The Economist

JULY 4TH–10TH 2015

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Obama's Amazing Grace

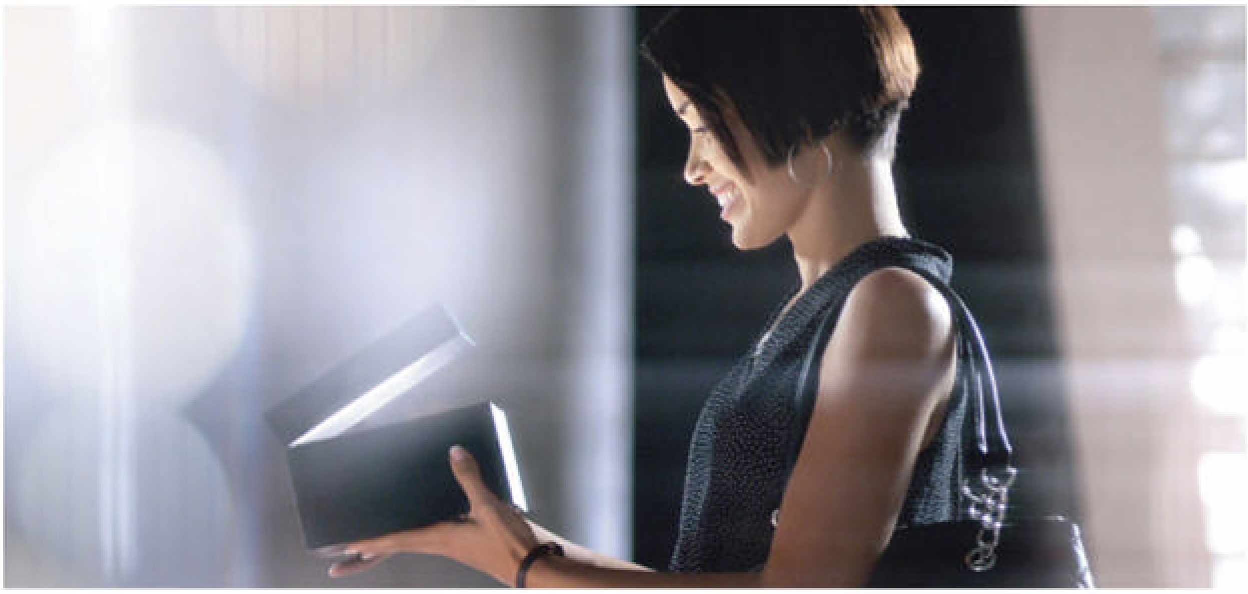
Why Indians go hungry

Uber jobs and the modern worker

Shale's fractured finances

Islamic State's franchise of fear

Europe's future in Greece's hands



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Economist.com/print

Audio edition: available online to download each Friday
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The Economist

Volume 416 Number 8945

Published since September 1843
to take part in "a severe contest between intelligence, which presses forward, and an unworthy, timid ignorance obstructing our progress."

Editorial offices in London and also:
Atlanta, Beijing, Berlin, Brussels, Cairo, Chicago, Lima, Mexico City, Moscow, Mumbai, Nairobi, New Delhi, New York, Paris, San Francisco, São Paulo, Seoul, Shanghai, Singapore, Tokyo, Washington DC

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Post: **The Economist Subscription Services, P.O. Box 46978, St. Louis, MO 63146-6978, USA**

Subscription for 1 year (51 issues)

United States	US$160
Canada	CN$165
Latin America	US$338

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PEFC/29-31-58

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Politics

A group connected to **Islamic State** (IS) killed at least 20 Egyptian soldiers in a series of co-ordinated attacks on checkpoints and military posts in northern Sinai. The attacks came after days of jihadist violence across the Middle East, including at a beach resort in Tunisia where a gunman killed 38 tourists and a bomb at a Shia mosque in Kuwait which left 27 worshippers dead. IS claimed responsibility for both though the true extent of the group's involvement is unclear.

Negotiators meeting in Vienna missed a deadline for agreeing a deal on **Iran's nuclear programme,** but extended it until July 7th. In return for relief from international sanctions, Iran must agree to tight restrictions on its programme, which it insists is peaceful, for at least ten years.

Burundi, which has been racked by violence for months since President Pierre Nkurunziza said he would stand for a third term in office, held parliamentary elections that the president claimed have delivered victory to the ruling party. Voter turnout was low. Presidential elections are scheduled for July 15th.

The recently inaugurated president of **Nigeria**, Muhammadu Buhari, has postponed the appointment of a cabinet. The country's central bank, meanwhile, has effectively banned the import of a wide range of goods including toothpicks, rice and tinned fish in order to support the currency, the naira, which has fallen by about 20% over the past year.

Cuba heals

As part of an ongoing diplomatic thaw, **Cuba** and the **United States** said they would exchange embassies for the first time since 1961. President Barack Obama said that was a sign that citizens of both countries were no longer "imprisoned by our past". For four decades, the governments have dealt with one another diplomatically only through "interest sections" within the embassies of Switzerland.

A proposal to reduce the age of criminal responsibility in **Brazil** from 18 to 16 was rejected, and then approved in amended form, by the lower house of the legislature. Supporters argued that a high proportion of crimes are committed by people in this age bracket; opponents said it would turn adolescents into hardened criminals by locking them up in violent prisons.

Brazil and the **United States** signalled a rewarming of their friendship by jointly setting ambitious energy targets. The western hemisphere's two biggest democracies, whose relationship was overshadowed by a spat over spying in 2013, both pledged to generate at least 20% of their power from renewables by 2030. The breakthrough came during a visit to Washington, DC, by Brazil's president, Dilma Rousseff, who also courted American investors and bankers.

Carry on Campaigning

A long-awaited report on how best to increase airport capacity in **London** recommended that a new runway be built at Heathrow in the west, rather than at Gatwick in the south. Britain's prime minister, David Cameron, pledged to make a final decision by the end of the year. Local opponents and their MPs—including the city's mayor, Boris Johnson—vowed to fight on.

Thousands of protesters camped out in the streets of Yerevan and other **Armenian** cities demanding that the government stop a planned electricity price hike. The protests present the president, Serzh Sargsyan, with a tough choice between political popularity and good relations with Russia, on which Armenia depends for security in its conflict with Azerbaijan. Armenia's national electric utility is owned by Russia's Inter RAO company, which has close ties to the Kremlin.

Yassin Salhi, a **French** citizen, strangled and then decapitated a manager at the chemical factory near Lyon where they both worked. He displayed the head alongside two Islamic flags, leading prosecutors to conclude that the attack had a "terrorist motive".

In sickness and in health

At the very end of its session the **Supreme Court** made two narrowly won but momentous rulings: first to save **Obamacare** by allowing federal subsidies for low-income people buying policies on federal health-care exchanges, and second to allow **gay marriage** throughout the 50 states. The White House joined the celebrations over gay marriage. Some conservatives accused the justices of tramping on states' rights and re-writing the constitution.

The court also ruled that **independent commissions** could be used to draw the boundaries of congressional districts, removing from state legislatures the traditional delights of gerrymandering. Another case looms, however, on whether the maps produced by such commissions are really any better.

Chris Christie, the governor of New Jersey, became the latest in a swarm of declared Republican candidates for president. Mr Christie proclaimed his ambitions and a new campaign slogan, "Telling it like it is", in the gymnasium of his old school.

Laying the groundwork

During a visit to Paris, **China's** premier, Li Keqiang, pledged his country would curb its carbon emissions by around 2030. China made a similar promise to America last year, but its latest statement will be taken as its formal position at a UN conference on climate change in Paris in December.

Tens of thousands of people marched through **Hong Kong** in an annual show of support for greater democracy. Turnout was far lower than last year, when as many as 500,000 took part. Last month legislators rejected a plan proposed by the government in Beijing that would have allowed the direct election of Hong Kong's chief executive, but only from a list of carefully screened candidates.

Sri Lanka's former president, Mahinda Rajapaksa, announced his re-entry into politics, saying he wants to stand in parliamentary elections next month. The move is a challenge to President Maithripala Sirisena, who defeated him in presidential polls in January. Mr Rajapaksa remains popular among the Sinhala Buddhist majority for his role in crushing Tamil Tiger rebels.

An **Indonesian** military-transport plane crashed in a residential area of the city of Medan in North Sumatra province. The army said there were no survivors among the 122 passengers on board, many of them civilians. Around 20 people may have been killed on the ground.

▸▸

Business

Alexis Tsipras, Greece's prime minister, called a **referendum** on whether to accept conditions set by the country's creditors. The country's bail-out programme expired and it failed to make a €1.5 billion ($1.7 billion) payment to the International Monetary Fund. At one point, Mr Tsipras seemed to tell the country's creditors that he would be willing to accept much of the bail-out deal offered last week. But European officials said the original terms were no longer on the table, and that new negotiations must await the results of the referendum, scheduled for July 5th.

New figures revealed that **annual inflation in the euro area** fell in June to 0.2% from 0.3% in the previous month. Although the European Central Bank launched a programme of quantitative easing earlier this year, inflation still shows little sign of reaching its official target of 2%.

The **Bank of England** launched the latest edition of its twice-yearly **financial-stability report**. It is worried about the risks of Grexit and about China's economy. Similar concerns prompted **Sweden's Riksbank** to cut its benchmark interest rate by a tenth of a percentage point.

China eased monetary policy, in part to help prop up the country's tumbling stockmarkets. The **People's Bank of China** trimmed interest rates by a quarter of a percentage point, the fourth cut since November. It also reduced banks' reserve requirements in an attempt to boost lending. And China's Securities Regulatory Commission lowered transaction fees and relaxed collateral rules on borrowing to fund share purchases. But there was little sign of markets stabilising: stocks in Shanghai and Shenzhen have lost nearly 25% of their value since the middle of June.

Sir, can I have some more?

Alejandro García Padilla, the governor of **Puerto Rico**, an American territory in the Caribbean, admitted that its debts were unpayable. A faltering economy has made it harder for the island to service its debts of $72 billion.

The Bombay High Court ruled that **Nestlé**, a multinational food manufacturer, could export its **Maggi** brand of noodles from India. A food-standards agency in Uttar Pradesh state had previously found a sample of its noodles had excessive levels of lead and monosodium glutamate, a claim that Nestlé disputes. But a ban on local sales remains in place—at least for now.

Barack Obama announced that from next year American workers with annual salaries of up to $50,400 would be entitled to **overtime pay** if they work more than 40 hours a week. The current threshold is just $23,660. Mr Obama hopes that his plan will help 5m workers, a figure that his opponents dispute.

