the galactic equivalent of fighter jets, for example, and toiling in dangerous spice mines—despite the crowds of clever robots that populate the galaxy. Indeed, the robots of "Star Wars", for all their technological wizardry, do not seem to be able to do everything humans can. When Obi-Wan Kenobi, a Jedi knight, is shown an army of human clones—soon to become storm-troopers—commissioned by a colleague, he is told that they are "immensely superior to droids, capable of independent thought and action". So far, so reassuring.

Yet humans also work because of the inequities of the galactic political system. Anakin Skywalker, the emotionally scarred Jedi who later becomes Darth Vader, first appears in the series as a slave on Tatooine. Anakin's son Luke, though not a slave, harvests atmospheric moisture in relative poverty while those at the heart of the galaxy live in luxury. Humans will work for a pittance, if necessary, to scrape by. This may lead them to the dark side. Worse, it might prompt inquisitive souls to ask what forces drive such an uneven distribution of wealth, turning them into those most dreaded of creatures: economists. ■

* Studies cited in this article can be found at www.economist.com/starwars15

Out with the old

PARIS

Why the bottom has dropped
out of the antiques market



A MINUTE'S walk from the Louvre museum, just a hop across the Rue de Rivoli, is an antiques centre called the Louvre des Antiquaires. Until recently hundreds of dealers had galleries here, selling Louis XVI chairs, Renaissance jewels and other delightful old objects to customers keen to own a piece of history. Today only about half a dozen shops remain open. The building's owner plans to turn the space into a high-end fashion store.

Shops selling furniture that has passed the century mark—the generally accepted definition of an antique—are closing on both sides of the Atlantic. Fulham Road in London used to have so many stores selling old wood furniture that it was known as the "brown mile". Today all but three have closed. Bermondsey Mar-

ket and Portobello Road, two other well-known stomping grounds for antique-hunters, are suffering, too. Last year Kentshire Galleries, a long-established antiques firm in New York City, sold its eight-storey gallery downtown and put its furniture up for auction at Sotheby's. The owners, the third generation to run the business, have decided to move out of antique furniture and focus on fine jewellery instead. Bonham's, Christie's and Sotheby's, three big auction houses, have all cut back on antique furniture to focus on what they see now as bigger moneymakers: contemporary art, jewellery and wine.

High rent is one problem for antique-sellers. But the other, much bigger issue is falling demand. Buyers are much less interested in antiques than they were even a decade ago. As a result prices for many different types, especially mid-range "brown furniture", have slumped by as much as half. Nineteenth-century chairs can be cheaper than equivalents from stores such as Restoration Hardware or bespoke reproductions, says Daniel Stein, a former lawyer who sells antiques in San Francisco. But even lower prices have not drawn buyers back in. "Do I think antiques are going to come back?" asks Mr Stein. "Not in my lifetime."

History boys

The desire to live in the presence of history has ebbed and flowed. In ancient Rome the elite sought out Greek bronzes, sculptures and vases; some cunning merchants tried to make new ones look older and boost their price. Collecting antiquities was also popular with the aristocracy during the Renaissance, and became even more so when young upper-class European men started to do the Grand Tour in the late 17th century. As they travelled across the continent many built up collections of antiques. "I am far gone in medals, lamps, idols, prints, etc.," wrote Horace Walpole, the son of Robert Walpole, at the time Britain's prime minister, in a letter home from Rome in 1740; "I would buy the Coliseum if I could."

Antique furniture went mainstream in Europe in the second half of the 19th century, as the bourgeoisie found themselves with more disposable income and developed a desire to invest in their homes. The antique trade boomed in Paris and London. By 1890 Paris had 300 antique shops, up from 25 around 1850, says Manuel Charpy, a historian. But antiques, like clothes, go in and out of style. They boomed again in the 1950s and 1980s, when "period rooms" in a single nostalgic style were all the rage.

For a long time antique-buyers believed that scarcity meant that the value of old furniture would rise, or at least hold steady. They perhaps underestimated the capriciousness of taste. Today fashionable homes look like hotels: pale sofas, soft rugs, stark ➤

► lines. Their owners prize comfort more than age. Home magazines and interior decorators drive trends in architecture and art. Many successful decorators sell furniture lines, and therefore have a financial incentive to suggest new items. Appreciating antiques, and knowing what to buy and at what price, takes study and training that few people have.

Dealers complain that time-pressed young buyers show little interest in past eras. Television programmes such as "Antiques Roadshow", where octogenarians find out how much the contents of their attics are worth, reinforce the perception that antiques are for oldies. Modern living means some items of furniture have lost their usefulness. Armoires, which used to be pressed into service as a place to hide televisions, are little use now that flat-screens can be hung on walls. Large items do not appeal to owners of small homes, especially apartments. Simon Myers, an English dealer based in Yorkshire who is the fourth generation to run his firm, says he used to stock lots of dining tables and chairs but no longer does, because young people do not entertain as they used to, and many do not have dining rooms. People do not want period rooms, no matter how much money they have, says Bunny Williams, an American interior designer. "Everyone lives a more casual life."

Me old China

The antiques that still sell well are original, one-off items that convey a sense of character. The top tier has held up best. Nicolas Kugel, a Parisian dealer, has a gallery on the Left Bank facing the Seine, on the same side of the street as the Musée d'Orsay. Tourists are unlikely to chance upon its unmarked entrance, but elite buyers know where it is. Inside it looks like a palace transformed into a museum, with everything for sale. No prices are displayed. Mr Kugel says that his clients, who come from all over the world, are still buying. They see antiques "as an undervalued piece of art".

High-end antiques may be crafted as carefully as fine artworks, and priced as steeply, but buyers may not enjoy the same social pay-off. According to Benjamin Steinitz, a Parisian dealer in fine antiques: "If you have a Picasso or Jeff Koons everyone knows what it is and that you're a success. If you have a lovely André-Charles Boulle desk, people may think you have the taste of your grandmother." Mr Steinitz in fact has a desk attributed to Boulle, who crafted furniture for Louis XIV at Versailles, for sale for €6m (\$6.4m). Few people, if they saw it in a home, would recognise its rarity and value.

Mid-range antiques have been squeezed especially hard because there is so much supply and diminished demand. Companies used to buy antiques for their offices, but today favour a modern look. Mr Stein, the San Francisco dealer, says that when he started out he had doctors and lawyers as customers. "The business I do now is almost exclusively with the one-tenth of one percent of people. It's not because my stuff is so expensive. It is because the middle market is gone."

Baby-boomers are downsizing, while their own parents are dying and leaving them their old furniture. But their own children have no interest in it. Many of those who go to antique shows are not looking to buy, but to gauge how much their own antiques are worth. Some have shifted to mid-century modern furniture. "Mad Men", a television show, has helped push that era's slick, minimalist aesthetic into the mainstream, says David Rosenblatt, the boss of 1stdibs, an online marketplace for antique and vintage furniture. Prices for mid-century designers such as Charles and Ray Eames, Paul Evans and Jean-Michel Frank have soared. A pair of small Frank tables were recently

"Mad Men" has helped push the slick, minimalist aesthetic of mid-century modern furniture into the mainstream

spotted in New York with an asking price of around \$400,000. Ken Bolan, who used to sell antiques in London but has switched to mid-century furniture, says prices have quadrupled in the past decade. Antique dealers scoff that mid-century is bound to go out of fashion. Prices do feel bubbly, given that much of it was mass-produced.

Chinese antiques are a rare bright spot. After decades in which celebration of their nation's cultural heritage was suppressed, well-heeled Chinese customers are now snapping up pieces that connect them with their past, almost always buying them back from Westerners. Prices for the best pieces of Chinese furniture are at least ten times higher than a decade ago, says Nick Wilson, a China specialist at Christie's, and furniture has risen more than any category of Chinese art in the past five years. Demand for tables and chairs made of zitan and huanghuali, two rare woods, is especially strong.

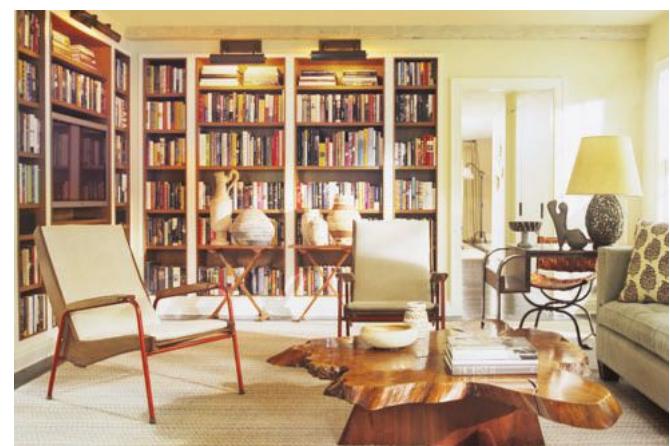
Online, no one knows you're a Boule

Many of the companies that are struggling are family businesses, where each generation did an apprenticeship before taking over. Most of those who survive own their own premises, insulating them from rising rent. The antiques trade requires a lot of space for storage and retail: an item may have to be held for a decade before the right buyer comes along.

Dealers used to bring a good eye and even better connections. They would drive to estates their customers did not know about to inspect pieces and drive hard bargains. But, as in so many sectors, the internet has lessened the role of intermediaries. The average distance between buyers and sellers using 1stdibs is around 2,100 miles. Some dealers are trying to survive by closing their shops, offering viewings by appointment only and selling exclusively online. But hundreds of auctions take place every month on sites such as Bidsquare, Invaluable and LiveAuctioneers, and you do not need to be a professional to take part.

It can be harder for customers to spot true quality online—and fraudsters find it easier to flourish. But buyers who take care should be able to find tremendous bargains. Items in good condition from a given era will only become rarer as time progresses—and may come back in style. Colin Stair, who runs an auction house in Hudson, New York, hopes that today's youngsters, who are much more socially conscious, will wake up to the appeal of buying something that exists already and is handcrafted from high-quality wood, rather than something that requires a new tree to be cut down and may have been manufactured in poor working conditions.

Social justice has not traditionally been one of antiques' selling points, but trends and thinking change from generation to generation—as dealers know well. It would be a shame if people did not find their way back to objects that embody past tastes and times. Antiques remind us of who we are and where we have been. ■



Going global

SURAT

Secrets of the world's
best businesspeople

AS BRITISH imperialists were trudging through African jungles to secure their newly conquered empire, some of the empire's subjects were also roaming far and wide, under the cover of the Union flag. One was Allidina Visram, from Kutch, in what is now Gujarat state in India. He arrived penniless in Zanzibar (now part of Tanzania) on the east African coast in 1863, aged 12. He opened his first small shop 14 years later, and soon afterwards spotted his great opportunity. He opened a store at every large railway station along the 580 miles of railway track being laid down through Kenya to Uganda in the early 1900s, providing supplies to thousands of railway workers. He then opened more stores at Jinja on Lake Victoria.

Flush with success, Visram was later joined by another Gujarati, Vithaldas Haridas. He arrived in 1893 and was, if anything, even more adventurous than his mentor; he stomped 24 miles through the jungle to the small town of Iganga, where he started his own shop. More followed. These were the beginnings of some of the larger fortunes to be made in colonial Africa.

Gujaratis have never been put off by small matters such as distance or temperature. Nowadays they form one of the most prominent immigrant communities in Canada, and at the other end of the Earth they constitute a large proportion of the 155,000 immigrants of Indian origin in New Zealand. And at all points of the compass in between, from Fiji to Britain, from Myanmar to Uganda, they have built flourishing communities. It may even be true, as one Gujarati organisation has claimed, that the only countries where they have not settled are "those which are very small, undeveloped or are merely small islands without much business opportunity".

Business, indeed, is the principal business of Gujaratis. Everywhere, they are to be found running businesses, from corner-shops to hotels, from tech start-ups to some of the world's largest conglomerates. Like the Jews, Chinese, English, Scots and Lebanese, they have come to form an impressive global commercial network. In proportion to their numbers (about 63m live in India, and there could be anything from 3m to 9m abroad), they could even claim to be the most successful. They bestride entire sectors of the global economy and have been at least partly responsible for the rise and fall of nations. Their influence on some advanced economies is now substantial.

Consider America. Having arrived in numbers from the 1960s onwards, Gujaratis now run about a third of all its hotels and motels. Furthermore, this was achieved mostly by just one group, essentially an extended family, the Patels, who hail originally from a string of villages between the industrial cities of Baroda (or Vadodara) and Surat (see map). Like other South Asians, they highly value degrees in medicine and engineering. But they have the added knack of turning a degree into a business opportunity. Thus they own almost half (12,000) of America's independent pharmacies (as well as one of the biggest chains in Britain, Day Lewis). There are thousands of Gujarati doctors in America, and they are quicker than most to start up their own practices. Bhupendra Patel, for



instance, studied medicine in Baroda before coming to America in 1971. He set up a practice four years later, bought his own building in Queens, a borough of New York City, in 1978 and soon had 30 or so doctors working for him. His classmates were certainly impressed; out of 120 of his peers, 90 came to America in his wake.