Hard times

Petrobras, Brazil's state-controlled oil giant, announced plans to slash its capital-expenditure programme for the next five years by 37%, to $130 billion. The firm, which has recently been plagued by a corruption scandal, cut its output forecast for 2020 from 4.2m to 2.8m barrels a day.

The charter of America's **Export-Import bank** expired for the first time in its 81-year history. It was originally opened in 1934 to offer exporters government-subsidised trade credit, to help America out of the Depression. But many politicians now see this as coddling big business, and distorting economic growth. Although conservatives oppose renewing its charter, Mr Obama hopes that it will receive a new mandate from Congress this autumn.

Who will buy

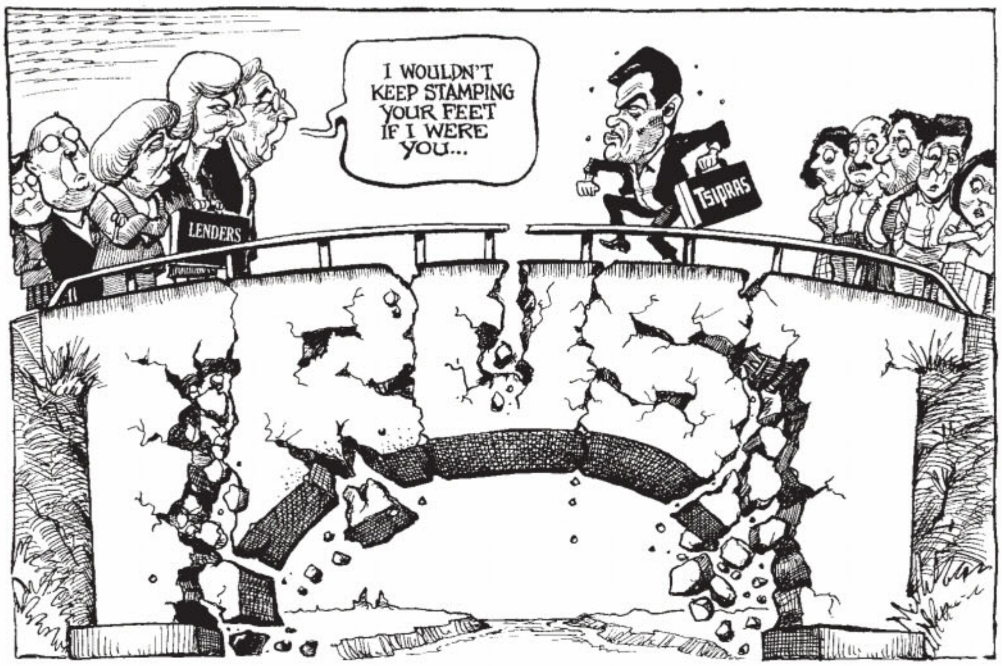
Japan Post announced plans to float itself, and its banking and insurance subsidiaries, on Tokyo's stock exchange. The government hopes the sale will eventually raise ¥4 trillion ($33 billion) to help finance earthquake-reconstruction projects. It will be the biggest sale of shares by a state-owned enterprise in Japan since 1987.

Restructuring plans by **General Electric**, America's best-known conglomerate, hit turbulence. The American government filed a lawsuit trying to stop Electrolux, a Swedish firm, buying GE's domestic-appliances business on antitrust concerns. But GE did sell its European lending arm to Sumitomo Mitsui Financial Group for $2.2 billion.

China launched the **Asian Infrastructure Investment Bank**. More than 50 countries have so far signed up to the new international financial institution, which is intended to rival the Asian Development Bank. But America and Japan have refused to join.

America's Department of Justice launched an investigation into possible collusion in the **airline industry**. Although the price of jet fuel—the industry's biggest cost—has dropped over the past year, fares have remained high.

Other economic data and news can be found on pages 76-77



Europe's future in Greece's hands

Whatever its outcome, the Greek crisis will change the EU for ever

THE European Union has never seen the like of the past eight days in Greece: barred banks, capital controls, the first IMF default by a developed country, the collapse of a multi-billion-euro bail-out, plans for a referendum that may hasten Greece's ejection from the single currency, and the beggary of the people. Were the stakes not so high, all those emergency summits and last-minute demands would count as farce.

Instead it is a tragedy, where an outcome that all sides say they do not want—Greece's exit from the euro—seems increasingly likely. The chaos is evidence that leaving the euro would be disastrous for Greece, not least because modest gains from default and devaluation would be overwhelmed by political and economic instability. For the rest of Europe, too, "Grexit" has well-rehearsed risks, notably that of a failing state on the continent's south-eastern flank. But as the drama has become more desperate, so Europeans seem less worried. They take comfort from the fact that Greece is uniquely dysfunctional. Game-playing and repeated miscalculation have poisoned the negotiations (see page 17). Without Greece, many now conclude, the euro zone might actually be more stable.

Sadly, that is wrong. Look beyond Greece, and the threat of further conflict within the euro is all but inevitable. Although Greece's departure would prove the euro is not irrevocable, nobody would know what rule-breaking would lead to expulsion. Nor would it resolve the inevitable polarisation of debtor and creditor governments in bail-outs. If the single currency does not face up to the need for reform, then this crisis or the next will witness more Greeces, more blunders and more dismal weeks. In time, that will wreck the euro and the EU itself.

Don't chuck it away

Just now this argument is obscured by Greece's hard-left Syriza government and its absurd referendum. Assuming it happens, Sunday's vote will ask Greeks to assess the creditors' restructuring plan (which is no longer on offer) and their debt-sustainability analysis (which requires a degree in economics). The prime minister, Alexis Tsipras, says a No will strengthen his hand with creditors and so help keep Greece in the euro. European leaders retort that a No is in fact a vote to leave. After a Yes, Mr Tsipras might cling on or, if he goes, Greece might re-elect Syriza, but both have campaigned for a No. It is not a high point for the country of Plato.

Back in the real world, Greece is running out of money. The European Central Bank (ECB) refuses to give the banks more liquidity and they are tottering. If Greece defaults on €3.5 billion-worth ($3.9 billion) of bond payments to the ECB on July 20th, pressure will build to withdraw even today's backing. The government will soon start paying its bills with IOUs that, in time, will become a parallel currency. Each step makes Grexit more likely. Moreover, for Greece to return to normality will require ever more nous and skill—and a lack of both in Mr Tsipras is part of the reason why his country is so lost.

Mr Tsipras's uselessness is his own fault. But neither the election of Syriza's ragbag of leftists in January nor their brinkmanship was an accident. Greek GDP shrank by a quarter over five years, unemployment is over 25% and youth unemployment over 50%. Partly to blame is austerity imposed by creditors who, especially in the early years, sought to bring down Greece's budget deficit too far too fast. Greece eventually started to grow again, but the slump discredited the establishment. Syriza came to power on the fantasy that Greeks could both end their hardship and also be welcome within the euro. Mr Tsipras thought he had bargaining power and as it has drained away he has looked increasingly erratic.

Omega hour

His miscalculation is prompted by tension at the heart of the euro project. Mr Tsipras believed that a cave-in by the creditors was inevitable because they are determined that the euro should stick together. But the creditors would not be blackmailed into subsidising endless delinquency, because they are adamant that the system must have discipline. Mr Tsipras negotiated as a sovereign leader with a democratic mandate; but northern European leaders represent voters, too, and they never signed up to a system of large unconditional transfers.

Brinkmanship and crisis are inevitable in such a system. And they are aggravated by the euro zone's reliance on ad hoc bail-outs, which politicise every decision. They set one side against another, breeding contempt among the creditors and resentment among the debtors. They turn wise policies into concessions that should not be given up to the other side until the last minute. No wonder the process has failed: at crunch time more than 20 negotiating parties, all with vetoes, were working to different agendas and haggling under pressure. The same downward spiral is all too plausible in a future crisis: the ruination of politics and the economy as demands for forgiveness from debtor nations like Italy or Portugal, say, founder on demands for austerity from Germany and Finland.

Right now Greeks need a new prime minister. Relations with the devious Mr Tsipras are shattered: with him in charge, they will struggle to stay in the euro. In the longer run, the euro zone needs shoring up. A stable currency is a trade off with fiscal sovereignty. To protect against downturns, euro-zone members must create automatic mechanisms, such as collective unemployment insurance, that channel extra funds to countries in recession. Instead of bail-outs, the single-currency area needs more joint pooling of risk and responsibility—some form of "Eurobonds" or jointly guaranteed sovereign debt—governed by fiscal rules more binding than today's.

The bloc knows that it needs to change. It has moved towards banking union; five of its leaders have issued a paper on how to strengthen the euro, including, among other ideas, a deposit-insurance scheme. But their proposals are modest because governments are harried by anti-EU populists and their citizens did not sign up to the euro expecting to give up a lot more sovereignty. The moral of Greece's disaster is that Europeans must face up to the euro's contradictions now—or suffer the consequences in more ruinous circumstances. ■

Airports in London

Now get on with it

Britain needs to expand Heathrow airport—and soon

FOR over 40 years British politicians have squabbled about where to build runways in south-east England. They have commissioned reports, ordered public inquiries and submitted to judicial reviews. For as long as the paperwork has helped them avoid local protesters, not a shovel has bitten into the ground. No full-length runway has been built to serve Britain's economic powerhouse since the second world war.

In 2012 David Cameron, Britain's prime minister, dodged the issue again, asking a commission under Sir Howard Davies, an economist, to look into airport expansion. On July 1st Sir Howard published his final report, backing a new runway at Heathrow, Britain's busiest airport (see page 47). There are worrying signs that Mr Cameron will be tempted to join the long line of paper-pushers.

Jet-lagged

Britain's delays have been costly. While Sir Howard and his pals have been pondering where to put a strip of concrete just 3.5km (2.2 miles) long, China has built around 80 new airports. Dubai, which overtook Heathrow in 2014 to become the world's busiest international hub, has more than trebled its terminal capacity, from 23m people a year in 2005 to 75m in 2012.

Without further airport expansion, London—and Britain as a whole—will lose out. Sir Howard and his team estimate that expanding Heathrow could boost the economy by 0.65-0.75% of GDP in 2050. The scarcity of routes means that ticket prices may rise and journey times lengthen. This will affect not just British business, but those farther afield, too. The trip from Boston to Shanghai is nearly 20% longer via Dubai than London.

This newspaper has long argued that expansion at Heathrow is the best way to boost Britain's airport capacity (although our favoured plan expands the airport westwards—differing slightly from the scheme backed by Sir Howard). The economic case for Heathrow is stronger than for any other. It is where airlines want to be, as shown by the eye-watering prices for landing slots. The airport and businesses that have sprung up around it employ around 100,000 people. Expansion would increase employment further in poor local authorities around its edges. But its effects will also be felt elsewhere: Sir Howard and his team estimate that almost two-thirds of the overall boost to GDP will be felt outside south-east England.

Heathrow's drawback is political, especially for this Conservative government. At least 800 houses will be demolished, air pollution (already high in the area) may increase and the airport is in the middle of several marginal Tory seats. At least five Conservative MPs vehemently oppose it, including Boris Johnson, the bumptious mayor of London who has threatened to lie down in front of the bulldozers.

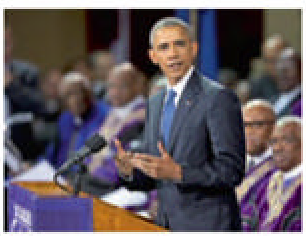
Sir Howard and his team have tried to mollify this opposition. Some of their suggestions, such as banning night flights, monitoring aircraft noise and boosting compensation to locals, are sensible. Such set-ups are common elsewhere in Europe and America. But Sir Howard's recommendation that the government should rule out a fourth runway at Heathrow is a futile sop to the most vociferous NIMBYs, not least because it would waste time on unnecessary legislation that could be overturned by any subsequent government.

Now is the moment for action, not more delays or fudges. The person who must act is Mr Cameron. In contrast to 2012, when the commission was set up, the prime minister oversees a majority government and may never be as popular with voters as he is now. He should get on with expanding Heathrow—even if it means steamrollering a prostrate Mr Johnson. ■

Race in America

Lost, but now found

Barack Obama has recovered his drive. He should use it to take on the residual problems of race in America



"FEARLESS" is how Barack Obama now describes his mood. A series of triumphs has suddenly given him a second wind. On June 29th he at last won "fast-track" authority to negotiate foreign-trade deals, paving the way for deeper economic engagement with Asia and Europe. On June 25th the Supreme Court rejected a conservative attempt to disembowel the Affordable Care Act, Mr Obama's flagship health-care law. A day later the justices declared gay marriage a fundamental right in all 50 states, and the White House spent the next night bathed in rainbow lights (see page 21).

Mr Obama cannot claim all the credit. The Supreme Court is not part of his administration, though he nominated two of its nine justices. And his free-trade victory owed much to Republicans in Congress, who beat back a revolt by populist Democrats intent on blocking the Democrat in the White House. But a win is a win, and the president now has momentum to deal with another cause close to his heart: racial justice.

After a racist massacre by a white gunman in a church in Charleston, South Carolina, Mr Obama has comforted black America as no other president could, notably in his eulogy for Clementa Pinckney, the murdered pastor. And he has been a voice of reason. America, he has reminded people, has come a ▸▸

long way on race; those who think it has not (see page 69) should listen to blacks who lived through the 1950s, 1960s or 1970s. But in Charleston, in the cadences of a preacher, even singing "Amazing Grace"—so unlike the cool, buttoned-up Obama of old—he also noted that striking inequalities remain. He is right. The median white household in 2013 had net assets of $142,000; the median black one had a paltry $11,000. A third of black men have spent time in jail, and panicky shootings of blacks by police have led to rioting in several cities. Black and Hispanic young men are more than six times as likely to be murdered as their white peers. At the age of nine 86% of black boys and 82% of Hispanic boys cannot read proficiently. Studies have found that people with black-sounding names must send 50% more applications to win a job interview.

Blind, but now I see

Mr Obama first soared to fame, more than a decade ago, with a speech decrying those who would divide the country into black and white Americas. He was right to do so, but that is not the end of the matter. It should not be divisive to note that black Americans face unique problems, nor to seek to alleviate them. In general the state should be colour-blind, but the police cannot do their job well unless they make extra efforts to forge links of trust with minority communities, and schools should pay extra attention to groups who flounder.

Sensibly, Mr Obama does not talk about financial reparations for past injustices, and is not interested in assigning blame for racial gaps. Instead he talks of promoting equality of opportunity, through such painstaking but vital things as early-childhood education, reading schemes, apprenticeships at private companies and mentoring to spot young men when they are first drifting into trouble. His most immediate answer to persistent poverty is a proposal to expand the earned-income tax credit (a negative income tax), doubling the maximum credit for a childless worker to $1,000 a year and increasing the income level at which it is phased out. This is a good idea: such wage subsidies not only lift people (of all races) out of poverty (see Free exchange, page 64); they also encourage them to work, which is the key to social mobility.

Racial ills that built up over centuries will not be cured in the last 18 months of Mr Obama's presidency. He knows this, of course, and plans to use his bully pulpit long after he leaves the White House. In 2014 he launched "My Brother's Keeper", the nucleus of a network of schemes he will promote after he leaves office, explicitly to increase opportunities for young black and Latino men and foster more sensitive policing.

Meanwhile, Americans can draw comfort from the shift in public opinion that the Charleston massacre revealed. It is worth recalling that when Klansmen bombed black churches in the deep South in the 1960s, the police barely bothered to investigate. This time the killer was swiftly caught and universal outrage at his crime jolted southern states to stop flying the Confederate flag over public buildings. As with gay marriage, attitudes have changed profoundly, and for the better. Mr Obama's presidency is both a reminder of that progress and an opportunity to accelerate it. ■

Shale oil

There will be blood

The ingenuity of America's shale industry is admirable, the state of its finances awful

WALL STREET loves a good scrap almost as much as the wildcatters who drill for oil do. No wonder that the fight over the finances of America's shale-oil industry has turned nasty. In one corner are short-sellers, including David Einhorn, a hedge-fund manager whose scalps include Lehman Brothers. They argue that "fracking"—the business of blasting oil out of rocks using water, sand and chemicals—is a bottomless pit into which too much cash has been thrown.

In the other corner are America's oil pioneers, who say that shale can thrive even though the benchmark American oil price has dropped from over $100 a barrel last year to $57 today. The oilmen are backed by plenty of other investors who are still pumping money into shale firms: some $35 billion of equity and bonds has been raised since December.

Both sides have a point. It makes sense to be cheery about the long-term prospects for shale energy—and to be queasy about today's bunch of fracking firms (see page 53).

Shale matters. The industry has become huge—listed firms have invested over half a trillion dollars of capital. Much of that money has been raised through junk bonds: if you include privately held companies, shale firms owe almost as much debt as Greece. After drilling beneath much of Texas and North Dakota, they account for 5% of global oil output. The health of shale firms affects people around the world, from Western drivers and Saudi Arabia's sheikhs to Asia's consumers.

The reason to be optimistic about shale energy is that the industry has responded cleverly to the falling oil price. Output surged in 2011-14 because of a spending boom. Bosses borrowed like mad, bid up land rights and drilled indiscriminately. But gone are the days when roughnecks were fed lobster in luxury camps and Texan towns were circled by Learjets. Instead, the new mantra in America's shale basins is thrift. Since December, costs have been cut by a fifth, mainly by squeezing suppliers. Texas has suffered 20,000 job losses. Shale bosses say their firms are concentrating on the very best prospects and sucking more oil from them. Production has held up even though the number of drilling rigs has fallen by half.

Economies of shale

Lower costs and more selectiveness mean that new investments should make money. Most firms boast potential annual returns of 25% or more on new wells when oil costs $60 a barrel. The industry's agility to date suggests costs will fall further.

If only shale firms could escape their past and concentrate on this bright tomorrow. Alas, every corporation is the sum of its existing, depleting assets and the promise of its future ones. Many shale firms made rotten decisions in the boom. This legacy means a dose of pessimism about them is in order. ▸▸

The top 60-odd shale firms are making a return of roughly zero on the swollen stock of capital they employ. Despite this, investors value them at well above book value, which suggests their share prices are frothy. Many firms are juicing up the cash they can crank out of their old wells. In the first quarter of 2015, 31% of the cashflow reported by the top firms came from derivatives bets placed when the oil price was high. These hedges will expire over the next year or so; cashflow will fall.

That puts cracks in the shale barons' claim that they can ramp up production without further borrowing. With less cash flowing in, shale firms need to slash their investment by over two-thirds if they are to balance their books. If spending falls, production will follow. And the capital markets may not always remain open: about half of shale firms, owing $85 billion of debt between them, have distressed balance-sheets. The pace of capital-raising has slowed in the past few weeks.

The wild card is the oil price. Many shale bosses are betting that they will be bailed out by higher prices. Oilmen are optimists by nature—why else would you drill holes in the ground? But if prices do not rise there will be a reckoning, with more firms defaulting, being bought or selling their assets. That would lead to short-term losses among banks and investors. America's shale industry needs to drill through its past if it is to emerge leaner and meaner than ever before. ■

Malnutrition in India

Ravenous for reform

India cannot tackle hunger if it suppresses embarrassing data

SOME of India's rulers have strong views on food. The home minister, Rajnath Singh, has called for a nationwide ban on slaughtering cows, which as a Hindu he considers holy. At least 20 Indian states and territories (out of 36) ban cow-killing. Since March it has been illegal to possess beef in Maharashtra, and lawmakers in Haryana say those who slaughter cows should be punished as severely as murderers. The education ministry suggests that vegetarian and non-vegetarian students should be segregated in some college canteens; another minister says beef-eaters should move to Pakistan.

Since India is roughly 80% Hindu, it is not surprising that Indian politicians pay respect to Hindu beliefs (many of which they passionately share). But if they care about people as well as sacred animals, they should worry about adding to the national menu, as well as cutting it back.

India has more malnourished people than any other country. Around 30% of children under five are underweight, according to the Rapid Survey on Children (RSOC), which was carried out in 2013 and 2014 by the UN and the Indian government. That is a welcome improvement from an estimated 43% a decade ago. But it still leaves children worse-fed in India than Africa and much less healthy than in China, where only 3% of them are underweight.

Favouring curry

Malnutrition leaves Indians weaker and more vulnerable to disease, but that is not the worst of it. When children are underfed it is not only their bodies that are stunted; it is also their minds. The country will never fulfil its gigantic potential if the brains of its young people never develop properly for lack of nutrients. Fighting hunger harder should therefore be a national priority. Unfortunately, progress is slower than it should be, thanks to taboos, corruption and political pride.

Consider India's school-lunch scheme. Since the late 1990s pupils at public schools have been entitled to a free midday meal. The programme has reduced malnutrition and boosted attendance. Yet it could work much better if it were honestly and competently administered. The food served is sometimes rotten, and studies in some states find that a quarter of the subsidies are stolen. Now religious strictures are making things worse. The chief minister of Madhya Pradesh, a state with lots of poor and ill-fed children, recently banned eggs in school lunches because many people consider them non-vegetarian. This is a big mistake: eggs brim with protein and are hard to adulterate, unlike milk, which in India may be illicitly mixed with glucose, cooking oil or even detergent.