These stories point to a couple of outstanding characteristics. Most fundamentally, those Gujaratis who turn to business say that they are constitutionally unsuited to working for other people. For them, the best way to work for yourself is to run your own business, "to take your destiny in your hands", as Russell Mehta, the head of Rosy Blue, a large diamond processor, puts it. For these people, enterprise is virtually a cultural obligation, and has always earned the most respect. Starting a small corner-shop is seen as more impressive than holding a mid-level management job in somebody else's company.

A kiss on the hand may be quite continental

For many Gujaratis the point of acquiring knowledge is to attain practical goals, particularly business goals. The Gujarati word *vediyo*, meaning a person who studies the Vedas, the ancient Sanskrit texts that constitute the oldest scriptures of Hinduism, has come to mean a "learned fool". Ethnic-Indian Americans have applied their practical knowledge to Silicon Valley; they are responsible for about a quarter of all startups there, and a quarter of those are thought to be Gujarati.

Around the globe, they have come to wield huge influence in the diamond business. An impressive 90% of the world's rough diamonds are cut and polished in the Gujarati city of Surat, a business worth about \$13 billion a year, and Indians, predominantly Gujaratis, control almost three-quarters of Antwerp's diamond industry. Like the motel owners, the great majority of diamond processors come from just one community, almost all of them tracing

► their origins back to one otherwise-obscure city in the north of Gujarat state called Palanpur.

Unsurprisingly, given their success abroad, they have been at the forefront of India's own recent economic surge, too. The three wealthiest Indian businesspeople—Mukesh Ambani, Dilip Shanghi and Azim Premji—are Gujarati. With just 5% of India's workforce, Gujarat produces 22% of the country's exports. Reliance, one of India's largest private conglomerates, is Gujarati-owned. The industrial centres of Ahmedabad and Surat dominate India's synthetic textile sector. One of the world's biggest denim factories is in Ahmedabad, which is also home to some of India's pharmaceutical giants. All this has produced handsome revenues for the state's coffers, and with it the sleek new roads that persuaded many Indians to vote for the former chief minister of Gujarat, Narendra Modi, as prime minister in 2014.

As the state of Gujarat accounts for about a fifth of India's coastline, perhaps it was inevitable that its peoples should be merchants and travellers. Its position also helped: it is well-situated for the Persian Gulf and Africa, and routes to South-East Asia. Gujarati traders have been recorded on the African and Gulf littorals since before the tenth century, and extensive trade with the Arabs partly accounts for the strong Islamic influence on the state, which was founded as a modern administrative unit in 1960. It consists of three main regions: the Kutch, a largely arid, sparsely populated area now abutting the border with Pakistan; Saurashtra, the westernmost point; and central Gujarat to the east, the main industrial belt. The graceful dhows that bore most of the Gujarati trade are still built by hand at Mandvi, on the coast of Kutch.

Under the influence of Muslim traders, and Persians invading from the north, many Hindus were converted to Islam. They now constitute the Muslim sects of the Bohras, Khojas and Memons. This was an important part of the development of a commercial ethos in Gujarat, as after conversion to Islam these communities were relieved of the Hindu restriction on "crossing the sea". It was not until 1905 that religious leaders lifted the social penalties against this among the two leading Hindu business organisations. One Hindu group, the Patidars, many of whom have the family name Patel, had mostly been farmers, but as family landholdings were subdivided among the sons, many were pushed into trading in agricultural products such as tobacco instead.

The spirit of capitalism

As well as the accident of geography and the virtues of religion, other significant ingredients in the rise of Gujarati mercantilism were the institutions known as *majahans*, the equivalent of European guilds. These developed in the early Mughal period, in the 16th century, and they regulated trade and settled disputes within the various trading communities, such as the cloth or grain merchants. The *mahajans* provided a system of self-regulation, says S. P. Hinduja, a professor of sociology at Delhi University, but they were also "multi-ethnic and multi-religious", binding together the Muslims, Hindus, Jains and others into one commercial class.

Whereas one religion, Protestantism, has often been associated with the rise of Anglo-Saxon capitalism, Gujarati capitalism was much more a fusion of influences. Ethnic and religious diversity became a source of strength, multiplying the trading networks that each community could exploit. Pragmatism and flexibility over identity, and a willingness to accommodate, perhaps inherited from the *mahajans*, are strong Gujarati traits, argues Edward Simpson of the School of Oriental and African Studies at the University of London. Gujaratis have been adept at remaining proudly Gujarati while becoming patriotically British, Ugandan or Fijian—an asset in a globalised economy.

In the 10th and 11th centuries they developed a distinct code of ethics for doing business. Again, religion played a role, especially with the Jains. Jainism was originally a protest movement against Brahmanic traditions and the privileged classes within Hinduism, rather like the Protestant revolt within Christianity, says Mr Hin-



duja. Jains are pacifists and vegetarians. The injunction against harming any creature, especially insects, ruled out tilling the fields. In a largely agrarian society, that left few ways to earn a living other than trade or finance.

Jain preachers drew up rules for business practice that emphasised non-violence and honesty. One such preacher, Hemchandracharya, determined that as peace was essential for trade, so merchants were at all times to avoid strife and provocation. Indeed, keeping a low profile has been another Gujarati characteristic. The region's politicians, such as Mohandas (Mahatma) Gandhi, Muhammad Ali Jinnah—the founder of Pakistan—and Mr Modi, are renowned throughout the world, but its entrepreneurs often remain invisible, which is exactly the way they like it.

Trust and honesty remain essential to Gujarati-dominated industries. Mr Mehta, himself a Jain from Palanpur, whose diamond company has a turnover of \$1.8 billion and offices from Antwerp to Tokyo, says that, despite the size of the business, it is still "all based on handshakes and words, with no contracts". In order to make the system work, he explains, diamond merchants prefer to deal with "the people they trust"—this usually means a group within the Gujaratis, in this case their fellow Jains from Palanpur. This is a big part of the reason why the subgroups of Gujaratis, such as the Patels and the Jains of Palanpur, have each congregated in one trade, and why most Gujarati businesses, except the very largest, remain run by families.

Traditionally, most of the finance to start a business comes from within the family, or at least the community. This brings other advantages. "We don't have to deal with government too much, and mostly not with the banks, as most money comes from families," says Dinesh Navadiya, the head of the Surat Diamond Association. "So there is little scope for corruption."

Business failure is also largely handled within families. Gujarati entrepreneurs are risk-takers, but they know that the family network provides a safety net. Even so, failure carries a stigma that may never be wiped clean, especially if the person who has failed is suspected of extracting excessive profits for selfish reasons. Mr Mehta has helped bail people out, and watched as the bankrupt sold everything to repay debts. "It could be really nasty," he says. "All the creditors, including their own family, would verbally abuse them; sometimes it was violent."

Retail empire

"Ethical business practices based on fair trade and honest dealings gave Gujarati traders a reputation of being trustworthy," write Achyut Yagnik and Suchitra Sheth, two historians of the region. So when the Portuguese, Dutch and then the British started arriving in India from the 16th century they used Gujaratis as their principal trading partners. The headquarters of the British East India Company was originally at Surat. It was the Gujaratis' relationships with the East India Company, and later the British crown, that were the biggest influences in shaping their contemporary

► trading empire.

They expanded by following the Union flag to the farthest corners of the British empire, encouraged to do so by the “open door” policy whereby traders and merchants set up shop in its booming entrepôts. Hundreds of thousands emigrated to east and southern Africa in particular, but also to Malaysia, Burma, Singapore and beyond, as well as more obscure territories such as Fiji. When the occasional colonial official cared to lift the bonnet on Queen Victoria’s empire, he usually found Gujaratis running the engine. One such was Henry Bartle Frere, consul on the east African island of Zanzibar, who observed in 1873: “We found [the Gujaratis] monopolising whatever trade there might be, spending and keeping their accounts in Guzeratti, whether in small shops, or as large mercantile houses. Their silent occupation of this coast from Socotra to Cape Colony is one of the most curious things of the kind that I know. It has been going on for forty years but I had no idea till I came here how complete their monopoly has become.”

It was not only the trading opportunities that enticed Gujaratis abroad; most left their homeland out of desperation, to escape devastating famines, plague and cholera. But whereas other Indians arrived in the outposts of empire to labour on sugar plantations or build railways, Gujaratis such as Allidina Visram, the shopkeeper in east Africa, opened the stores that serviced the labourers. So commercially driven were the ethnic-Indian Ugandans, of whom about three-quarters were Gujarati, that at the peak of their success, in the mid-20th century, they contributed about a fifth of Uganda’s GDP despite numbering only about 100,000 out of a population of 8m. One of their number was the singer Freddie Mercury, born on Zanzibar in 1946.

More Thatcherite than thou

Gujaratis enjoyed similar success in other colonies of the British empire, notably Kenya and South Africa. Memons, in particular, prospered in Burma, trading mainly in teak, rice and tea. The most successful was the very wealthy Sir Abdul Karim Jamal, knighted by the British in 1920. Originally from Jamnagar in Kathiawar, the “King of Rice” even had a street named after him in Rangoon (now Yangon). Considering how well the Gujaratis did out of the empire, it seems only natural that a Jain from Palanpur, Sanjiv Mehta, should now own the East India Company itself. He snapped up the moribund company in 2005 and has opened a posh store bearing its name in London’s West End. It sells fine crockery, traditional marmalades and, inevitably, tea. To guilty Britons the company is redolent of imperial exploitation, but to Mr Mehta it is more of a brand “known all over the world, the Google of its age”. The world’s first joint-stock company has come round full circle.

The intimate connection with the British, however, came at a price. The Gujaratis were identified as little more than colonial satraps by indigenous Burmans, Ugandans and others. So once the British left, they were often targeted by the first post-independence politicians, asserting their nationalist credentials.

In Burma (now Myanmar), the military regime that took over in 1962 nationalised all foreign businesses, forcing hundreds of thousands of Indians out of the country. In Uganda, in 1972, the deranged dictator, Idi Amin, abruptly gave the country’s 60,000 South Asians, mostly Gujaratis, 90 days to leave. The consequence, as elsewhere, was precipitous economic collapse. Amin’s cronies sequestered the Gujaratis’ businesses and ran them into the ground. In 1997 a new Ugandan president, Yoweri Museveni, came to Britain to ask the exiles to return

and rebuild the country. The generals who governed Myanmar never did so, to their country’s enduring cost.

But Uganda’s loss was Britain’s gain. Stripped of most of their money and possessions by Amin, about 27,000 Indian refugees, mostly Gujaratis, arrived in Britain and set about building their fortunes a second time. Dolar Popat arrived in 1971 as a 17-year-old, slightly ahead of the main influx, with £10 (\$24 at the time) in his pocket. He spent £6 of it on lodgings with an Irish family in Kilburn (the only people who would take a non-white tenant), got a job as a waiter in a Wimpy restaurant for 25p an hour and worked so well that his boss started to give jobs to other Gujaratis.

By the time the bulk of the Ugandan Asians arrived, Mr Popat had bought a three-bedroom house in Wembley. He sheltered 25 of the refugees. He took night courses in business studies, completed a part-time accountancy course and in 1977 bought his first corner-shop, with a sub-post office that gave him a fixed income. Three years later he set up a finance company providing mortgages (half of his customers were Gujarati), and soon after bought his first care home. Hotels and much else followed.

Now worth about £70m, he was given a peerage by the Conservative government in 2010. “That’s how we fight prejudice and raise our living standards, through hard work, education and enterprise,” reflects Lord Popat today. Even the Conservatives, many of whom opposed the influx of Ugandan Asians, were eventually forced to acknowledge that the values of Gujaratis like Lord Popat were if anything more Thatcherite than their own. Norman Tebbit, a prominent minister in Margaret Thatcher’s governments, wrote to Lord Popat in 2012 that while he had opposed the Gujaratis’ arrival in 1972 he now acknowledged that they had “become integrated into the community and uphold British values and standards which have become rather less respected in some parts of our indigenous population”.

Will Gujaratis around the globe continue to enjoy the same success in the future? The state their forebears came from has seen an uptick in sectarian violence between Hindus and Muslims in recent years, particularly in 2002, and this has, to an extent, damaged the religious and ethnic tolerance on which so much of their commercial ethos was built. There is a risk that divisions in India may, in time, spread to the diaspora. Some fear, too, that in the age of “knowledge economies” their utilitarian approach to learning might become a disadvantage; it is Bangalore and Hyderabad that have pulled ahead in India’s latest high-tech businesses. But, as the Gujaratis like to point out, they do the business, not the tech. As there have been gaps in the market during the past millennium, so there will be gaps during the next millennium—and Gujaratis will be there to exploit them. ■

Stripped of their money and possessions, Gujarati refugees from Uganda came to Britain to build their fortunes a second time over



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Human exoskeletons

Full metal jacket

From the battlefield via the factory floor to the orthopaedic clinic, artificial bones and muscles worn outside the body are providing help and protection

SOLDIERS kitted up in expectation of their first taste of combat often reflect on how much of their bodies a bulletproof jacket and helmet do not cover. About 81%, it turns out. More armour than this would be impractically heavy. Indeed, many soldiers already carry at least 50kg of kit and supplies, which is more than double what America's Army Science Board advises as the limit if damage to a soldier's skeleton and musculature is to be avoided.

The answer, many suggest, is a second, external skeleton, complete with artificial muscles, that would let its wearer carry far more weight without strain. Such exoskeletons, moreover, are no longer the stuff of science fiction. Interest in their uses, both on and off the battlefield, is growing.