Political pride is stopping the publication of data that would help India's states learn from each other. The RSOC survey we cite is big, based on weighing 90,000 children and conducting 210,000 interviews. It was finished eight months ago. Yet apart from a few figures on immunisation rates released in October, the Indian government has failed to make its results public. The UN says the study is sound and blames the government for the delay. The most probable reason for that is because the report casts a shadow over Gujarat, the state once governed by Narendra Modi, the prime minister. *The Economist* has obtained the full RSOC report and is publishing much of the data this week (see page 34 and online). Most states show gains, but Gujarat, though prosperous, has worse-than-average rates of child malnutrition. Plausible reasons for that include poor public hygiene and low rates of immunisation.

One reason Indians are less well-nourished than Africans is that more Indians defecate outdoors, so more contract diarrhoea and other diseases that make it harder for children, especially, to absorb the nutrients they consume. The failure to inoculate allows some of these diseases to spread. To deal with these problems, India would have to spend more than a risible 1% of GDP on public health. Alas, Mr Modi as prime minister has overseen cuts in health spending.

Rather than suppress embarrassing information, Mr Modi's government should publish any data that might help inform better policies. These should focus on girls and women, who are typically worse-fed than their brothers and husbands. Malnourished pregnant mothers give birth to malnourished babies. Even in the wealthiest 20% of Indian households, 26.5% of children are stunted and 17.5% are underweight. It is a fair guess that most of these are female. States, such as Kerala, that try harder to identify the vulnerable and provide them with education and health care achieve better results. Better food policies would make India happier—and cleverer, too. ■

We're only human

Your article described how the executive-search industry has "little choice" but to find new services to sell, touching on a concern that this increasing cross-selling "could produce conflicts of interest" ("From headhunters to culture vultures", June 13th).

Headhunters exploit one important facet of human judgment: a known piece of negative information about an internal candidate carries far more weight than the possible weaknesses of an external candidate. This fundamental error, the salience bias, tips the odds of selection heavily in favour of external candidates.

This alone creates a clear case for the evaluation of candidates, internal and external, that is independent of the headhunter. Separating the sourcing of candidates from their objective evaluation provides assurance of objectivity, is fair and is more likely to be motivating for those within the organisation.

ROBERT SHARROCK
CEO, YSC
London

Hungarian immigrants

Contrary to the suggestions in your piece, Hungary fully respects the common migration policy of the EU, including the provisions of the Dublin regulation ("Asylum-seekers in Europe", June 27th). As of June 23rd the Hungarian authorities asked for the solidarity of EU member states when they indicated that temporarily, but for an indefinite period, they are not in a position to receive the transfer of persons who have submitted an application for international protection.

Over 60,000 illegal immigrants have been caught at the Schengen borders of Hungary this year so far, most of them at the Hungarian-Serbian border. The number of applications for international protection submitted to the Hungarian authorities this year has also exceeded 60,000. These numbers are far higher than in previous periods, and there is nothing to suggest that the pressure on Hungary will ease in the immediate future.

This has forced the introduction of these emergency measures, but it does not mean that Hungary is not committed to complying fully with the Dublin regulation and the government will do everything in its power to remedy the situation.

PÉTER SZABADHEGY
Ambassador of Hungary
London

The myth of dynastic wealth

Buttonwood's observation that the wealth of the richest dynasties dissipates over time (June 20th) is neither surprising nor inconsistent with further increases in wealth inequality. Such mean reversion is necessary in a stable rank-based random system, and is perfectly consistent with either decreasing, constant or increasing top-wealth shares. Noting that dynastic wealth dissipates over time says nothing about the future of American wealth inequality.

It can be argued that mobility is more important than inequality, but these two are related. There is growing evidence that higher inequality is associated with less economic mobility. This relation suggests that if American wealth inequality continues to rise it is likely that mobility will decline and hence that inherited wealth will become more important and persist for longer periods of time.

RICARDO FERNHOLZ
Assistant professor of economics
Claremont McKenna College
Claremont, California

Much is made of the fact that contemporary descendants of America's great 19th-century industrialists are not as rich as one might expect. But the appearance of "dwindling" dynastic wealth can be explained by the simple fact there was no great inheritance to start with.

Andrew Carnegie's own writings give vehement expression to his belief that bequeathing vast amounts to one's offspring is morally disgraceful, and that the rich have a duty to spread the wealth around instead.

The fortunes of Carnegie, Vanderbilt and their ilk remain flourishing outside their family lines. Witness the various university endowments, concert venues, charitable foundations and institutions designed to advance the rather admirable mission of not simply giving it all to the children.

DANIEL HALLIDAY
Political philosophy lecturer
Melbourne University
Melbourne, Australia

To duel or not to duel

In your review of duelling in literature ("Men at Arms", June 13th) you mention the efforts of Louis XIV to outlaw the practice. It was also a problem in early 19th-century Kentucky. So many men of importance were getting killed in duels that the Commonwealth came up with a solution. The US constitution of 1850 required all lawyers and state officers to swear, after the usual pledge, that they "…have not fought a duel with deadly weapons within this State, nor out of it, nor have sent or accepted a challenge to fight a duel with deadly weapons…"

This oath must be taken even today, as the undersigned did when he was admitted to the Bar.

ARNOLD TAYLOR
Covington, Kentucky

Move over Elmo

If "Sesame Street" and its characters prepared children better for school 40 years ago, then the IBM Watson AI computer and children's toy company CogniToys are going to prepare them better for life, education and the universe ("Big Bird, big brain", June 13th).

CogniToys connect to and use IBM Watson AI to produce interactive teaching and learning personalised for each child. The more CogniToys are connected to Watson the more Watson can learn from the gathered big set in order to spot ability and anomaly, such as dyslexia, in a short interaction with each individual child.

Move over one-to-many learning: one-to-one learning has arrived.

JOHN STRAW
London

Two birds, one stone

Leafing through this week's issue, I have come across two separate "skunk" references and counting ("A whiff from hell" and "Weeded out", June 6th). Notable are that Israel and Britain are each producers of two very different kinds of skunk. Israeli Skunk is used on stone-throwers while British skunk is used by stoners.

Perhaps if these two nations were to swap skunk, both peace in the Middle East and a decline in hooliganism could at once be achieved.

SIMON DERMER
Managing director
eSSENTIAL Accessibility
Toronto, Canada

Boom boom

There were some astonishing figures in your article about "sugar daddies" paying for the companionship of college women ("A teaspoon of sugar", June 20th).

At least they seemed astonishing until I remembered part of a Reduced Shakespeare Company sketch:

Q: What's the difference between paying for sex and not paying for sex?

A: Not paying for sex is a lot more expensive!

JOHN ARMSTRONG
Sierra Madre, California

Letters are welcome and should be addressed to the Editor at
The Economist, 25 St James's Street, London SW1A 1HG
E-mail: letters@economist.com
More letters are available at:
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Non-Executive Board Appointment

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WORLD BANK GROUP

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Financial Reporting Council

(Established under the Financial Reporting Act)
MAURITIUS

VACANCY

CHIEF EXECUTIVE OFFICER

Responsibilities
The Financial Reporting Council (Mauritius) ("FRC") is looking for a Chief Executive Officer who will be responsible for the effective discharge of the Council's statutory functions and proper administration and management of its affairs along the principles of good governance.

Minimum Eligibility Requirements
Candidates should:

(a) possess a professional recognised accounting qualification. Registration as professional accountant with the Mauritius Institute of Professional Accountants ("MIPA") is *sine qua non* for appointment. While Mauritian applicants should already be registered with the MIPA, others should be eligible for same at the time of application under the Act.
(b) have at least ten years post-qualification practical experience in the field of accounting and auditing;
(c) demonstrate proven technical expertise in matters of financial reporting;
(d) be knowledgeable in international state of the art financial reporting and be able to deliver within the relevant country legal framework; and
(e) show a commitment to –
  (i) monitor effectively the accountancy and audit sector; and
  (ii) secure compliance with, and enforce, the applicable good governance guidelines, rules and regulations.

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Application
Applicants should send their: (a) full CV; (b) copies of relevant academic/professional certificates/diplomas/degrees; (c) the names and addresses of two referees; and (d) a passport-size photograph to the Chairperson, Recruitment Panel, Financial Reporting Council, 3rd Floor, Anglo Mauritius House, Intendance Street, Port Louis, latest by **noon on Tuesday 04 August 2015**. The documents should be enclosed in sealed envelopes clearly marked "Chief Executive Officer, Financial Reporting Council."

For further information, please visit FRC website (careers section) at www.frc.govmu.org

Interview
Only the best candidates shall be called for an interview. In the event shortlisted candidates cannot attend the interview, the interview can be conducted by video conferencing or Skype.

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03 July 2015

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There comes up a day

ATHENS, BERLIN AND BRUSSELS

A nation decides its fate. Again

FEW countries put sufficient store in rejecting things to have a national "No" day. But every October 28th Greece's *Oxi* Day holiday commemorates the No with which it replied to a humiliating Italian ultimatum in 1940, a refusal to acquiesce that led to invasion.

The snap referendum that Alexis Tsipras called on June 26th after walking out of negotiations with the country's creditors looks like the Greek prime minister's attempt to stage another defiant rejection. He has urged Greeks to use the vote on July 5th to say *Oxi* to austerity and the "blackmail" of Greece's creditors. The leaders of the European Union, for their part, are hoping for a resounding *Nai*: Yes to remaining within the euro and the wider European family.

On the face of it Greece and its creditors were not far apart on the substance of how to extend the bail-out that the country needs to keep paying its bills. But trust between the two sides has broken down almost entirely, and room for manoeuvre has run out. On June 30th Greece failed to make a €1.55 billion ($1.72 billion) payment to the IMF, the biggest default in the fund's history. Five years into the debt crisis, the country has suffered a loss of 25% of its GDP and a debilitating rise in immiseration and the unemployment rate—which now stands at over 50% among young people. Its soup kitchens are open but its banks are closed; the country is close to collapse. The default on its IMF loan does not have immediate consequences, but that would not be the case if it failed to make the payment of €3.5 billion due to the European Central Bank (ECB) on July 20th. Greece is likely to leave the euro, and possibly the EU, if it does not vote Yes on Sunday.

The miserable banality

For something so pivotal, the referendum itself is wonky to the verge of obfuscation. Its 72-word question makes no explicit mention of the euro; it asks whether the voters will accept a reform and fiscal-adjustment programme drawn up by the European Commission, the ECB and the IMF, comprising two documents submitted on June 25th. To muddy things further the measures it refers to were superseded by a later proposal which in turn lapsed when the bail-out deal expired on June 30th. On July 1st Mr Tsipras said a No vote would strengthen Greece's negotiating hand, not push it out of the euro. But he has twisted and turned so much that Greeks find it hard to know how to take what he says. Some wonder whether he will hold the vote at all—his leftist Syriza party is split on the matter.