One of the most advanced is the Kinetic Operations Suit (**KOS**) made by Revision Military, a firm in Vermont. For a soldier this triples his armour-protection while adding little burden to his movement. An artificial articulated spine transfers most of the weight of the suit's helmet (which fully encases the wearer's head) to armour on his shoulders. The weight of the armour protecting his torso is similarly transferred to his hips and legs through another section of artificial spine. All this reduces strain on his neck and lower back, the natu-

ral skeleton's weakest links. His legs must still bear the extra weight, however. To assist with this, the **KOS** uses titanium-aluminium shafts which are strapped, along with armour, to his lower limbs. Electric motors, taking their cue from accelerometers and other sensors embedded in the suit, move these shafts in step with the way the soldier moves his legs.

According to Brian Dowling, a former special-forces soldier in the American army who works for Revision Military, the system is both nimble enough and robust enough to help its wearer run, fully laden, across uneven terrain. The armies of several countries, America's included, are now evaluating such claims.

A second military exoskeleton, more ambitious even than **KOS**, is being developed by the special forces themselves. This project's contractors include many of the most famous names of America's defence establishment, such as General Dynamics, Lockheed Martin and Raytheon. Intriguingly, they also include Legacy Effects, the firm that designed the exoskeletons which feature in the "Iron Man" science-fiction films. The device these firms have come up with is called the Tactical Assault Light Operator Suit, a name crafted to yield the acronym **TALOS**, the ancient Greek name of a

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mythical animated bronze statue.

TALOS will weigh twice as much as the soldier inside it. The components contributing to this weight will, however, make it bullet- and shrapnel-proof. They will also offer its wearer a cooling system; a set of sensors that monitor his physiology; and superhuman strength. The result, according to General Joseph Votel, head of the Special Operations Command, will be "peerless tactical capability".

If, of course, it works. That is not certain. To start with, the actuators that operate **TALOS** will need to become more agile. Replicating the movements of the shoulder joint, the human body's most mobile, remains particularly difficult. The device will also need far more power than portable batteries can provide. General Atomics, another of the military-industrial complex's usual suspects, has proposed designing a small internal-combustion engine to run the whole thing. But such engines are noisy, which could alert the enemy. Also, soldiers might, quite reasonably, be reluctant to wear a tank of petrol into battle.

Power down

A prototype of **TALOS** should be available by 2018, though a battle-ready version is at least a decade away. And even Revision Military's more modest system will probably not be fit for combat for several years. In the meantime, though, the world's armed forces are looking at the idea of unpowered exoskeletons.

Australia's Department of Defence, to take one example, has designed a skeleton that diverts much of the weight of a backpack, or of armour designed to protect the torso, directly to its wearer's boots. Two ➤

► steel cables—encased in flexible tubes which are, in turn, held in place by loops in the wearer's trousers—run directly from the backpack or armour to the soles of the boots. It is these cables that transmit the load. The tubes stop them buckling, letting them support their burden while retaining sufficient flexibility for the wearer to walk or run unhindered. The system is a prototype. But two other unpowered exoskeletons, one developed by Lockheed Martin and the other by BAE Systems, a British defence giant, are already in use—not for combat, but for industry.

A worker holding a rivet gun or other similarly heavy tool may have to set it down to shake out his arms and recover his strength so often that he is resting nearly half the time he is on a job. To help, Lockheed Martin has designed FORTIS, a 17.5kg unpowered exoskeleton now being tried out by the American navy and also by nearly a dozen manufacturing companies. FORTIS's articulated aluminium frame supports a gimballed arm (see picture on previous page). One end of this arm, in front of the worker, is attached to the tool being used. The other end, behind him, carries an appropriate counterweight. Whether he is standing or kneeling to do the job in question, the combined weight of both tool and counterweight is transferred to the ground through the exoskeleton rather than through his bones. The tool itself thus seems weightless, and the work-

er does not so much wield as guide it. And, because that tool is attached to the exoskeleton, rather than being carried in the worker's hands, this arrangement also prevents injuries caused by dropped tools.

Both FORTIS and BAE's competing system, the Orthotic Load Assistance Device, boost productivity by about 50%, reckons Dana Ellis of the National Centre for Manufacturing Sciences. This industry body, based in Ann Arbor, Michigan, is helping both manufacturers and America's Department of Defence adopt the technology. At American naval shipyards, FORTIS lets two workers do more with a grinder than the three-man team they have replaced, says Trish Aelker, exoskeletons boss at Lockheed Martin. At the end of their shift, she adds, workers are no longer so fatigued that they routinely "go home and crash on the couch".

Carmakers are interested, too. Earlier this year Audi and Daimler, along with three other firms that prefer to remain anonymous, began testing a device called the Chairless Chair, made by Noonee, a Swiss firm. The Chairless Chair is a padded titanium exoskeleton that a worker straps to his buttocks, thighs and calves. Internal hydraulics allow its configuration to be locked at the push of a button, holding the wearer in a sitting position until he tries to stand up. Doing so automatically disengages the lock, permitting him to rise. The device weighs less than 4kg, so someone

wearing it does not feel encumbered when standing or walking around. But, the button pushed, it lets him crouch comfortably inside the frame of a half-built car in order to add to its structure. According to Tanja Schembera-Kneifel, who runs Audi's tests of the product, by reducing workers' musculoskeletal problems, the Chairless Chair has also reduced absenteeism. Audi plans to deploy the device widely.

Other partial exoskeletons are in the works. One, the Personal Lift Assist Device, designed by Mohammad Abdoli-Eramaki of Ryerson University in Toronto, is also being tested by carmakers. Dr Abdoli-Eramaki's invention involves a sheathed spring that runs down the spine. When the wearer bends to grasp and lift something, the spring stretches, reducing the effort required to stop gravity pulling his body to the floor. Then, when he stands up, the spring contracts, pulling on his torso enough to reduce by more than 15% the effort his muscles have to use to lift him.

Another partial skeleton, unveiled earlier this year by researchers at Carnegie Mellon University, in Pittsburgh, is called the Walking Assist Clutch. It is worn around the ankle and the calf, and uses a short elastic cord to reduce the work required of the muscles that pull on the Achilles' tendon of one foot while the other is in the air. As the cord stretches, it stores energy which, a moment later, is released to tug the heel up, helping that foot push off the ground. According to its inventor, Steven Collins, the Walking Assist Clutch decreases the effort involved in walking around by 7%. For someone like an infantryman, that would be a valuable gain.

Step up

In the end, though, the future of exoskeletons probably does lie with powered versions. The European Union, for example, is putting €15m (\$17m) into a transnational project to develop a system called Robo-Mate. This is an exoskeleton with upper- and lower-arm motors that reduces the perceived weight of an object by 90%. Trials begin in 2016. One of the guinea pigs is Fiat, another carmaker (whose chairman, John Elkann, sits on the board of *The Economist*'s parent company). The second is INDRA, a French firm whose business is the even-more-labour-intensive one of dismantling and recycling vehicles.

Nor is Robo-Mate alone. Power Loader from ActiveLink, a subsidiary of Panasonic, a Japanese company; Hal from Cyberdyne, another Japanese firm; and the Body Extender from Percro, a robotics laboratory at the Scuola Superiore Sant'Anna in Pisa, Italy, are all in development, too. They may do more than make existing workers safer and more productive. Carmen Constantinescu, Robo-Mate's project manager at the Fraunhofer Institute campus in Stuttgart, Germany, observes that they will also re-

The perils of public office

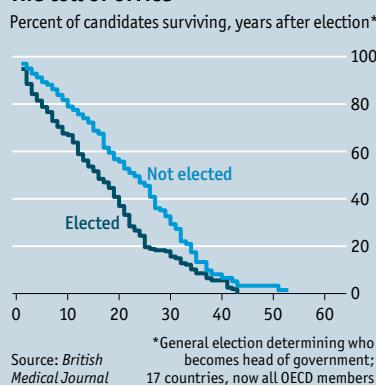
A merry life but a short one

Politicians beware. Success can seriously curtail your lifespan

THE idea that power could corrupt physically as well as morally—that the strain of high office might damage an incumbent's health—took a serious knock in the 1970s, with the publication of the first "Whitehall" study by Michael Marmot of University College, London. This showed that, among British civil servants, it is those at the top of the pyramid who are healthiest and live longest, even when other factors are taken into account. Being the alpha dog, Sir Michael found, is itself an elixir of life.

Research just published in the *British Medical Journal*, though, tells a different story. Anupam Jena of Harvard University and his colleagues looked not at civil servants, but at those who won elections to take the position of head of a government. Dr Jena compared the subsequent lifespans of 279 winners of elections in 17 countries (going back, in the case of Britain, to the early 18th century) with those of 261 runners-up in such contests who never subsequently won the top

The toll of office



office. Using actuarial data, he concluded that winning and exercising the highest of offices in these countries takes an average of 2.7 years off the victor's lifespan. For elected, rather than unelected politicians, then, supreme power really does look like a Faustian bargain.

▶ define who can become a worker. By abolishing the strength advantage enjoyed by men, exoskeletons will open up to women jobs that many now find too strenuous. They will also help older men, who might otherwise have to give up work.

The group whose lives may be changed most by powered exoskeletons, though, are paraplegics. Both ReWalk Robotics, an Israeli firm, and Parker Hannifin, of Cleveland, Ohio, make devices that consist of an artificial pelvic girdle sporting two powered, jointed, limb-like appendages that

strap to the wearer's legs. Combined with a pair of walking sticks attached to his forearms, these let a user walk for hours at a time before the batteries run out. They can even permit him to climb a flight of stairs.

ReWalk's device has been available in Europe since 2012, and in America since 2014. Parker Hannifin's was approved for use in Europe in November, and American approval is expected soon. Exoskeletons, then, come in many guises. Some may help on the field of battle. But sometimes, conquering a staircase will be enough. ■

selves using more benign materials, such as peanut oil and even extra-virgin olive oil. These materials do not dissolve plastics like polyethylene at room temperature. If they did, such plastics could not be used as containers for cooking oils, or in many other familiar ways. But the researchers did not work at room temperature. By heating mixtures of polyethylene and their chosen solvents to 230°C, they got the polymer to dissolve.

They then cooled the mixture down, letting crystals form, drew fibres from the result, and tested what they had to see how it compared with fibres prepared using a non-polar solvent called decalin. The results astonished them. They had hoped the new fibres might be as good as decalin-made ones. In fact, they were better.

Tensile strength is measured in pascals. High-quality steel has a strength of one gigapascal (GPa). The two researchers' decalin-made fibres had a strength of about 2GPa. The best of those made using peanut oil and olive oil came in at 4GPa. Why is not yet clear. But something about the interaction between polyethylene molecules and the new solvents seems to encourage the formation of more perfect crystals than those that emerge from a decalin solution. If this applies to other polymers, and the process can be scaled up, Dr Smith and Dr Tervoort will have created a process for making strong fibres that is not only greener, but more effective. ■

Materials science

No tangled web

Greener polymers are stronger, too

BULLETPROOF jackets, yacht sails and tow lines are made of fabrics and ropes designed to withstand enormous force. Those fabrics and ropes are, in turn, woven or twisted from fibres made of artificial polymers, such as polyethylene, specially prepared in ways that make them strong.

Unfortunately, this preparation uses inflammable and toxic solvents. That makes it hazardous for workers and potentially bad for the environment. But this may change if a team of materials scientists led by Paul Smith and Theo Tervoort at ETH Zurich has its way. As they write in *Macromolecules*, Dr Smith and Dr Tervoort have been trying to make strong polymer fibres using less-nasty solvents. Not only have they succeeded, their virtue has been rewarded by the discovery that this approach creates even stronger materials than the old and noxious one.

Polymers are long, chainlike molecules. Each link in the chain is either an identical chemical unit (as in the case of polyethylene) or one of a small set of such units (as in the case of nylon, which has two sorts of link). Such chains tend to intertwine in a disorderly fashion when part of a solid. Strength, however, requires order. To make a strong material the individual molecules should, as far as possible, be stretched out in parallel with one another, thus forming an elongated crystal, and the crystals should then be similarly aligned in a fibre as that fibre is being drawn.

If fibres are drawn directly from liquid polymers, they will solidify in a disorderly way. In a solution, though, the molecular chains can slip past each other, straightening themselves out and aligning themselves in the same direction, thus forming crystals. Then, when a thread is drawn, these crystals will line up along its axis.

The established method of doing all

this is to use something good at dissolving the polymers in question—typically, a type of chemical known as a non-polar organic solvent. These substances are generally hydrocarbons of the sort petrol is made of. They are notoriously dangerous and bad for the environment.

Dr Smith and Dr Tervoort, however, wondered if it might be possible to coax polymer molecules into aligning them-



Some cosmic Christmas baubles

Telescopes are nowhere near good enough to see features on planets orbiting stars other than the sun. But if a planet passes in front of its parent star they can study the spectrum of starlight passing through its atmosphere. This shows what the atmosphere is made of and how cloudy it is. A planet's size can be estimated from how much light it blocks during such a passage. And telescopes can, by measuring a planet's distance from its parent star, reveal its temperature. Such data are sufficient to draw plausible artists' impressions. These ones, by an artist at the European Space Agency, are of "hot Jupiters"—gassy giants that orbit their parent stars more closely than Mercury does the sun. The planets' spectra were collected using the *Hubble* space telescope by David Sing, of Exeter University, in Britain, and his colleagues, and have just been published in *Nature*. The planets' names are the star-catalogue names of their parents, followed by the letter "b" to indicate they are the second-known body in that system. The smallest, HAT-P-12b, is about the size of Jupiter. The others are to scale.