European leaders hope that, faced with a hard choice, the Greeks will stick with the European project. They take reversals earlier in the crisis as cheering precedents. In late 2011 the Socialist prime minister, George Papandreou, announced a referendum on a bail-out, changed its terms, cancelled it and promptly lost power. In 2012 the voters strengthened anti-austerity parties in a first round of voting but, spooked by the real prospect of "Grexit", swung back to more EU-amenable parties in the second.

The same dynamic may be at work this time. The Yes camp is fragmented, but some polling suggests it is pulling ahead. Capital controls and limits on ATM withdrawals—€60 a day, far less than Cypriots were entitled to at the height of their banking crisis in 2013—concentrate the mind. Pensioners without cash cards are hit badly; some banks have opened for pensioners alone, under police guard and with withdrawals limited to €120 a week. There have been queues at petrol stations and hoarding at supermarkets. Sheltering from the rain under a Greek flag at a Yes rally in Syntagma Square, one voter said he turned out "because voting yes is the only way to get rid of this catastrophic government and to stay in Europe…We belong in Europe and we do not want to become third-world citizens."

Many have had a hand in creating this mess. The founding fathers of the euro launched a single currency so flawed as to risk becoming, in the words of the British Conservative leader of the time, William Hague, "a burning building with no exits". European leaders allowed a woefully unprepared Greece to join the currency in ▸▸

2001; France and Germany broke and rewrote the budget rules in 2003, weakening their authority. Until the global financial crisis made its deficit impossible to hide Greece's leaders misled the rest of the euro zone about their country's finances.

As rising bond yields threatened to push Greece to default, creditors botched the first bail-out in 2010 (see chart 1) by imposing too much austerity too quickly. For all of their railing against austerity, Greek leaders mostly cut deficits instead of promoting growth. For too long, the ECB resisted any notion of imposing losses on private bondholders even when it was obvious that Greece was bust. When haircuts for bondholders, known as "private sector involvement", were agreed on in 2011 they were too late to do the trick.

In 2012 European leaders promised in the future to look again at the sustainability of Greek debt, but never wrote any of it off. It now stands at 177% of GDP. The failure by the creditors to face reality helped Mr Tsipras to a resounding election victory in January on the contradictory promise both to end "barbarous" austerity and to keep the euro.

Time has gone by quickly

For a while, it looked as if Mr Tsipras might eventually yield. On February 20th Yanis Varoufakis, the finance minister, agreed to an extension of the bail-out agreement then in place and to negotiations on further reforms, saying reassuringly that he was in favour of 70% of them. Then things went downhill. Mr Varoufakis's penchant for lecturing his fellow finance ministers got him sidelined. A new Greek negotiating team resisted VAT increases and pension cuts—both "red lines" for the government—while producing budget figures reliant on unlikely improvements in tax-collection. The government rehired sacked workers and declared a new tax amnesty.

On June 21st, only nine days before the bail-out's extension was due to expire, the Greeks at last produced a plan that European leaders thought worth serious discussion. But the IMF disliked its emphasis on tax rises, and European officials crossed out several sections with red lines, rewriting them to their taste like teachers dissatisfied with a pupil's shoddy homework. Negotiations continued; at one point only €2 billion seemed to separate the two sides. But just when it seemed a deal was in the offing, Mr Tsipras walked out of the negotiations and called his referendum. A slow bank-run in Greece accelerated (see chart 2) and the ECB froze the level of emergency liquidity it was prepared to offer Greek banks, leading the government to close them for a week. Mr Tsipras made several eleventh-hour offers. In one plea, he again asked for an extension, and the start of negotiations on a third bail-out, lasting two years. In another, he said he accepted almost all of the creditors' conditions. But the creditors said there would be no more games, and no more negotiations, until the Greek people had spoken.

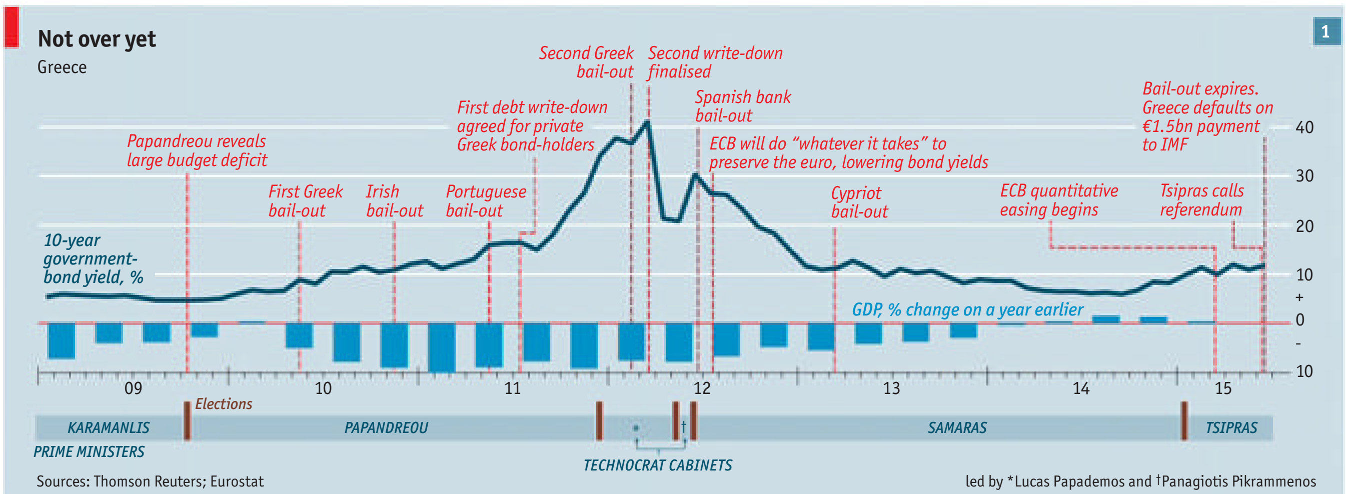
If this hard line does bring about a Yes Mr Tsipras and his ministers will probably prefer to resign than to submit to a deal they have so roundly denounced. That could lead either to the formation of a new government of national unity from the current parliament, or to fresh elections. If those elections were to give Syriza a fresh mandate there is no telling what might happen—something which would also be true if Mr Tsipras were to stay on in spite of a Yes. But if, as seems more likely, Greece ends up with a non-Syriza government it will be able to expect some political goodwill from its creditors during the negotiation of a third bail-out, and to get some sort of promise on restructuring Greece's vast debts. The goals of such a deal might not differ substantially from those of the creditors' previous offer, but reaching them could be significantly more painful. The economic damage of recent months may mean more tax rises and spending cuts.

There is no way that such a bail-out can be put into operation before the July payment to the ECB comes due. But if the negotiations are going well, the ECB could tide the country over by temporarily raising the amount of money that Greece can raise through issuing short-term debt and the amount of that debt that Greek banks can purchase. One way or another, something could be worked out: "It's an open door to be creative," says a senior Eurocrat.

Nervous about the oracle

The ECB would also have to attend to the role it took on in late 2014 as the ultimate supervisor of Greek banks. When Greece's financial sector emerges from its current induced coma it will be in even worse shape than before; given the economic shock of the past week, non-performing loans are likely to soar from an already high 34%. Fresh capital may once again have to be provided by the government (and thus by loans from the creditors).

A No vote would see the same milestones reached, but without the goodwill. Some observers think that the ECB—which could, by removing support after a July default, let Greek banks fail in a way that makes Grexit certain—might instead keep them on life-support so as to let the politicians take the final decision. But having ▸▸



told the Greeks that a No vote would be a vote to leave the euro, many leaders would see no benefit in stopping the process. In recent weeks Angela Merkel's much-used motto—"If the euro fails, Europe fails"—has been respun to distinguish defending the euro from keeping Greece in the euro zone. A YouGov poll shows 58% of Germans now favour Grexit; less than half as many want to keep Greece in the club.

Conceived as an "irrevocable" monetary union, the euro has no official exit routes. But two are plausible in practice. If it chose not to keep the country on life support for a political *coup de grâce*, the ECB would cut Greece out of the TARGET2 payments system, which would separate it from the euro area. It might also be obliged to stop providing liquidity to Greek banks. With no euros available, Greece would have to fund its banks in a new currency.

Even without a banking crisis, an unsupported Greek government would have to start using scrip—in effect new IOUs—to pay bills, and maybe pensions. If the Greek government decided to make this parallel currency legal tender then once again the ECB would almost certainly have to act.

On the face of it, there is nothing to prevent Greece from remaining in the EU if it stops using the euro. Nine other countries have national currencies. But because the euro was meant to be a one-way street there is as yet no legal path by which Greece can bring that number up to ten. And it is possible that, in the turmoil of Grexit, the country would be unable or unwilling to abide by the rules of the single market, or that other countries would start to impose controls on the movement of goods and people from Greece.

The financial consequences of Greece leaving the euro can now be considered with much more equanimity than previously because the risk of contagion looks much smaller than it used to. When the earlier bail-outs were agreed to, it was feared that Grexit would cause so much panic in the markets that other vulnerable countries might also be pushed into default. But since then the ECB has put in place a programme of quantitative easing that has kept bond yields low, and has indicated it will take further action if renewed contagion from Greece starts driving up yields elsewhere. Markets believe that Mr Draghi will carry through on his promise, made in 2012, to do "whatever it takes" to save the euro.

That does not mean no pain. News of the referendum and the subsequent capital controls caused a sell-off in world markets on June 29th, with the DAX index of German stocks falling by 3.6%, France's CAC 40 falling by 3.7% and the S&P 500 in New York falling by 2.1%. But things might have been a lot worse. On June 29th Portuguese government-bond yields rose by a third of a percentage point, but the spread (or excess rate) over German yields is still only a sixth of its level in June 2012. This does not just reflect the ECB's new powers. Portugal, Ireland and Spain, once grouped in with Greece as the PIGS, are doing better than they were—as indeed was Greece, before Syriza. Whereas in 2012 capital fled other southern European countries when Greece was ailing, there is no such exodus happening at the moment.

Europe's banking system, a likely vector for contagion in any financial crisis, is in better shape than at the outset of the crisis. Euro-zone banks have raised some €250 billion in capital since 2008, bolstering once-shaky balance sheets. And banks once heavily exposed to Greece have had

Get your euros while you can

ample time to reorder their affairs. European lenders' claims on Greece, which once topped €300 billion, now stand at just €54 billion, according to Deutsche Bank. Most of the outstanding Greek debt is now owed to governments and international institutions, which could handle the cost of default, rather than to banks, which would struggle to do so. The overall cost of Grexit might be €230 billion, according to Alberto Gallo of RBS, another bank: hefty, but only about 2% of euro-zone GDP.