Bosom buddies

The surprising story of America's first boob selfie



OF THE 2m objects in the Metropolitan Museum of Art in New York, one of the most startling is the painting with accession number 2006.235.74. Summoned from the stacks where it lives most of the time, the tiny picture sits on a block of comforting polystyrene, a blue surgical glove on either side acting as a guard of honour. The idealised breasts that are the painting's centrepiece are even more luminous in the original than in reproductions. Swathed in a furry gauze, they present themselves like a jewel in a box or a bonbon, something secret and sweet, both a revelation and a challenge.

The picture comes not from Britain, where miniature-painting became especially popular in the 18th century, nor even from France, the home of sensuality. It was painted in puritanical Boston in 1828. If that is not surprise enough, more surprising still is the painting's atmosphere of vulnerable humanity: the left breast rounder and slightly more settled than the right, the nipples ever so lightly puckered, the skin salted with goosebumps. Shown here nearly three times its actual size, "Beauty Revealed: Self Portrait" was painted from life by a right-handed woman in a studio that was none too warm.

Portrait miniatures were brought to America by European settlers. Sometimes they were the only mementoes of family and friends left behind, never to be seen again. The term miniature derives from *minium*, the red lead ink used in medieval manuscript illumination, and was originally a reference to technique rather than to size. It is perhaps no coincidence that people started painting them during the scientific revolution when Sir Isaac Newton published "Opticks", his treatise on the fundamental nature of light, and the world was being seen anew. If easel portraits had long been made for public gaze and approbation, by the mid-1700s, miniatures, newly voguish, were for discreet contem-

plation, a peephole into the sitter's private self. Miniatures became a common way for people to mark family milestones: betrothal, marriage, birth, death. They were hidden in drawers, or worn: by women on a chain inside the bodice or, by men, on a pin behind the lapel of a jacket.

Their popularity in the North American colonies in the early 19th century coincided with a growing economy and a shift in social attitudes towards family, marriage, children and love. Men may have been the gunbearers of the revolution, but according to John Adams, America's second president, the new republic also needed a "national Morality" that could be obtained only by championing family values.

Although independent, the new state still looked to the old world as its cultural true north. The best American artists travelled to London to study with the English masters; British fashions became American fashions. Some things, though, struggled to catch on, especially anything to do with the carnal or erotic. That is what makes "Beauty Revealed" such an unusual work. Americans, for example, did not like painting from models. Until long after the revolution no American academy offered life drawing from naked, live models, as was the tradition in Europe. It was

the same with eye portraits, hand-painted miniatures of single human eyes set in jewellery and given as tokens of affection, which became all the rage in Britain after the Prince of Wales secretly proposed to his Catholic mistress, Mrs Fitzherbert, in 1785 with a miniature of his own eye. It would take another 15 years before the first eye portraits were painted in America, and even then the fashion never really took off.

Boston or bust

The earliest American portrait miniatures date from the 1740s, and were painted in oil on wood or copper. Artists travelled from city to city with their tools: a portable work desk, a small box of paints, handmade brushes, reducing glass, pieces of wood or copper, and, increasingly, slices of ivory cut from tusk or whalebone. The exquisite finish of "Beauty Revealed" came from using watercolour on an ivory wafer so thin it is transparent when held up to the light.

Miniatures required a special delicacy of hand and brush; being associated with emotion, they were deemed from the beginning to be particularly suited to women. Sarah Goodrich, the artist who painted "Beauty Revealed", was born in 1788. She grew up in the Massachusetts countryside and learned to draw, according to her family, by scratching pictures on birch bark using a pin. Eventually she moved to Boston, then the most cultured city in America, and took instruction from Gilbert Stuart, a celebrated portraitist, who, during the American revolution, had exhibited at the Royal Academy in London.

Goodrich learned how to cut ivory shavings into the shape she wanted for a painting and how to make watercolour stick on ivory's oily surface by heating, greasing and sanding it, and finally treating it with gum arabic. She learned not to flood the pigment with too much water, lest she make the colours run. Stuart, whose

► daughter was also a painter, commented that Goodrich's portrait of him was the "only true likeness"; he liked it so much that he made a gift of it to his mother, adorned with a bracelet woven from his and his wife's hair.

A year after she met him Goodrich opened a small studio of her own and was soon painting two or three miniatures a week, enough to allow her to buy a house in the elegant Beacon Hill district of Boston near the Charles river. There she raised an orphaned niece and cared for her invalid mother for the last 11 years of her mother's life. Between commissions she painted several likenesses of herself. A self-portrait from 1830 (pictured), now in the collection of the Museum of Fine Arts in Boston, shows her sitting, as tradition demanded, three-quarters on. She has a helmet of dark curled hair and a shawl wrapped decorously around her shoulders. Neither beautiful nor ugly, Goodrich has an open, self-possessed face; her eyebrow is almost arched, her look wry, humorous, forthright.

Goodrich had a wide circle of artist friends in Boston, and would have discussed the paintings that were exhibited there. She may well have had views on John Vanderlyn's "Ariadne Asleep on the Island of Naxos", a large painting of a naked woman, breasts akimbo, that was shown in Boston in 1826, two years before Goodrich painted "Beauty Revealed". Vanderlyn, unusually among American artists, had gone to France to study, rather than to England. His French-style Ariadne, which would become America's most famous early nude, shocked many both in Boston and New York, and his painting style did not take off. He died in upstate New York a quarter-century later, a pauper. By contrast, the Boston Athenaeum held five exhibitions of Goodrich's conventional portraits, starting in 1827, and she went on working for nearly 30 years until she could no longer see well enough for the tiny stippling needed to layer colour on ivory.

Enter the patron

Many miniaturists of the time would travel, touting for work. Nathaniel Hancock's advertisements, which describe him as taking "the most correct Likenesses", have him travelling from Petersburg, Virginia, to Richmond, Boston, Portsmouth and Exeter, New Hampshire, as well as Salem, Massachusetts, in less than ten years. Goodrich became sufficiently well-known that clients came to her. One of her most dedicated patrons was Daniel Webster, the North's best-known orator and statesman. A senator and one-time secretary of state, Webster would throw away any chance of becoming president when, in 1850, he supported a political compromise over slavery that infuriated the abolitionists—though it saved the Union and delayed the American civil war by a decade.

Webster was a drinker. He was also easy with money and not beyond writing to the president of the Bank of the United States, just when the Senate was debating the renewal of the bank's charter, complaining that his retainer "has not been received or refreshed as usual". Nevertheless, in 1956, the future president, John F. Kennedy, wrote up Daniel Webster as the second of his Pulitzer prize-winning "Profiles in Courage", describ-



Other painters travelled, touting for work. Goodrich was so well-known that clients came to her

ing him as "one of the most extraordinary figures in American political history".

Goodrich and Webster probably met in 1819, when Goodrich's teacher and mentor, Gilbert Stuart, was painting Webster's portrait, and Goodrich was asked to paint a miniature of Webster's young daughter, Julia. They began a lively correspondence. Her letters to him have disappeared, but 44 of his survive. At first he signs them, "Yrs always truly..." and "Yrs. Always", and later writes, "I shall not go away without seeing you."

Over the years Goodrich would paint a number of miniatures of Webster's children, grandchildren and other relatives, and over a dozen portraits of the senator himself. The earliest extant painting dates to 1825 and shows him with vivid eyes and thin, sculpted lips. By 1827, in a miniature that belongs to the Massachusetts Historical Society, he seems more confident, despite a receding hairline; his eyes almost smouldering. In the portrait that was painted in 1828, by contrast, his head appears sunk into his jacket. That was the year Webster's wife, Grace, died, leaving him with three young children. "I feel

very little zeal or spirit in regard to the passing affairs," he wrote to a friend. "My most strong propensity is to sit down, and sit still."

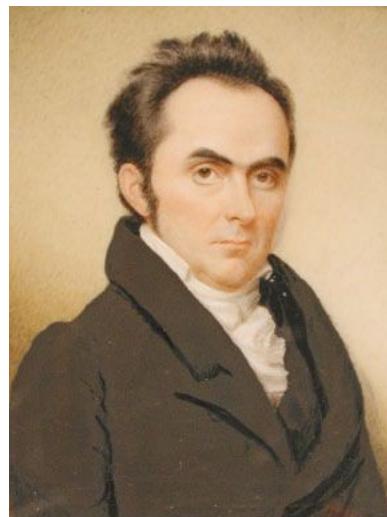
As for Goodrich, she did two things of note in 1828. She left Massachusetts for the first and only time, travelling to Washington, DC, to see the bereaved senator. And she painted "Beauty Revealed", a painting like no other in the history of American art.

Webster, in search of a mother for his children, and of money, needed a wife, and soon began thinking again of marriage. By May 1829 he was courting Catherine Van Rensselaer, the daughter of a rich patron in New York who was one of Webster's political allies. Nothing came of it, and by November he was writing to friends about Caroline Le Roy, the daughter of a reputable New York merchant. At 32, Caroline was not young; neither was she beautiful. But, wrote Webster, he found her "amiable, discreet, prudent, with enough personal comeliness to satisfy me, & of the most excellent character and principles." She was also, though he didn't say so, rich. They were married before the end of the year.

Webster's second marriage did not mean the end of his association with Goodrich. Quite the reverse. The artist and the senator continued to write to one another, and she went on painting him

and his grandchildren. She lent him money when he was short, and he amassed considerable debts with her. His last letter, from January 2nd 1851, the year after he lost his Senate seat and not long before he died, confesses: "I send you a check for \$215.39—which will leave due, according to yr acct \$2000 (\$19,000 in today's money)—For this I will try to arrange pretty soon."

In 1853, three days after Christmas, Sarah Goodrich had a stroke and died. Daniel Webster had succumbed just over a year earlier. Ill already with cirrhosis of the liver, he suffered a brain haemorrhage after falling from his horse. Among his personal effects, his family found two gifts from Goodrich: one of her paintboxes and "Beauty Revealed: Self-Portrait", the disembodied ivory miniature. Only someone who had seen that bosom uncovered would recognise, on the inner curve of the right breast, the tiny beauty spot—and know to whom it belonged. ■



Webster: patron, orator and statesman

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China plays a significant role in the international economy, and international exchange accounts for a substantial proportion of its own gross domestic product too: making the country a “mega-trader,” a feat no other Asian economy has achieved since Japan in the 1980s. Yet China’s international trade dominance is in question as growth slows and the economy undergoes a rapid transition.

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Musical diplomacy

Patriotism on Broadway

NEW YORK

Why everyone wants to see "Hamilton"

LIVE theatre is an artisanal art form. Even a big show serves, at most, 2,000 people at a time, which seems almost quaint in this era of viral cultural phenomena. Many people never hear about acclaimed productions being performed on their own doorstep, much less works that may be earning praise overseas. Yet for some reason nearly everyone, from New York to Nottingham, is talking about "Hamilton".

A musical about America's first treasury secretary does not sound like obvious material for a blockbuster. A hip-hop score and largely non-white cast would seem to guarantee it a place in the cultural margins. But tickets to "Hamilton" have been well-nigh impossible to get since its off-Broadway premiere in January. Near-universal critical acclaim and an insatiable public ensured a quick transfer to the Richard Rodgers Theatre on Broadway in August, where it is now sold out for the next ten months. Other cities want to get their hands on the show: Chicago will have its own production next September. Cameron Mackintosh is working on bringing "Hamilton" to London in 2017. At a time of bitter political polarisation, this musical even enjoys a rare consensus: President Barack Obama, who has seen it twice, said finding it "brilliant" may be "the only thing that Dick Cheney and I have agreed on during my entire political career".

Why are so many people so giddy

about "Hamilton"? Part of the show's appeal is its subject. The story of America's first bureaucrat is almost too good to be true. Born illegitimate and raised in squalor in the Caribbean, Alexander Hamilton arrived in New York in 1773 as a penniless orphan with little more than a sharp pen, good looks and a chip on his shoulder. Yet he restlessly worked his way up to become an essential player in the revolutionary war and one of America's Founding Fathers. As George Washington's right-hand man, he helped create the new government, churned out elegant essays defending its constitution (which are still frequently cited in the Supreme Court today), and invented much of the machinery that would keep it all humming, such as a public debt, a central bank and a coastguard. But the fearless ego and stubborn pride that fuelled his rise also ensured his fall, at the hand of Aaron Burr, the vice-president, on a duelling ground in Weehawken, New Jersey, when he was just 49.

It is a sexy tale, and one that has been overshadowed by other stories of the period. Hamilton had a more lasting impact on the country than many of his peers, but he also had a gift for making powerful enemies, many of whom went on to become president. (Hamilton's role in the nation's first political sex scandal kept him out of the office.) This tarnished his record and obscured his legacy. Before this year, few

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Americans registered that it is his handsome face on the \$10 bill (on December 11th a proposal to replace Hamilton was delayed by the treasury secretary in part because of pressure from the musical's fans).

Yet "Hamilton" is no mere history lesson. The thrill of this show, beautifully directed by Thomas Kail, is the way it makes events that happened centuries ago feel as fresh and as relevant as the political debates that are taking place today. In the hands of Lin-Manuel Miranda, its 35-year-old writer, composer and charismatic star, the story of this daring immigrant made good becomes the story of America, a country that is still as "young, scrappy and hungry" as the brash revolutionaries who rolled up their sleeves to help build it.

Some of this vitality can be put down to casting. Unlike most stories about America's intrepid first steps as a country, "Hamilton" resembles much of the nation as it is now. All of those dead white men and women have been energetically reincarnated by an excellent cast of mostly African-American and Latino actors. At a stroke, the show reasserts the way America has always been a nation of striving immigrants and outsiders, and that the country's story is the property of all Americans—even those whose ancestors may have started out as property themselves.

Even more remarkable is the music, which harmonises several worlds that rarely collide: 18th-century history, musical theatre and hip-hop. When Mr Miranda first proposed his plans to combine his unlikely passions, few believed he could pull it off. Although he had won a Tony for his first hip-hop-inflected musical, a semi-autobiographical tale called "In the Heights" about life in a Puerto Rican neighbourhood in New York, his vision for this show was far more ambitious. Ron Cher-

▶ now, whose vivid 800-page biography of Hamilton provided the inspiration (and is back on bestseller lists 11 years later), says he was "flabbergasted" when Mr Miranda first told him that "a hip-hop musical kept flying off the page". Daveed Diggs (pictured), an accomplished rapper who steals his scenes as Lafayette in the first act and Jefferson in the second, concedes he was sceptical, too. "It's tricky enough to accurately depict history without seeming didactic or corny," he explains. "But with hip-hop, if it isn't authentic, it doesn't work."

Yet both of them—and many others—swiftly climbed aboard the moment they heard Mr Miranda perform what would become the first number of the show. Now sung by Burr (the silky-voiced Leslie Odom junior), who jealously narrates Hamilton's rise, its rhythmic poetry immediately announces a new voice for the stage: "How does a bastard, orphan, son of a whore and a Scotsman, dropped in the middle of a forgotten spot in the Caribbean by providence, impoverished, in squalor, grow up to be a hero and a scholar?"

"You're hearing rhyming couplets and quatrains—it's really quite extraordinary," says Mr Chernow, who adds that he was stunned when he heard the first 40 pages of his book compressed into a catchy four-minute song. (He swiftly agreed to be a historical adviser throughout the project.) After Mr Miranda, the son of a political activist, performed a version at the White House in 2009, Mr Obama leapt to his feet in a spontaneous standing ovation.

Rap and hip-hop have been around for 40 years, but in "Hamilton" many are discovering it for the first time. Some have been surprised to learn that this musical form is all about lyrical dexterity, about elevating vernacular speech into rhyming, rapid-fire verse. This makes it uniquely well-suited for conveying masses of information as succinctly and cleverly as possible (particularly useful when presenting a man who published over 27 volumes of writing; Mr Miranda's Hamilton says more than anyone in Shakespeare other than Hamlet). For example, a cabinet debate between Hamilton and Jefferson over whether to establish a national bank is presented as a rap battle, with Hamilton arguing: "A new line of credit, a financial diuretic, how do you not get it? If we're aggressive and competitive the union gets a boost. You'd rather give it a sedative?"

Against all expectations, it feels natural for these characters to talk this way, despite their period costumes. Mr Miranda pulls this off by supplying them with perfectly chiselled lyrics that are dramatic, erudite and cool all at once. They pulse with internal rhymes and reveal ever more detail each time you listen to them. A perfectionist, he worked at these songs for six years and was still tinkering after the show opened on Broadway. "The fact that I can

go to Lin at intermission with an idea about a line, and he can come up with a better one and then perform it an hour and a half later is the great gift of Lin-Manuel Miranda," says Mr Kail.

The music, richly orchestrated by Alex Lacamoire, is packed with references to the hip-hop soundtrack of Mr Miranda's youth. A number about duelling protocol called "Ten Duel Commandments", for example, offers a playful nod to the Notorious B.I.G.'s tips on drug dealing, "The Ten Crack Commandments". But these songs, which also draw from jazz, R&B and the soaring ballads of Stephen Sondheim and Andrew Lloyd Webber, are easily enjoyed on their own merits. The cast recording, released digitally in September, is the first to top the charts as both a Broadway cast album and a rap album. It has also won millions of fans who may never reach Broadway, but who can at least find each other on social media. *Rolling Stone*, the San Francisco magazine, recently named it one of the best albums of the year.

Yet there is something about this moment that has made this show feel especially relevant. Unlike many of the biggest Broadway musicals of the 21st century, such as "The Book of Mormon", "Spamalot" and "The Producers", "Hamilton" is performed with utter sincerity. It presents a portrait of America's founders that showcases their brilliance but acknowledges their flaws. Jefferson was a clever tactician, but also a preening showboat; Hamilton had serious "skill with a quill", yet he could also be a self-destructive windbag. The country's politics were always a messy business, full of personal grievances, selfish ambition and rabble-rousing invective. (As Christopher Jackson's wise Washington says: "Winning was easy, young man. Governing's harder.") These were not philosopher-kings working in some golden age, but imperfect men who still managed to forge a new country out of hard work, compromise and a shared vision of democratic principles.

This is an optimistic message. At a time when Americans have been pondering big questions about who they are and what their country is—who is served and who gets to belong—"Hamilton" offers a welcome chance to feel patriotic about how it all began, and where it might still go. It also presents a more inclusive, more multicultural vision of what America always was and what it should be. Just as every generation brings a new set of rebels who are moved to "rise up" against injustice, every age must bring its own compromises for getting things done. The country will always be a work in progress, a "great unfinished symphony" in the words of Mr Miranda's Hamilton. As Americans struggle to compose the next few bars, some are finding inspiration in the notes coming from Broadway. ■

Philosophy in practice

The lives of moral saints

Strangers Drowning: Grappling with Impossible Idealism, Drastic Choices and the Overpowering Urge to Help. By Larissa MacFarquhar. Penguin Press; 320 pages; \$27.95; Allen Lane; £20

“THE do-gooder”, writes Larissa MacFarquhar in “Strangers Drowning”, “sets out to live as ethical a life as possible.” This is the kind of person who has himself injected with the leprosy bacillus to be a subject for medical testing, or who drives hundreds of miles after a hurricane to save factory-farm chickens. Do-gooders have flocked to Greece to help refugees.

In a series of character studies—coupled in this eccentric and intriguing book with historical and philosophical essays—Ms MacFarquhar profiles a range of do-gooders including an Indian aristocrat, a Bostonian social worker and a Japanese monk. These disparate altruists are united by the priority they place on the duty to help strangers. They are moral above all else, suppressing desires, sacrificing pleasures and often enduring years of loneliness. The saviour of chickens believes that advocating for chickens' rights is the best way for him to reduce worldwide suffering. “He wasn't interested in happiness,” the author writes. “He was interested in pain.”

Ms MacFarquhar is a staff writer at the *New Yorker*. She is a careful expositor of ideas. “Strangers Drowning”, a defence of the authenticity of do-gooders, presents an exemplary subject for a writer who is at once cerebral and anecdotal, critical and sympathetic. ▶



Hands across the sea

► Ms MacFarquhar does not argue that saintly behaviour is simply a question of doing one's duty. Instead, she sets out to prove that altruists are not necessarily deluded or dispirited. And she uses her distinctive profiler's tone to show, as she puts it, "the beauty and cost of a certain kind of moral existence". For Ms MacFarquhar's subjects themselves, everyone is morally obliged to be maximally good all the time, and anything less is unjustifiably selfish. Many critics, on the other hand, find such moralising fanatical and perverse. Do-gooders are often not especially likeable. One tells his girlfriend he will not clean up after himself because "time spent washing dishes could be time spent working for animal rights". They are distrusted by those who suspect that hidden motives underlie their goodness. Ms MacFarquhar refers to doctors who have called kidney donors "screws", "abnormal" and "not to be trusted".

Susan Wolf, a philosopher whose landmark essay, "Moral Saints", is a foil for Ms MacFarquhar's thinking, has argued that moral perfectionism and personal well-being are incompatible. Because "morality itself doesn't seem to be a suitable object of passion", moral saints must either lack or repress the amoral desires that give people their humanity, Ms Wolf writes.

That view might seem intuitively correct to anyone who aspires to virtues that are not moral in nature—who would, for example, act immorally for a friend in need. If morality forbids all partiality and self-cultivation, any special attachment to friends and family, even to yourself—then people may well question whether it is good to be moral. Ms MacFarquhar is not endorsing the strict moral requirements upheld by her subjects. She does, however, refute Ms Wolf's claim that do-gooders must be robots or hypocrites. Many are motivated by uncommon moral sentiments. "Strangers Drowning" begins with a vignette in which a young philosophy student is reduced to tears merely by reflecting on the existence of suffering.

Even the most self-sacrificial do-gooders can achieve a remarkable clarity and contentment. One couple adopts 20 children, many of whom end up in prison, have unwanted pregnancies or die young. But the whole family remains close in spite of it all. "Their days were crowded and unpredictable," writes the author, "and charged with fervour and purpose." These do-gooders could be described as moral overachievers, an unlikely group whose well-being can consist in extreme moral goodness, whose partiality itself seems impartial. Concluding that their behaviour is not morally required does not dismiss the challenges they present. Readers of this book will question whether they can admire do-gooders while wishing to be nothing like them. ■



The Western mind

Lost soul

Soul Machine: The Invention of the Modern Mind. By George Makari. W.W. Norton; 656 pages; \$39.95; 672 pages; £24.99

ABOUT a century and a half ago, an American railway worker named Phineas Gage was setting an explosive charge near Cavendish, Vermont. While he was tamping down the charge with an iron rod, it went off and sent the rod through his head. Gage miraculously survived—or least part of him did. But contemporaries thought that his personality had changed; where once he had been well-behaved, now he was downright antisocial. The incident raised questions about what constitutes the self and to what extent it is influenced by the body.

Although Phineas Gage is cited in medical and psychological literature as one of the earliest known cases of brain damage and personality change, the debate about what makes people human had, by then, already been going on for centuries. In "Soul Machine" George Makari, a psychiatry professor at Weill Cornell Medical College, presents an electrifying narrative of the intellectual disputes that gave rise to the Western conception of the mind.

His book focuses on the period between 1640 and 1815. As wars and religious conflicts plagued Europe, philosophers and scientists sparred with each other over whether a human's inner self was an immortal and divine essence, or merely a fallible natural object. Out of confusion and combat eventually grew the idea of the modern mind, which was "part soul and part machine".

Mr Makari's highly engaging story be-

gins with René Descartes, who was born in 1596. Ever since Greek philosophy had merged with Christianity, the soul had been regarded as the "unifying link between nature, man and God", Mr Makari writes. By the 17th century, however, Christendom was in crisis and many found it hard to reconcile the notion of an incorporeal soul with a mechanical world that was increasingly understood as made up of matter. Descartes tried to satisfy the demand of sceptical naturalists by severely narrowing the concept of the soul to a "thing that thinks", yet that was separate from the body. The French philosopher thus breathed new life into the Christian belief in an immortal soul, which may go some way towards explaining why he dedicated his "Meditations on First Philosophy" to the "most wise and illustrious the Dean and Doctors of the Sacred Faculty of Theology in Paris".