They'll do the legislating

But if the short-term consequences of Grexit seem manageable, the long-term effect of an irrevocable union being partially revoked is unpredictable. A crisis over Grexit may yet spur the euro zone to take another step towards integration. The currency's weaknesses—a lack of risk-sharing mechanisms, of a common safe asset, of a central budget and other means to help absorb economic shocks in one or other country—are well rehearsed. Common deposit insurance, more integrated capital markets and common Eurobonds would tie things together better. But as sensible as economists may deem them, and as ardently as integrationist Europeans may wish for them, they will be difficult to enact. Mutualising liabilities touches the core of national sovereignty. Populist anti-EU parties make any move towards "more Europe" risky for mainstream politicians. Yet even if financial contagion is limited, there will be spillovers elsewhere.

There are Eurocrats who fear that Grexit might compound Europe's migration problem. Over 63,000 migrants (mainly Syrians) have arrived in Greece this year; the EU relies on "frontline" states like Greece to fingerprint and register as many such people as possible. This co-operation, never solid, could break down entirely.

Geopolitical concerns loom large, too. For months some Europeans have feared that a Syriza-led government might seek to strengthen Greece's long-standing ties with Russia. So far those fears have proved unfounded; Greece has not, for example, attempted to block the EU's sanctions over Ukraine. But its calculus may change if it finds itself bankrupt and isolated. Mrs Merkel is one of those who fear the consequences of the EU abandoning a country with a history of coups in a part of Europe with a particularly unstable history. Some European institutions are already drawing up plans for humanitarian assistance packages for a post-Grexit Greece.

And there could also be knock-on effects on Britain's position in the EU. The more time and effort Europe's leaders invested in the Greek crisis, however it develops, the less they will have available to deal with the renegotiation that is to preface Britain's forthcoming referendum on EU membership. A chaotic Grexit would also strengthen the hand of British Eurosceptics by reflecting poorly on all involved; and if it accelerated fiscal integration among the 18 remaining members of the euro zone it would deepen British concerns about the gap between euro-zone "ins" and "outs".

To lose one EU member might look like misfortune; to lose two would look like carelessness. A Greek departure would surely make much of Europe more determined to keep Britain in. The problem is that, as Greece's botched and blame-filled story shows, Europe is not adept at getting the results that it wants. And for now, what it gets next depends on Sunday's voters. Some of them, as they make their decision, will doubtless recall the words of the poet Konstantinos Cavafy:

> For some among us there comes up a day
> When either the great Yea or the great Nay
> Must needs be spoken…

For many the heart will say Nay and the head command Yea. Which wins will determine the course of their country, and perhaps of much else besides. ■

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The Supreme Court

Change is gonna come

NEW YORK AND WASHINGTON, DC

Nine judges are being asked to compensate for political stalemate. This is both troubling and essential

WHEN big social shifts happen in America, most people outside the corridors of Capitol Hill wonder what the response of the federal institutions will be. Washington's politicos, by contrast, quickly set to thinking up a dozen reasons why fresh legislation should not be passed. Then, with surprising speed, something that hitherto looked impossible becomes the law of the land. The Supreme Court's ruling on gay marriage, on June 26th, is the latest example of this.

America is a country that changes rapidly, governed by a set of national institutions with a bias towards inertia. A 50-year-old American was born into a world where some states had laws banning her from marrying a black man. Now she finds herself inhabiting one where she is allowed to marry a woman. In 2004 political consultants wondered whether John Kerry's support of same-sex civil unions damaged his chances of becoming president; 11 years later, a rainbow was projected onto the White House to celebrate the court's decision, and some pundits are wondering whether hostility to gay marriage will damage Republican chances in the next presidential election.

Views on gay marriage have shifted unusually quickly, but that is not an isolated example. In 2002 only 45% of Americans thought that having a baby outside marriage was morally acceptable, according to polling by Gallup. Now 61% do. Stem-cell research, one of the most controversial ethical questions during George W. Bush's presidency, now has the backing of 64% of Americans. On climate change, where America has long been an outlier in the rich world, the country now looks less exceptional: 64% of adults support stricter limits on carbon emissions from power plants, according to polling by Pew, including half of all those who identify themselves as, or say they lean, Republican.

In another political system, these changes might result in new laws. In America's, which combines the most energetic conservative movement found in any rich country with a proliferation of vetoes over federal legislation, they do not. This leads to a build-up of pressure in the tubes that connect Americans to their government. Increasingly, this pressure finds an escape through the Supreme Court, as the court's most recent term shows.

In his tenth year as chief justice, John Roberts has presided over an unusually large bundle of important cases. As well as embracing gay marriage, the justices rescued Obamacare from a potentially fatal semantic glitch, rejected a challenge to a lethal-injection drug that seems to result in botched executions, scolded the Environmental Protection Agency for failing to consider costs before regulating power plants, clarified the meaning of racial discrimination under the Fair Housing Act, and allowed Arizonans to take action against partisan gerrymandering.

And that was just in the last five days of the term. Earlier the justices expanded the rights of pregnant women in the workplace, issued two rulings favourable to Muslims seeking accommodations for their religious views, told the feds to keep their hands off a Californian farmer's raisins, clarified the rules when police stop drivers on the highway and reversed the conviction of a man who had threatened to kill his wife on Facebook.

The role of a judge, Mr Roberts told senators during his confirmation hearings in 2005, is that of an umpire who calls balls and strikes. That is true, he insisted, despite the public's sense that the justices may be little more than politicians in robes. "I'm worried about people having that perception, because it's not an accurate one," Mr Roberts told an audience at the University of Nebraska last autumn. "It's not how we do our work, and it's important that we make that as clear as we can to the public. We're not Republicans or Democrats."

The Roberts court has indeed shown that the justices are willing to wander out of their ideological comfort zones. In February two liberal justices, Ruth Bader Ginsburg and Elena Kagan, found themselves on opposite sides of a dispute over John Yates, a fisherman who tossed overboard some fish he had caught which were smaller than the rules permitted. Justice Ginsburg held that because fish do not qualify as "tangible objects" under an evidence-tampering law passed in the wake of the Enron scandal, Mr Yates should not face up to 20 years in prison. Justice Kagan disagreed, writing that "a 'tangible object' is an object that's tangible".

There were other examples of unusual ▸▸

splits. In *Zivotofsky v Kerry* Clarence Thomas, the court's most conservative justice, voted with Anthony Kennedy and the four liberals to expand presidential power in international diplomacy. In *Walker v Sons of Confederate Veterans*, Justice Thomas again departed from his fellow conservatives in allowing Texas to refuse to print a licence-plate emblazoned with the Confederate flag. This decision, when combined with the murder of nine blacks in a church in Charleston, South Carolina on June 17th, led to the swift removal of the flag—which had lingered on sentimentally for decades—not only from public places in the South but also from Walmart and eBay.

For the second time in three years, too, Mr Roberts gravely disappointed conservatives when he voted to save the Affordable Care Act (ACA), Barack Obama's biggest legislative accomplishment and the target of more than 50 repeal attempts in the House of Representatives. The legal nub of the case, *King v Burwell*, was a mere four words in the 900-page law involving the allocation of tax credits to low- and middle-income Americans. These subsidies, the law reads, are for people buying policies through "exchanges established by the state". But 34 states had left the job of setting up these marketplaces to the federal government. Were millions of Americans ineligible for support because their states had not set up their own exchanges?

No, Mr Roberts wrote. Though the plaintiffs' interpretation of the four words might be the "most natural" reading, dropping the subsidies would make health insurance unaffordable for as many as 8m Americans, leading to fewer enrolments and higher premiums. The result, the chief justice wrote, would be a "death spiral" that would bring the law to a "calamitous" end. "Congress, he concluded, "passed the Affordable Care Act to improve health-insurance markets, not to destroy them."

Chief Justice Roberts, a natural pragmatist, had no interest in making his court appear overtly partisan. Yet that is how the rulings of this session have been received anyway. Ted Cruz, a former Supreme Court clerk and now a Republican presidential candidate, accused the court of lawless behaviour "that undermines [...] the very foundations of our representative form of government". Kevin Williamson, writing in the right-wing *National Review*, declared that the decisions marked the moment of "peak leftism". The greatest outrage, though, came from within the court in *Obergefell v Hodges*, the landmark 5-4 ruling that opened marriage to gays and lesbians nationwide. "Allow[ing] the policy question of same-sex marriage to be considered and resolved by a select, patrician, highly unrepresentative panel of nine," wrote Antonin Scalia, the court's chief conservative scourge, "is to violate a principle even more fundamental than no taxation without representation: no social transformation without representation."

Warming to Obamacare

"Do you think it is the responsibility of the federal government to make sure all Americans have health-care coverage?" % replying

Source: Gallup

The public pulse

Unlike Congress, though, the Supreme Court is obliged to take a position when confronted by social change. Even the dissenting opinions in the gay-marriage decision showed a sensitivity to public opinion which some politicians lack. In his dissent in *Obergefell*, Chief Justice Roberts spoke directly to Americans, using conciliatory tones. "If you are among the many Americans—of whatever sexual orientation—who favour expanding same-sex marriage, by all means celebrate today's decision," he wrote. "Celebrate the achievement of a desired goal. Celebrate the opportunity for a new expression of commitment to a partner. Celebrate the availability of new benefits." Were he a legislator, he went on, he "would certainly consider" the benefits of marriage equality "as a matter of social policy". As a judge, however, he had to hold that the constitution demands nothing of the sort. "I have no choice," he wrote, almost apologetically, "but to dissent."

The Supreme Court rarely likes to get very far ahead of public opinion. Before issuing rulings giving rise to a major social change like the desegregation of public schools (*Brown v Board of Education* in 1954), the legalisation of interracial marriage (*Loving v Virginia* in 1967), or abortion (*Roe v Wade* in 1973) the justices seem to like at least half of Americans to be on board. In this light, the justices' tones in the *Obergefell* opinions owe much to the environment into which they were released.

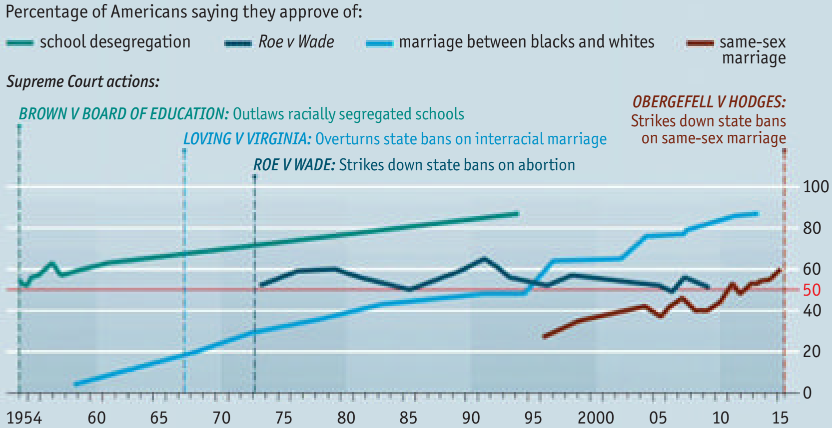
When he dissented from the pro-gay-rights holding in *United States v Windsor* in 2013, a ruling striking down the heart of the Defence of Marriage Act, Chief Justice Roberts included no words of support for the gay-rights advocates he was voting against. Same-sex marriage was legal then in only a dozen states. But the tide changed significantly over the ensuing two years. While he was writing his dissent in *Obergefell*, the number of states with gay nuptials had surged to 37 and popular support for gay marriage had reached 60%.

Next autumn, two racially charged cases await the justices. In *Fisher v University of Texas (II)*, the court will rehear a challenge from a white woman who says the university violated the 14th Amendment when it rejected her because of race-conscious admissions criteria. And they will consider *Evenwel v Abbott*, a major case deciding whether Latino votes are "overweighted" in Texan legislative districts. In either case it may become the turn of Democrats to denounce the court for judicial meddling.

The pattern of Congress leaving the court to rule on social changes that Congress cannot rouse itself to address is troubling for American democracy. But if the alternative is no change—which, given the political polarisation of the country, is highly probable—it is also hard to regret. The danger is that, relieved of responsibility for legislating on some of the most charged social questions, elected politicians are left free to posture without having to face the consequences of their positions, and the polarisation gets worse. ■

Thinking differently

Percentage of Americans saying they approve of:



Sources: Gallup; Harris Interactive

Traffic accidents

Road kill

HOUSTON, TEXAS AND WASHINGTON, DC

Despite improvements, driving in America remains extraordinarily dangerous

THE Cedar Creek Saloon, a bar an hour or so outside Houston, sits just off the freeway next to a clutch of motels, a barbecue restaurant and a petrol station. From anywhere nearby the only way to reach it, realistically, is by car. And yet on a Friday night it is packed with people happily smoking as they work their way through buckets of Bud Light. Not everyone is driving; but one patron, a little worse for wear, admits that not everyone drinking has a lift home. "People out here drink when they want to drink," he says. And drunk-driving laws? "They don't pay attention at all."

Drunk-driving is just one of the perils of American roads. In 2014 some 32,675 people were killed in traffic accidents. In 2013, the latest year for which detailed data are available, some 2.3m were injured—or one in 100 licensed drivers. These numbers are better than a few decades ago, but still far worse than in any other developed country. For every billion miles Americans drive, roughly 11 people are killed. If American roads were as safe per-mile-driven as Ireland's, the number of lives saved each year would be equivalent to preventing all the murders in the country.

In most of the rich world, far fewer people die in road accidents these days; cars are much safer than they were, with crumple zones, airbags, anti-locking brakes and adaptive cruise control. Use of seatbelts is widespread. But compared with other countries, America has not improved much. And in some ways things have been getting worse. For example, between 2009 and 2013 pedestrian deaths jumped by 15% as the economy recovered. In Britain, over the same period, the number fell by a fifth.

Many states are as safe to drive in as Europe: New Jersey, Rhode Island and Massachusetts all have low accident rates, for example. But in rural, sparsely-populated areas, where people drive long distances on long empty roads, the death rates can be shocking. In Wyoming in 2014, 131 people were killed in fatal crashes—a traffic-accident death rate higher than in most of sub-Saharan Africa. According to the Wyoming Highway Patrol, many deaths involve drivers who refuse to wear seatbelts.

Other risky behaviour is equally tolerated. As if roadside bars are not dangerous enough, in Louisiana drivers can stop at drive-through daiquiri joints to top up for the road. Across America, almost a third of traffic deaths involve alcohol. The number of motorcyclists killed each year has more than doubled since the late 1990s—mostly because there are more on the roads but also because, in 31 states, most adult bikers do not have to wear helmets.

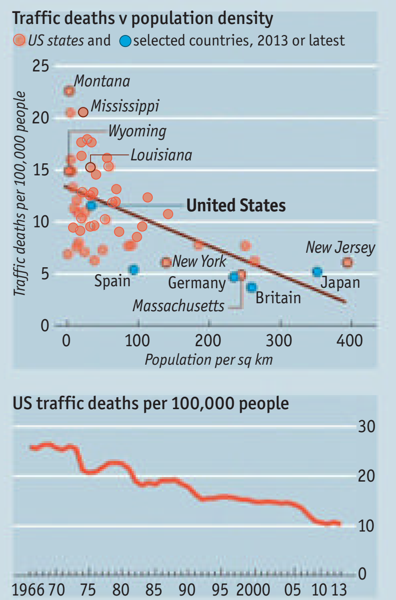
Speed limits on highways in America can often seem low—a product of a law, now abolished, which imposed a national limit of 55mph. But faster roads are proliferating—in Texas, one stretch of toll road between San Antonio and Austin now has an 85mph limit. No clear link exists between speed limits and accidents, perhaps because speed limits are so widely flouted anyway. But the higher the speed, the more likely it is that an accident will be fatal.

A newer problem is mobile phones. A study in 2011 by the Centres for Disease Control found that 69% of American drivers had used their mobile phone at the wheel in the previous 30 days, and 31% had read or sent texts or e-mails. Among European countries, only Portugal was as bad. Just 14 states ban drivers from using hand-held phones while driving.

Perhaps most troubling, however, is changing street design. North-eastern cities are safer largely because they were laid out before the car was universal, says Jeff Speck, a city planner and author of "Walkable City". But populations are growing far faster in sunbelt metropolises such as Houston, Tampa or Atlanta; and there, says Mr Speck, "engineers have been designing city streets like highways", with multiple wide lanes of traffic and few obstacles. That encourages speeding, not a good idea in places also busy with pedestrians.

In places, change is coming. In many sprawling cities, the rise of cheap taxi services such as Uber and Lyft has helped to give drinkers other ways to get home. And bad road design is being improved. Florida, which by one measure has four of the five most dangerous cities for pedestrians in America, has promised to build friendlier roads. The trouble, says Chris Cochran of California's Office of Traffic Safety, is that making driving safer tends to mean making it slower and more annoying. Drivers anywhere tend to dislike that. ■

Empty roads, reckless wheels



Sources: Census Bureau; WHO; World Bank; Insurance Institute for Highway Safety

Gerrymandering

One for the people

SAN DIEGO

The justices let Arizonans tackle an ancient scourge

THE biggest racket in American politics is the process by which legislative district lines are decided. In most states, the party that controls the legislature also draws the map. And in a process known as "gerrymandering", that party typically rigs the districts to make sure its candidates prosper while rival candidates lose. Both Republicans and Democrats are guilty of producing congressional districts, like the one on the right in Massachusetts in 1812, so contorted that they have earned the names "Salamander", "Hanging Claw" and "The Pinwheel of Death".

In 2000, voters in Arizona passed a ballot measure designed to address this inversion of democracy head on. They took the process of drawing district lines out of the hands of their state legislators and handed it to a less partisan body, the Arizona Independent Redistricting Commission, hoping to end "the practice of gerrymandering and improv[e] voter and candidate participation in elections".

After the censuses of 2000 and 2010, the commission drew up new districts. But in 2012 Republicans in the Arizona legislature grew wistful for their power of yore. They sued, claiming the ballot initiative conflicted with the federal constitution's provision that "the times, places and manner of holding elections for senators and representatives, shall be prescribed in each state by the legislature thereof".

The dispute in *Arizona State Legislature v Arizona Independent Redistricting Commission* focused on what exactly a "legislature" is. Writing for five justices, Ruth Bader Ginsburg turned to dictionaries from the founding era defining the term "capaciously". A legislature, she wrote, is "the power that makes laws", whether that power is the people acting on their own or representatives making decisions in the people's name. She consulted John Locke, a 17th-century political philosopher, who wrote that the legislature must bow before the "people's ultimate sovereignty". While admitting that commissions "have not eliminated the inevitable partisan suspicions associated with political line-drawing", Justice Ginsburg cited a study finding that "they have succeeded to a great degree" in "limiting the conflict of interest implicit in legislative control over redistricting".

In a churlish dissent, Chief Justice John Roberts wrote for four conservative justices that the majority offered only "disconnected observations about direct democracy, a contorted interpretation of an irrelevant statute and naked appeals to public policy". And he offered a definition of his own, that a legislature is "[t]he body of men in a state or kingdom, invested with power to make and repeal laws". This meaning is "unambiguous", he claimed.

With this ruling, voters in Arizona, California and a few other states with independent commissions will continue to choose their representatives, rather than the other way round. But another challenge to the commission concept looms next autumn, when the justices have agreed to hear *Harris v Arizona Independent Redistricting Commission*, a complaint that the maps produced by the new body may not have been entirely kosher after all. ■

Solving homicides

Getting away with murder

NEW YORK

Police fail to make an arrest in more than a third of the nation's killings

THE manhunt lasted for more than three weeks. Some 1,300 heavily armed officers, with dogs and night-vision gear, prowled the damp woods of upstate New York in search of two murderers who had escaped from a state maximum-security prison on June 6th. The search is said to have cost around $1m a day. At last, on June 28th, the drama ended: David Sweat, the younger fugitive, was shot and arrested two days after a federal agent killed his co-conspirator, Richard Matt, in the woods near the Canadian border.

So these two killers, at least, are off the streets; but many more still roam the country with impunity. America's homicide clearance rate—the percentage of solved crimes that lead to arrest—has fallen considerably in the past 50 years, from around 90% in 1965 to around 64% in 2012, according to federal statistics. This means more than 211,000 homicides committed since 1980 remain unsolved. Every year introduces nearly 5,000 more.

The fact that so many people are getting away with murder is partly the result of good news. Homicides in America have ▸▸

Our man in Havana

In mid-July, if all goes well, Cuba and America will reopen proper embassies in each other's countries. Diplomatic relations, severed when Cuba became a Soviet satellite in the early 1960s, have been thawing since the end of 2014. The present US Interests Section in Havana, which will become the embassy, is a rectangular modernist cheese-grater erected in 1953 to display "a young, progressive and modern-minded America". The Cuban Interest Section in Adams Morgan, a wealthy bit of Washington, has elegant balustrades and columns and reeks of old money. The most controversial aspect of the arrangement is that the American flag will now fly on the Malecón, a seaside promenade adorned with graffiti of the same flag being trashed.