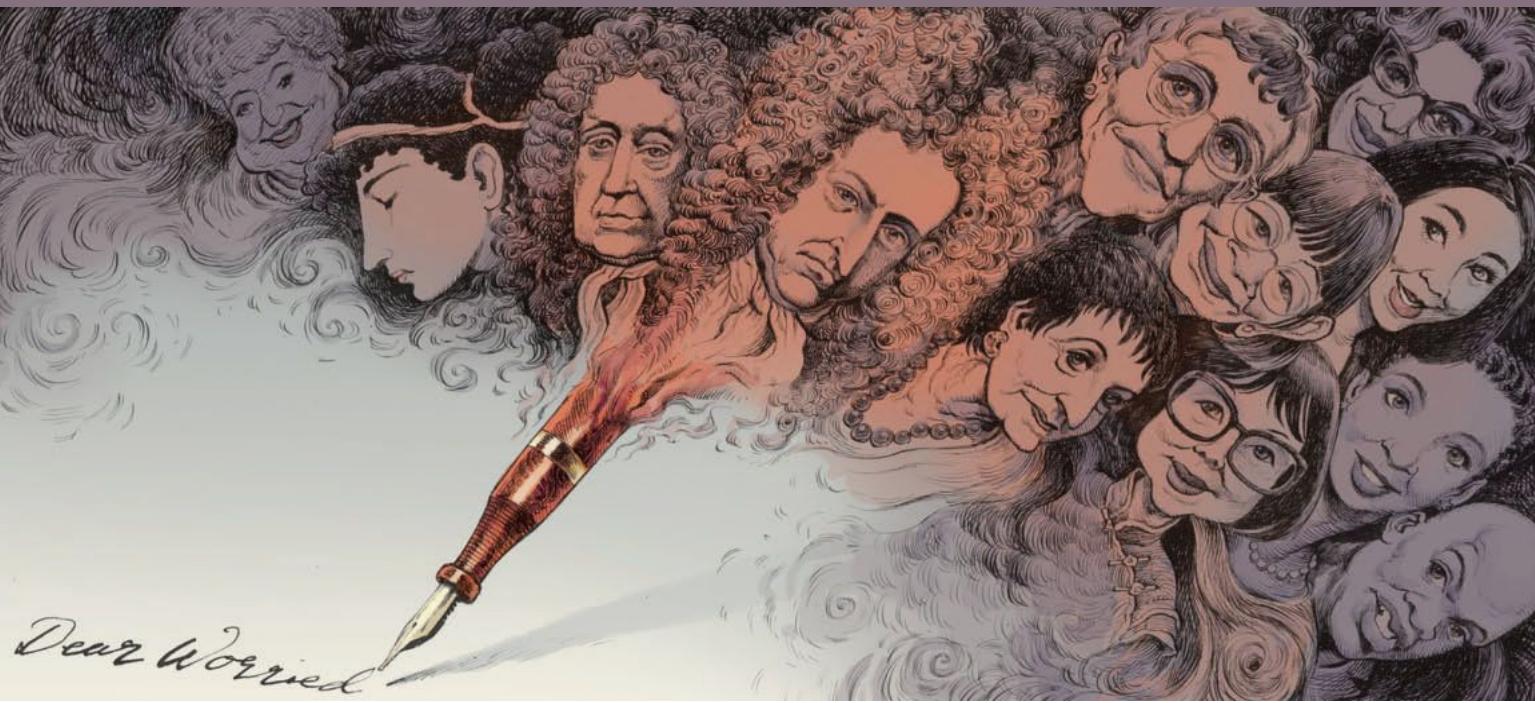
At the other end of the spectrum stood Thomas Hobbes, born eight years before Descartes, who thought there was no such thing as "immaterial substance". In his view the soul, rather than being rational and Godlike, was "material, prone to illness and errors". The disparate views on the nature of the "thing that thinks" was to have monumental implications. And it demonstrates the importance of Mr Makari's narrative as more than just an intellectual exercise. After Hobbes concluded that men were controlled by animal feelings that inevitably produced conflict, his proposed solution was to hand over power to an absolute monarch. John Locke, by contrast, envisioned a mind whose rationality was bounded but yet encompassed reason and free will—a notion that would help give birth to political liberalism.

Mr Makari's historical account of the modern mind is a doorstop of a book. To the author's credit, he makes a subject that some may find hard to digest more easily accessible by adding colour to the many dead European thinkers around whom "Soul Machine" is centred. Descartes is described as "vain, brilliant and reclusive", Locke is "sagacious" and Hobbes is, he writes, considered part of a "growing band of rebels".

"Soul Machine" is an ambitious work. It covers political turmoil, religious heterodoxy and scientific discovery—often within the same paragraph—and boasts a formidable cast of characters. Any reader who is not thoroughly schooled in modern Western history may find Mr Makari's detailed account confusing. Although fundamental questions about the self have yet to be resolved, human beings today, as Mr Makari concludes, tend not to spend most of their waking hours dwelling on their existence, but instead simply embrace the belief that most people possess the capacity to think, choose and love as "modern hybrids of soul and machine". ■

Whatever should I do?

To understand how societies evolve,
read the problem pages



FOR more than 1,000 years the Oracle at Delphi offered advice to all who asked for it. More than 500 snippets of oracular wisdom have survived. Some sound just like a modern agony aunt, if you ignore the animal sacrifice and the priestess's mystic trance. The aphorisms inscribed outside the shrine were "know thyself" and "nothing in excess".

Like most advice columnists today, the Delphic Oracle was female. But unlike modern agony aunts, she spoke in riddles. When the Persians were invading Greece, she told the Athenians to put their trust in "a wooden wall". Themistocles, the Athenian leader, realised that this meant "build lots of ships". He acted on the advice, and his navy routed the Persians at Salamis in 480BC. But her refusal to give a straight answer could lead to disaster. In the sixth century BC King Croesus of Lydia was told that if he made war on the Persians he would "destroy a mighty empire". That empire turned out to be his own.

An agony aunt is "a purveyor of common sense", writes Irma Kurtz, who did the job for *Cosmopolitan* for four decades, in "My Life in Agony", a memoir. Since what counts as common sense varies from age to age and from place to place, the history of agony aunts reveals a lot about social change. The first regular problem page, open to questions from readers, was published in 1691 in the *Athenian Gazette*, a British periodical. Its creator, John Dunton, was feeling guilty for cheating on his wife. He thought that people like himself might appreciate confiding anonymously in a stranger, and that readers would be titillated by the exchange. It was an instant success. He was bombarded with queries on everything from marriage to the ethics of slave-trading to why sermons seem longer than they are.

The format caught on. Daniel Defoe, the author of "Robinson Crusoe", penned an agony column for the *Review*, a magazine he founded in 1704. Alas, it wasn't much good. "[He] felt superior to his readership," notes Robin Kent in "Aunt Agony Advises: Problem Pages through the Ages". Defoe said his aim was "to enlighten the stupid understandings of the meeker and more thought-

less" members of the public. He railed against divorce, sex before marriage, sex after menopause and fiscal irresponsibility (which was a bit rich, coming from a serial bankrupt).

Readers expected a sympathetic ear; but not an infinitely indulgent one. One of the joys of reading the problem pages is to see people who deserve a ticking-off receive an amusingly brutal one. In 1765 a young man wrote to the *Court Miscellany*, a British periodical, to ask whether he should fight a duel against a rogue who had insulted his beloved. The reply urged him to accept the challenge: "[F]or if you run your antagonist through the body, or he you, 'tis three to one but the other comes to be hang'd; and then there's good riddance of two ridiculous hot-headed coxcombs."

The early British problem pages received far more queries about bigamy than divorce. Divorce was in effect illegal, but there was no central record of marriages, so an unhappy spouse could move and pose as single. One correspondent told Dunton that she had married a man who was already married. When she realised, she had him arrested. He was transported to Australia. She heard that he was dead, and remarried. Two years later he wrote to ask her to join him. She asked: "Which of the two...is my real husband?" Dunton told her to stick with the honest one.

The agony and the ecstasy

Advice columns often did more than reflect social change: they advocated it. In the 18th century advice columnists in papers such as the *Spectator* fulminated against arranged marriages. In the 19th century the problem pages of *Cassell's* and the *London Journal* campaigned for women to retain control of their property after marriage—and may have hastened the day when such laws were passed. Agony aunts were also among the first to call for easier divorce laws, though they seldom pushed too far ahead of public opinion; papers cannot afford to alienate their readers.

Listening to so many hopes and desires may, perhaps, incline agony aunts to the idea that the world is happier if people make their own choices. But sympathy has often struggled against a ➤

► desire to uphold moral values. A woman writing to the *Family Star* in 1935 complained that although everyone thought her marriage was happy, her husband believed in free love and was unfaithful. The agony aunt replied: "It is something that your husband has the decency to keep up appearances before outsiders. Continue to conduct yourself before the whole world as a faithful and happy wife and mother, and smile while your heart aches. That shows the stuff a brave woman is made of."

The early agony aunts discussed sex only indirectly, and usually with pursed lips. When a young correspondent admitted to Defoe that she had been seduced, he called her a whore—though he spelled it "w---e" to spare his readers' blushes. In the 1890s the advice column in the *Boy's Own Paper* was almost entirely about how to refrain from masturbating (without ever spelling out the nature of the "school vice" that would make boys blind and prematurely senile). But in the 1930s agony aunts began to admit that even nice women might enjoy sex. They "gave lady-like hints on the joys of orgasm", writes Ms Kent, and sent helpful booklets to frustrated couples—as long as they were married. In the 1960s readers began to pop the pill and agony aunts swung with them.

Today, advice columns do not merely explain how to have better sex; they show photos. A typical week for the mass-market Sun newspaper's "Dear Deidre" column includes such conundrums as "I've got four girls on the go and none know[s]", illustrated with half-nude models. The agony aunt Deidre Sanders is sober and constructive, however: she offers the serial philanderer an e-leaflet on how to be faithful.

The spread of agony aunts around the world reveals a lot about varying cultures—and political systems. Consider China. Perhaps its first modern agony aunt was Xinran, who hosted "Words on the Night Breeze", a radio show, from 1989 to 1997. One of her first letters was from a boy who said that an old man in his village had bought a young girl as his wife. She was kept chained up, and had obviously been kidnapped. The boy asked Xinran to save her, adding: "Whatever you do, don't mention this on the radio. If the villagers find out, they'll drive my family away."

Xinran called the police, who told her that this sort of thing happened all the time and she should mind her own business. But she persisted, and finally managed to rescue the girl, who turned out to be 12 years old, and reunite her with her parents. In most countries, Xinran's bosses would have congratulated her. Not in China: the state-run radio station was furious that she had caused so much trouble and wasted so much time and money.

Censorship made Xinran's job hard. She moved to Britain; others soldier on. Gloria Ai, the host and founder of Ask Media, produces programmes for Chinese state television in which viewers send in questions and experts try to answer them. The topics range from starting a business to coping with throat cancer. The shows are recorded; there is no question of allowing a live phone-in. A member of the public with a live microphone might veer off topic and start criticising the Communist Party.

Social media allow Chinese people to seek advice without attracting the censors' ire. Tony Tong and Kristin Wu run New Kinsey, an organisation that offers sex advice in person or via social media. More than 160,000 people follow Mr Tong on Weibo, a microblog a bit like Twitter. Since there is no good sex education in Chinese schools and embarrassed parents rarely broach the topic, Chinese youngsters are desperate for information. "Almost none" of those Mr Tong deals with knows how to use a condom properly. Many young Chinese men have learned about sex from Japanese porn, he says, and expect their partners to be submissive. Many young women find this disagreeable. "We try to show

them what's real and what's not," he says.

South African agony aunts cast light on a culture that mixes rich, poor, modern and traditional. In the *Daily Sun*, a feisty tabloid aimed at the black working class, Khanyi Mbau, a well-known actress, offers cheerful tips about such matters as what to do when your boyfriend worries too much about what the ancestors might think. "Mizz B", a column provided by LoveLife, an anti-AIDS charity, offers sensible advice about sex, while being careful not to contradict readers' prejudices too directly. When a man writes to say he needs help because he is attracted to other men, Mizz B does not tell him, in print, that it is OK to be gay. Instead, she gives him the number of a sympathetic counsellor.

For the pious, Pastor Daniel offers "Spiritual Guidance". A woman complains that her husband is unfaithful, has given her sexually transmitted diseases, is physically abusive and has "raped me twice already". On the plus side, he has not yet given her AIDS. A Western agony aunt might suggest dumping the bastard and calling the police. But for Pastor Daniel, divorce is a sin. "Look for a pastor who can assist with counselling for you as a couple," he says; and "in the meantime, encourage your partner to condomise [so that you don't get HIV]."

The internet has allowed agony aunts to specialise: there are advice columns for gay men, for trainspotters and for Jews who live in Philadelphia. There are aunts for every worldview, from libertine to puritan and from reactionary to radical. In November the Nation, a left-wing American magazine, launched an advice column. The first reader's question was: "Is my depression individual or political?" The reply: "Dear Depressed, Let's not draw too sharp a distinction. Life under capitalism can be a profound bummer!"

You are not alone

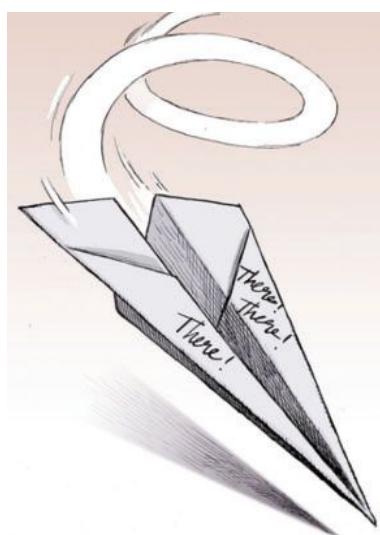
The internet and social media have enabled crowdsourcing, where one reader posts a problem and others suggest solutions. Bella Naija, a popular Nigerian website, has an "Aunty Bella" column in which readers argue passionately about how to cope with an interfering mother or a duff husband. They also help people to realise that they are not alone. "Everyone who wrote to us in [the pre-internet days] thought they were the only person in the world who made themselves sick after eating or cut themselves with razors," says Virginia Ironside, a veteran agony aunt for the *Independent*, a British newspaper. Now they are only a mousesclick away from a self-help group.

But this does not make professional agony aunts redundant. The best ones are more entertaining than any crowdsourced comment stream, and offer snappier advice. Many publish their own suggestions alongside those from readers. This is "immensely freeing", says Ms Ironside. "It allows me to go out on a limb."

She often does. "Is there anything worse than being abandoned like this? Quite frankly, it would be better if your husband had died," she told a jilted wife. "[Y]ou would [receive] a great deal

more sympathy from friends, you would know that there was absolutely no hope of his ever returning, and you wouldn't be tormented by thoughts of him living in a love nest with his new woman."

The world is richer and in many ways gentler than in the early days of agony aunting. Readers no longer wonder if it is all right to throw witches in ponds, as John Dunton was asked in 1692. But people are probably no happier, thinks Ms Ironside: "Everyone still worries about children, marriage and being alone." Still, agony aunts have it easier than their forebears. If they give controversial advice, they may be subjected to a flame war. When the Delphic Oracle scolded the emperor Nero for having murdered his mother, he had her burned alive. ■





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Appointments



TRINITY COLLEGE, OXFORD ELECTION OF PRESIDENT

The Governing Body of Trinity College, Oxford, seeks to elect a new President with effect from 1 August 2017, in succession to Sir Ivor Roberts, KCMG, who retires on 31 July 2017 after 11 years in office. The President will offer inspiring and engaging leadership of this vibrant and internationally renowned academic community, and will represent the College both within Oxford University and in the public domain.

Ideal candidates will have academic or professional distinction, enthusiasm for and commitment to excellence in teaching and research, and a proven style of leadership appropriate to a modern, democratic, self-governing institution.

Information about Trinity College, and further particulars about the Presidency and the procedure for application, can be found on the College's website <http://www.trinity.ox.ac.uk>.

Applications and enquiries should be addressed to Dr Curly Moloney at Moloney Search (trinity@moloneyssearch.com) and should include:

a) A curriculum vitae
b) A concise statement explaining the candidate's reason for applying, and how the candidate believes he or she matches the qualities that the College requires.

**The closing date for applications is 31 January 2016.
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**Invitation to Express Interest in relation to a
350MW Solar Photovoltaic ("PV") Independent Power Project
located at Sweihan, the Emirate of Abu Dhabi**

The Abu Dhabi Water and Electricity Authority ("ADWEA") formally announces the commencement of a competitive process to select a developer or developer consortium to own up to 40% of a special purpose vehicle (the "SPV") to be incorporated under the laws of the Emirate of Abu Dhabi and United Arab Emirates to participate in a 350MW Solar PV Independent Power Project located at Sweihan, Emirate of Abu Dhabi (the "Project"). The remaining equity will be held, directly or indirectly, by ADWEA.

The Project will support the Emirate of Abu Dhabi's achievements in sustainability and energy diversification through the use of renewable and clean energy, in accordance with the vision of the Late Founding Father and President of the United Arab Emirates, Sheikh Zayed bin Sultan al Nahyan, who through his vision, dedication and wisdom championed environmental stewardship, and through the continuation of such vision and leadership by His Highness Sheikh Khalifa bin Zayed al Nahyan, President of the United Arab Emirates and Ruler of the Emirate of Abu Dhabi, and the directions of His Highness Sheikh Mohamed bin Zayed Al Nahyan, Crown Prince of Abu Dhabi, Deputy Supreme Commander of the United Arab Emirates Armed Forces and Chairman of the Abu Dhabi Executive Council, and the oversight of the Abu Dhabi Government.

The Project will comprise, *inter alia*, the development, financing, construction, operation, maintenance and ownership of a greenfield renewable power generation plant of 350 MW AC net of power generation capacity, together with associated infrastructure (the "Plant"). The Plant will be located in the Eastern Region of the Emirate of Abu Dhabi, near the town of Sweihan approximately 120 km east of the city of Abu Dhabi, and in the vicinity of an existing high voltage substation, to which it will be connected.

The Project will be structured as an independent power project ("IPP"). The SPV will enter into a long-term power purchase agreement ("PPA") with the Abu Dhabi Water and Electricity Company (the "Procurer"), the single buyer of power and water capacity and output in the Emirate of Abu Dhabi, and a wholly owned subsidiary of ADWEA. The PPA will be structured as an energy purchase agreement whereby the Procurer will pay only for the net electrical energy supplied by the Plant.

The Project will draw upon the successful development of eleven I(W)PPs led by



ADWEA. The developer or developer consortium, selected following a competitive tender, will work closely with ADWEA and the Procurer to develop and implement a plan of development, design, equipment selection and procurement, engineering, construction, finance, operation and maintenance for the Project. Parties responding to this invitation to express interest are therefore expected to have similar experience in such areas.

All interested parties are requested to submit an expression of interest ("Expression of Interest") at the earliest opportunity and no later than 10:00 a.m. local time in the City of Abu Dhabi on 13 January 2016, in the form of (i) two paper originals to: Managing Director, Abu Dhabi Water and Electricity Company, Room 203, ADWEC Building, Al Falah Street, P.O. Box 51111, Abu Dhabi, United Arab Emirates (24°29'07.1"N, 54°22'48.9"E); and (ii) an electronic copy to:

sweihansolarpv@adwec.ae

Each Expression of Interest must specify the name, address, telephone number, fax number and e-mail address of the authorised contact person (the "Contact Person") from the developer or developer consortium, to whom all future correspondence should be sent, together with a brief description of the developer/developer consortium expressing interest (including but not limited to number of employees, country of incorporation and business profile).

Following review of the Expressions of Interest by ADWEA and the Procurer, the relevant Contact Person will be notified by the Procurer to advise whether the developer or developer consortium has been selected to proceed to the next stage. The Contact Person of the selected developers or developer consortiums will be provided with a confidentiality agreement for execution and a request for statement of qualifications ("RFQ"). The RFQ will provide additional details regarding the Project, pre-qualification criteria and the bidding process.

Nothing contained in this invitation to express interest shall constitute an agreement, contract, warranty or representation between ADWEA and the Procurer and any other party. ADWEA reserves the right to modify this invitation and the contents thereof and/or the process related thereto in its sole discretion, including but not limited to with respect to the recipients of any RFQ.

Appointments



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- (ii) undertake research and analysis as required and;
- (iii) provide project management support across relevant activities so that ICMM can effectively deliver its work program.

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TENDER NOTICE/CORRIGENDUM

In partial modification of the tender notice, vide SPL # 9928, published on 28th November 2015 for the purchase of FMD Vaccine, the bid should reach by **30th December 2015 at 11:00 am instead of 21st December 2015**, which will be opened on the same day at 11:30 am. All other terms & conditions will remain the same.
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	latest	qtr*	2015 [†]				latest 12 months, \$bn	% of GDP 2015 [†]					
United States	+2.2	03	+2.1	+2.4	+0.3 Oct	+0.5 Nov	+0.2	5.0 Nov	-429.0 Q2	-2.5	-2.6	2.19	-
China	+6.9	03	+7.4	+6.9	+6.2 Nov	+1.5 Nov	+1.5	4.1 Q3 [§]	+279.0 Q3	+3.1	-2.7	2.86 ^{§§}	6.46
Japan	+1.6	03	+1.0	+0.6	-1.4 Oct	+0.3 Oct	+0.7	3.1 Oct	+126.2 Oct	+2.6	-6.8	0.28	122
Britain	+2.3	03	+1.9	+2.4	+1.7 Oct	+0.1 Nov	+0.1	5.3 Aug ^{††}	-149.2 Q2	-4.5	-4.4	1.89	0.66
Canada	+1.2	03	+2.3	+1.1	-3.7 Sep	+1.0 Oct	+1.2	7.1 Nov	-54.1 Q3	-3.2	-1.8	1.49	1.38
Euro area	+1.6	03	+1.2	+1.5	+1.9 Oct	+0.1 Nov	+0.1	10.7 Oct	+348.8 Sep	+3.0	-2.1	0.65	0.92
Austria	+1.0	03	+1.9	+0.8	+0.3 Sep	+0.7 Oct	+0.9	5.6 Oct	+10.7 Q2	+1.7	-2.1	0.85	0.92
Belgium	+1.3	03	+0.9	+1.3	-2.4 Sep	+1.5 Nov	+0.6	8.7 Oct	-5.8 Jun	+0.1	-2.6	1.06	0.92
France	+1.2	03	+1.4	+1.1	+3.6 Oct	nil Nov	+0.1	10.8 Oct	+0.2 Oct [‡]	-0.3	-4.1	0.90	0.92
Germany	+1.7	03	+1.3	+1.6	+0.2 Oct	+0.4 Nov	+0.2	6.3 Nov	+275.8 Oct	+7.9	+0.7	0.65	0.92
Greece	-0.9	03	-3.5	+0.5	-1.7 Oct	-0.7 Nov	-1.1	24.6 Sep	-2.8 Sep	+2.5	-4.1	8.57	0.92
Italy	+0.8	03	+0.8	+0.8	+2.9 Oct	+0.1 Nov	+0.2	11.5 Oct	+38.5 Sep	+1.9	-2.9	1.70	0.92
Netherlands	+1.9	03	+0.5	+1.9	+2.1 Oct	+0.7 Nov	+0.4	8.4 Oct	+85.3 Q2	+10.6	-1.8	0.73	0.92
Spain	+3.4	03	+3.2	+3.2	-0.3 Oct	-0.3 Nov	-0.6	21.6 Oct	+19.1 Sep	+0.9	-4.4	1.71	0.92
Czech Republic	+3.9	03	+2.2	+3.4	+3.8 Oct	+0.1 Nov	+0.3	5.9 Nov [§]	+2.0 Q3	-0.1	-1.8	0.62	24.8
Denmark	+0.9	03	-0.6	+1.6	+0.3 Oct	+0.3 Nov	+0.5	4.5 Oct	+22.0 Oct	+6.8	-2.9	0.91	6.83
Norway	+3.0	03	+7.3	+0.7	-2.6 Oct	+2.8 Nov	+1.7	4.6 Sep ^{††}	+37.3 Q3	+9.3	+5.9	1.52	8.70
Poland	+3.5	03	+3.6	+3.4	+2.4 Oct	-0.6 Nov	nil	9.7 Nov [§]	-2.4 Oct	-1.4	-1.5	3.08	3.36
Russia	-4.1	03	na	-3.8	-3.5 Nov	+15.0 Nov	+15.2	5.5 Oct [§]	+64.3 Q3	+4.7	-2.8	9.61	70.0
Sweden	+3.9	03	+3.4	+3.0	+4.0 Oct	+0.1 Nov	nil	6.7 Oct [§]	+31.8 Q3	+6.4	-1.2	0.86	8.50
Switzerland	+0.8	03	-0.1	+0.9	-2.8 Q3	-1.4 Nov	-1.1	3.4 Nov	+60.9 Q2	+8.1	+0.2	-0.13	0.99
Turkey	+4.0	03	na	+3.0	+14.7 Oct	+8.1 Nov	+7.6	10.3 Sep [§]	-38.1 Oct	-5.0	-1.6	10.79	2.96
Australia	+2.5	03	+3.8	+2.3	+1.9 Q3	+1.5 Q3	+1.6	5.8 Nov	-49.5 Q3	-4.1	-2.4	2.88	1.39
Hong Kong	+2.3	03	+3.5	+2.4	-1.9 Q3	+2.4 Oct	+3.1	3.3 Oct ^{‡‡}	+7.4 Q2	+2.8	nil	1.57	7.75
India	+7.4	03	+11.9	+7.3	+9.8 Oct	+5.4 Nov	+5.1	4.9 2013	-25.9 Q2	-1.2	-3.8	7.79	67.0
Indonesia	+4.7	03	na	+4.7	+5.2 Oct	+4.9 Nov	+6.3	6.2 Q3 [§]	-18.4 Q3	-2.4	-2.0	8.98	14,057
Malaysia	+4.7	03	na	+5.4	+4.2 Oct	+2.5 Oct	+2.5	3.2 Sep [§]	+7.8 Q3	+2.5	-4.0	4.37	3.50
Pakistan	+5.5	2015**	na	+5.7	+2.3 Sep	+2.7 Nov	+3.9	6.0 2014	-1.1 Q3	-0.7	-5.1	9.00 ^{†††}	105
Philippines	+6.0	03	+4.5	+6.4	-1.8 Oct	+1.1 Nov	+2.4	5.6 Q4 [§]	+11.7 Jun	+4.1	-1.9	4.11	47.4
Singapore	+1.9	03	+1.9	+2.9	-5.4 Oct	-0.8 Oct	+0.2	2.0 Q3	+68.6 Q3	+21.2	-0.7	2.57	1.41
South Korea	+2.7	03	+5.3	+2.5	+1.5 Oct	+1.0 Nov	+0.7	3.1 Nov [§]	+105.6 Oct	+7.3	+0.3	2.22	1,184
Taiwan	-0.6	03	-1.2	+3.2	-6.2 Oct	+0.5 Nov	+0.1	3.8 Oct	+77.2 Q3	+12.8	-1.0	1.19	32.8
Thailand	+2.9	03	+4.0	+3.4	-4.2 Oct	-1.0 Nov	+0.8	0.9 Oct [§]	+31.2 Q3	+2.4	-2.0	2.62	36.0
Argentina	+2.3	02	+2.0	+1.1	-2.5 Oct	-***	-	5.9 Q3 [§]	-8.3 Q2	-1.8	-3.6	na	9.77
Brazil	-4.5	03	-6.7	-3.1	-11.3 Oct	+10.5 Nov	+9.3	7.9 Oct [§]	-74.2 Oct	-3.8	-6.0	15.95	3.89
Chile	+2.2	03	+1.8	+2.8	-0.6 Oct	+3.9 Nov	+3.9	6.3 Oct ^{‡‡}	-2.7 Q3	-1.2	-2.2	4.58	710
Colombia	+3.2	03	+5.1	+3.3	+2.0 Sep	+6.4 Nov	+4.2	8.2 Oct [§]	-20.8 Q2	-6.7	-2.1	8.45	3,323
Mexico	+2.6	03	+3.0	+2.4	+0.5 Oct	+2.2 Nov	+2.8	4.4 Oct	-29.9 Q3	-2.5	-3.4	6.39	17.2
Venezuela	-2.3	03~	+10.0	-4.5	na	na	+84.1	6.6 May [§]	+7.4 Q3~	-1.8	-16.5	10.98	6.31
Egypt	+4.5	02	na	+4.2	-3.0 Oct	+11.1 Nov	+10.0	12.8 Q3 [§]	-12.2 Q2	-1.4	-11.0	na	7.84
Israel	+2.4	03	+2.5	+3.3	-4.5 Sep	-0.9 Nov	-0.2	5.3 Oct	+12.5 Q3	+4.9	-2.8	2.19	3.87
Saudi Arabia	+3.5	2014	na	+2.7	na	+2.3 Nov	+2.7	5.7 2014	-1.5 Q2	-2.7	-12.7	na	3.75
South Africa	+1.0	03	+0.7	+1.4	-1.1 Oct	+4.8 Nov	+4.7	25.5 Q3 [§]	-14.0 Q3	-4.3	-3.8	9.52	15.0

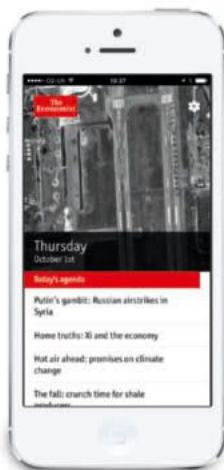
Source: Haver Analytics. *% change on previous quarter, annual rate. [†]The Economist poll or Economist Intelligence Unit estimate/forecast. [§]Not seasonally adjusted. [‡]New series. [¶]~2014 **Year ending June. ^{**}Latest 3 months. ^{††}3-month moving average. ^{§§}5-year yield. ***Official number not yet proven to be reliable; The State Street PriceStats Inflation Index, October 25.52%; year ago 41.05% ^{†††}Dollar-denominated

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Markets

	% change on			
	Index Dec 15th	one week	in local currency terms	Dec 31st 2014
United States (DJIA)	17,524.9	-0.2	-1.7	-1.7
China (SSEA)	3,675.0	+1.1	+8.4	+4.1
Japan (Nikkei 225)	18,565.9	-4.8	+6.4	+4.8
Britain (FTSE 100)	6,017.8	-1.9	-8.4	-11.6
Canada (S&P TSX)	12,919.6	nil	-11.7	-25.7
Euro area (FTSE Euro 100)	1,082.3	-1.8	+4.4	-5.8
Euro area (EURO STOXX 50)	3,241.5	-1.7	+3.0	-7.0
Austria (ATX)	2,352.4	-3.2	+8.9	-1.7
Belgium (Bel 20)	3,582.2	-1.0	+9.0	-1.6
France (CAC 40)	4,614.4	-1.4	+8.0	-2.5
Germany (DAX)*	10,450.4	-2.1	+6.6	-3.8
Greece (Athex Comp)	583.2	+0.2	-29.4	-36.3
Italy (FTSE/MIB)	21,272.7	-1.2	+11.9	+1.0
Netherlands (AEX)	433.6	-1.8	+2.2	-7.8
Spain (Madrid SE)	981.0	-1.3	-5.9	-15.1
Czech Republic (PX)	929.0	-0.2	-1.9	-9.2
Denmark (OMXCB)	876.5	-2.2	+29.8	+16.9
Hungary (BUX)	23,073.6	-1.1	+38.7	+25.0
Norway (OSEAX)	640.8	-0.6	+3.4	-10.9
Poland (WIG)	44,304.7	-2.9	-13.8	-22.9
Russia (RTS, \$ terms)	783.7	+0.8	+15.7	-0.9
Sweden (OMX30)	1,426.5	-2.0	-2.6	-10.3
Switzerland (SMI)	8,581.6	-1.4	-4.5	-4.2
Turkey (BIST)	72,156.8	-1.3	-15.8	-33.6
Australia (All Ord.)	4,963.9	-3.8	-7.9	-18.9
Hong Kong (Hang Seng)	21,274.4	-2.9	-9.9	-9.8
India (BSE)	25,320.4	nil	-7.9	-13.2
Indonesia (JSX)	4,409.2	-1.2	-15.6	-25.7
Malaysia (KLCSE)	1,622.8	-2.8	-7.9	-25.2
Pakistan (KSE)	32,467.0	-1.0	+1.0	-3.0
Singapore (STI)	2,815.5	-2.1	-16.3	-21.3
South Korea (KOSPI)	1,933.0	-0.8	+0.9	-6.3
Taiwan (TWI)	8,073.4	-3.2	-13.3	-16.4
Thailand (SET)	1,300.5	-0.5	-13.2	-20.6
Argentina (MERV)	12,307.1	-5.8	+43.5	+24.3
Brazil (BVSP)	44,872.5	+1.0	-10.3	-38.7
Chile (IGPA)	17,648.2	-0.5	-6.5	-20.1
Colombia (IGBC)	8,184.4	+4.1	-29.7	-49.7
Mexico (IPC)	42,905.2	+1.6	-0.6	-14.6
Venezuela (IBC)	14,471.1	+1.9	+275	na
Egypt (Case 30)	6,421.0	-2.8	-28.1	-34.3
Israel (TA-100)	1,301.3	-2.1	+1.0	+1.5
Saudi Arabia (Tadawul)	6,771.5	-3.1	-18.7	-18.7
South Africa (JSE AS)	48,428.8	-1.3	-2.7	-24.9

World GDP

The world economy grew by 2.7% in the third quarter of this year compared with the same period a year ago, down from 2.8% the previous quarter. Although China's GDP grew below an annual rate of 7%, it was still the biggest contributor to world growth. Measured at purchasing-power parity, China's output accounted for over 40% of global growth. India, the next-biggest contributor (at 17%), has been doing its bit to offset China's slowdown: GDP there grew at 7.4% year on year in the third quarter. America, the third-biggest contributor, has seen its growth slow, from a year-on-year rate of 2.7% in the second quarter of 2015 to 2.2%. That is still far better than Brazil and Russia, both of which shrank.

Contribution to growth, percentage points

Sources:
Haver Analytics;
IMF; *The Economist**Estimates based on 57 economies
90% of world GDP.
Weighted GDP at purchasing-power parity**Other markets**

	% change on			
	Index Dec 15th	one week	in local currency terms	Dec 31st 2014
United States (S&P 500)	2,043.4	-1.0	-0.8	-0.8
United States (NAScomp)	4,995.4	-2.0	+5.5	+5.5
China (SSEB, \$ terms)	400.1	+4.6	+43.3	+37.6
Japan (Topix)	1,502.6	-4.2	+6.8	+5.1
Europe (FTSEurofirst 300)	1,411.7	-1.8	+3.2	-6.9
World, dev'd (MSCI)	1,646.7	-1.4	-3.7	-3.7
Emerging markets (MSCI)	779.4	-2.0	-18.5	-18.5
World, all (MSCI)	395.2	-1.5	-5.3	-5.3
World bonds (Citigroup)	869.4	nil	-3.6	-3.6
EMBI+ (JP Morgan)	703.4	-0.9	+1.7	+1.7
Hedge funds (HFRX)	1,166.1 ^{\$}	-1.1	-4.3	-4.3
Volatility, US (VIX)	21.0	+17.6	+19.2 (levels)	
CDSs, Eur (iTRAXX) [†]	80.1	+9.3	+27.3	+14.9
CDSs, N Am (CDX) [†]	90.5	+5.4	+36.9	+36.9
Carbon trading (EU ETS) €	8.1	-4.0	+10.5	-0.2

Sources: Markit; Thomson Reuters. *Total return index.

†Credit-default-swap spreads, basis points. ^{\$}Dec 14th.

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The Economist commodity-price index

	2005=100			
	Dec 8th	Dec 15th*	% change on one month	% change on one year
Dollar Index				
All Items	126.3	126.8	+0.2	-17.8
Food	148.8	149.2	+0.3	-14.2
Industrials				
All	102.9	103.5	+0.2	-22.6
Nfa [†]	110.9	110.0	+2.1	-11.8
Metals	99.5	100.7	-0.6	-26.9
Sterling Index				
All items	153.3	152.5	+0.9	-14.5
Euro Index				
All items	144.5	142.9	-3.2	-6.7
Gold				
\$ per oz	1,074.3	1,070.4	-0.4	-10.5
West Texas Intermediate				
\$ per barrel	37.6	36.3	-10.9	-35.2

Sources: Bloomberg; CME Group; Cottlook; 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.



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King of mud, king of rain

Brajraj Kshatriya Birbar Chamupati Singh Mahapatra, last prince of the British Raj, died on November 30th, aged 94

BACK when his eyes were sharp and his handlebar moustache impressive, Brajraj Mahapatra would go big-game-hunting in the damp, dense forests of Orissa (now Odisha) in eastern India. As King of Tigiria in Cuttack district, 45 square miles of this hill country belonged to him. Rifle on his shoulder, servants creeping behind, he would bring down tigers and leopards—13 of the former, 28 of the latter—and use their pelts to decorate the walls of his palace. The residence was not large. Nonetheless it had fine carpets, marble columns, an ornate throne of gilt and velvet and well-ventilated rooms in which to write down, for various magazines, his famous stories of the hunt.

He also killed one elephant. The local villagers had begged him to do so because it was trampling their crops; though it was a special perquisite of kings of his line, from earliest times and also under the Raj, that they should always travel by elephant and be heralded with black flags and bugles. Consequentially, he liked tuskers. But as the villagers' obliging prince, he did as they asked. His rule was mild; so mild that Tigiria's jail had no walls, and the worst punishment imposed was that the king would refuse to speak to you.

In the 21st century the villagers still came to pay their respects, though not to

the palace. That had long been turned into a high school for shrill dark-plaited girls. For his last 28 years the house of Brajraj, still most royal, was a small hut of mud on a hillock with an asbestos roof that thundered and leaked under the monsoon rains. He lived there alone. His furniture was a wooden cot under a torn tarpaulin, a few plastic chairs, a battery-powered fan and rails, thick with cobwebs, on which to hang his clothes. As for those, they were no longer the best embroidered *sherwanis*, gem-heavy necklaces, cummerbunds, scabbards and jewelled turbans in which he would attend a *durbar* or, with a lordly expression, pose with one two-tone shoe on a gilt stool for the photographer. He now wore a humble kurta and lungi over his bony hips. He had been plump in the old days. Now he pecked at what his subjects served him: tea and a couple of biscuits in the morning, a little dal and rice for lunch, a roti at night. His eyes were so clouded with cataracts that he felt, rather than saw, what was placed before him.

He was probably the last surviving king of British India, and certainly the last ruler of the 26 princely states of Orissa that cooperated from the beginning with the British Raj, traded freely with the East India Company and grew fat on the taxes they were allowed to keep. For some years this

arrangement kept him in playboy style. He bought fast, flash motors: 25 cars and Jeeps filled his garages, polished and tuned by some of his 30 staff. In 1943, at 22, he became king. He and his best friend, the King of Puri, would often be driven through the green paddy-fields along the coast to Kolkata, where they would hold court in the lounge of the Great Eastern Hotel in an aura of majesty, Black Label and State Express 555 cigarettes. There Brajraj, utterly at home, would “drink to my heart's content and have a good time”.

A dream of three hills

Rumour had it that he drank too deep, and that was why he found himself in the hut at last, with Queen Rasmanjari (from whom he had long separated) living a kilometre away, and his six children even farther off. But political upheaval had played a larger part. At first, with the birth of independent India in 1947, little changed; he agreed to merge his principality into the new nation and, while his *diwan* or minister waited outside, signed the instrument of accession in Cuttack town hall. A privy purse was awarded to him of 11,200 rupees (\$2,338) a year; it could barely sustain a month of his glamorous existence, and in 1975 Indira Gandhi removed even that.

The palace had already been sold 15 years earlier. It fetched only 75,000 rupees; though he was glad to sell it to a school, for he had founded several, and his education-minded forebears had written manuals of dance and warfare. He moved in first with the King of Puri, then with his own brother, the King of Mandasa, but pined for Tigiria, the little kingdom of “three hills”, which an ancestor had seen in dreams in 1264, and where Jagannath deities had been hidden for their safety in the leopard-haunted forest. In 1987 he returned there to build his hut. People tried to entice him into politics; he refused. Kings, he said, with a rare gleam of condescension, should not beg for votes and bow to people.

If he left the hut now it was in a rickshaw, not a motor, pulled jolting by one man over the mud tracks from one village to another. He did not complain. The aura of attentiveness and reverence about him was as strong as ever, his people as loyal to “Sir” as before. Only the trappings had changed. He now preferred to be his subjects’ *aaja*, grandfather, rather than their *raja*; his one command was that each villager should pay ten rupees for his cremation when the time came. He awaited it with patience, his gaunt hands knotted round his walking stick as, in former times, they had clasped the still-warm barrel of his trusty hunting-rifle. He was content with both the future and the past. As he told one journalist preparing yet another “Prince to Pauper” feature, if he was unhappy, how could he have lived so long? ■

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