Sweat cornered

dropped by nearly a third since 1990. Fatal crimes of passion, which tend to be easier to solve, have plummeted just as quickly. The murders that are left—around 14,500 each year—tend to be harder to clear up, as they often involve gangs or organised crime where witnesses are scared.

A closer look at the numbers, however, reveals big discrepancies between cities. Some, such as Houston and San Diego, have managed to raise their rates to between 75% and 90% in recent years. Others, such as Detroit and New Orleans, solve less than 30%. Charles Wellford, a criminologist at the University of Maryland, also notes that murders of police officers are nearly always solved, anywhere. Perhaps, he suggests, "any homicide can be solved if you put the time into it."

Many law-enforcement officials blame their low clearance rates on limited resources and lack of gear. But getting better results "doesn't have to cost that much money", says David Carter, a criminologist at Michigan State University. In a Department of Justice study of police departments with some of the highest clearance rates, he found that the most essential characteristics were trusting relationships with locals and good teamwork. Though television dramas tend to depict wizened sleuths solving crimes alone or in pairs, the most effective departments co-operate and communicate widely. The most costly part of any investigation, Mr Carter notes, is the overtime that must be paid to investigators in the first 48 to 72 hours after a homicide is discovered.

Changing the culture of a homicide-investigation unit is often hard. But the effect can be powerful. Richmond, Virginia, for example, had a serious problem with gang violence in the mid-1990s, and a homicide-clearance rate just north of 50%. The police department then built better relationships with locals and sent more officers to areas with higher rates of crime. From a peak of 160 murders in 1994, the city saw 37 in 2013, 27 of which have been solved. ■

The legal marijuana industry

Silicon Valley meets Bob Marley

DENVER

The rise of cannabis capitalism

MEN in suits swarmed everywhere, but not one spliff or bong could be seen. Any doubts that the legal marijuana (or cannabis) industry is now a serious business soon disappeared after a few hours at the Arcview Investor Network forum in Denver on June 26th.

PhDs and Harvard MBAs networked with investment bankers and hedge-fund managers to raise money for businesses covering every aspect of marijuana commerce, from consumer guides to insurance. Some eager punters discussed the secrets of emerging brands, such as those associated with those two legendary singers and weed experts, Willie Nelson (who announced in April that he is launching his own brand) and Bob Marley. Others debated how to make use of hemp, a crop closely related to weed but, unlike it, indisputably legal to buy and sell, and marvelled at all the jobs being created by the new industry.

A wide range of firms are talking up their potential. Meadow is an online market for medical marijuana. Highest Reward is a cannabis-centered human-resources firm. Leaf has designed a fridge-sized home-growing system that can be operated remotely by mobile phone. Ebbu is a cannabis distillery, selling "feelings not tastes" in five varieties, "chill, bliss, create, energy and giggle". Many of the startups are based in Colorado, including several from CanopyBoulder, a recently opened cannabis business incubator in that city, which offers firms $20,000 and several weeks of training and mentoring in exchange for a 9.5% ownership stake.

Colorado has gone further than any other state in accepting and regulating the business of catering to people who just like smoking marijuana, as well as to those who (officially) consume it as a medicine. The state is an active regulator. Labelling rules have been changed four times in the past two years, complains one entrepreneur—before adding that this makes Colorado a likely model for the cannabis industry in other states as legalisation, he hopes, spreads across America. Oregon legalised marijuana on July 1st, and regulators there are sharpening their pens.

The legal cannabis business is the "fastest-growing new industry around", says Troy Dayton, the chief executive of ArcView, a network of cannabis investors, predicting sales of $3.5 billion this year (not including related products such as vaping devices), up from $2.7 billion last year and $1.55 billion in 2013. This is not like the early days of the internet, where new consumers have to be convinced to buy; legalisation will simply bring lots of existing cannabis-users into the legal market, says Steve DeAngelo, the co-founder of ArcView—and one of the few attending the meeting who looked like a throwback to pre-legalisation days, though he is clearly also a very sharp businessman.

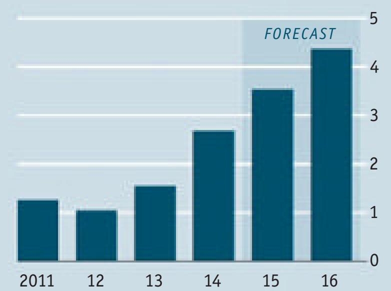
As investors have gained confidence in the industry, publicly traded marijuana companies have soared to well over 200 from a handful two years ago, says Frank Marino, boss of MJIC, which publishes an index of cannabis stocks. Most of these firms are small; by value, the index is dominated by two out-of-state medical-marijuana firms with multi-billion-dollar valuations. Such rapid growth in both numbers and value is already producing signs of frothiness.

Capital flowing to cannabis has increased rapidly in the past year, especially since Founders Fund, an influential Silicon Valley venture-capital firm, invested in Privateer Holdings, which has a stake in companies such as the one developing the Marley brand. Most of the investors so far are not mainstream venture capitalists from California but wealthy individuals from other parts of the country, says Emily Paxhia of Poseidon Asset Management, a hedge fund focused on cannabis.

Much the biggest risks facing the industry are political, says Mr Dayton. He was a drug-reform activist before he started ArcView, in part because he thinks a profitable industry will be better equipped to wage war against opponents of cannabis. One danger is complacency about the legalisation referendums that are on the ballot next year in several states, he says. The other is that next year's presidential race may be won by a committed enemy of cannabis. Ms Paxhia agrees. "My nightmare scenario is President Chris Christie," she says. The governor of New Jersey, now a Republican candidate (see Lexington), has made no secret of his hatred of weed in all its forms—even if legal, branded and marketed by a man in a pinstripe. ■

Spliffing

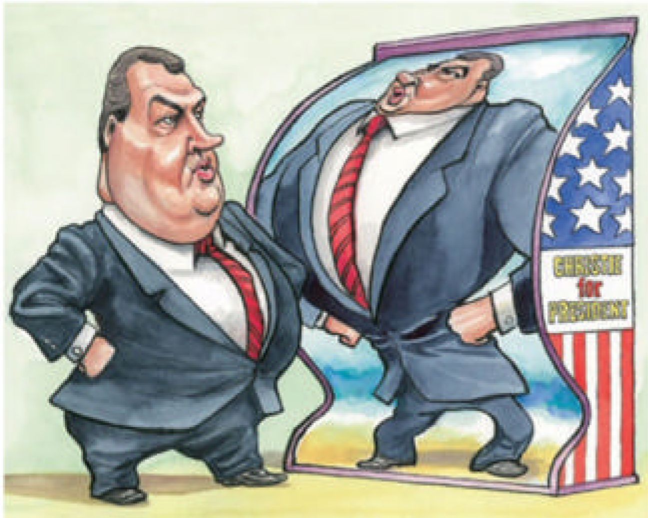
US legal cannabis sales, $bn



Source: ArcView Market Research

Lexington | The vanity of the short-distance runner

What has Chris Christie got, besides himself, to offer to the presidential race?



A LOT of people may ask: why is the opening of this column written in the voice of Chris Christie? Because that voice is where it all starts. The voice of a man ready to tell it like it is. To share. To share the story of how Chris Christie became a fighter and a leader: two-term Republican governor of the great state of New Jersey, a living proof of the American Dream. Like it or not. He won't apologise for loving his country. It's just who he is.

Because in Chris Christie speeches unnamed people ask him helpful questions all the time, such as: Why is Chris Christie not shy in a crowd? And you know what? He has the courage to answer. It all comes back to family, and friends, and to heart. And that heart is on his sleeve. Good or bad. That is how Chris Christie defied the cynics and got elected twice as a Republican in a mostly Democratic state. And why on June 30th he drove to the gymnasium of his old high school and announced that he is seeking the Republican nomination for president of the United States.

Oof. Enough. At his presidential launch the real Governor Christie offered 27 minutes of this stuff: a torrent of chin-jutting self-promotion, dressed up as fearless candour. As he likes to do, the governor built his speech around questions and answers. Children ask the best ones, he chortled, such as: "What's your favourite colour?", and "What's the best part of your job?" His answer to that last one is always the same, he confided: waking each morning with the chance "to do something great". Alas, Mr Christie left out an obvious question prompted by his presidential bid. Namely, why is he running when he is likely to lose by a mile?

This is a timely question: Mr Christie is the 14th declared candidate for the Republican nomination. Two more heavyweight contenders are set to declare soon: Governors Scott Walker of Wisconsin and John Kasich of Ohio. True, the field has its share of hucksters running to secure TV contracts, sell books or simply promote their personal brands. But the pack also includes senators, governors and ex-governors with serious ideas about how to run the country, some of whom may not pass the first hurdle: a TV debate in early August that will be limited to the ten candidates at the top of a basket of national polls.

Though early polling should be taken with a pinch of salt, Mr Christie's numbers are unusually grim. His approval ratings among Republicans dipped after he gave the keynote speech at the 2012 Republican National Convention, and talked about himself for 16 minutes (people counted) before mentioning the name of Mitt Romney, his party's presidential nominee. Mr Christie's ratings among conservatives plunged after he praised and bear-hugged President Barack Obama for sending New Jersey federal aid in the wake of Hurricane Sandy, helping Mr Obama to look bipartisan and benign just before the 2012 election. Meanwhile Democrats soured on Mr Christie after members of his inner circle were accused of creating monster traffic jams in September 2013, allegedly to punish a local Democratic mayor who declined to endorse the governor for re-election (Mr Christie denies all knowledge and was never charged). Five years after he became governor New Jersey's state finances remain ropey, denting Mr Christie's record as a canny manager of public funds. These are weak foundations for a national run.

Don't pander, try candour

In part the vast Republican field is a product of vanity. Politicians are odd people, able to convince themselves that they have paths to victory, even when pollsters, reporters and other naysayers say they are doomed. Self-regard is a particular danger for governors, as they are fawned on by local business bosses, guarded by state troopers and whisked about in motorcades. Running for president is not a popularity contest, Mr Christie told his campaign launch: he is not trying to be "elected prom king of America". Actually the rally was a bit like prom night for New Jersey Republicans. The gym at Livingston High School heaved with state assemblymen, county chairmen, elected police chiefs and Christie family friends: dapper men with silvery hair, trailing clouds of aftershave, and elegant women sporting sequined brooches in the shape of New Jersey. Asked about Mr Christie's chances, several acknowledged that his star has faded since 2012, and that he faces some tough competition. All called truth-telling his great strength. But strikingly, when pressed to name truths that need telling, Mr Christie's backers mostly offered conservative bromides. Americans need to hear that free enterprise and capitalism are what made the country great, suggested the Republican leader of New Jersey's general assembly. America needs fewer hand-outs and more hard work, and Chris Christie will tell them, enthused a retired cop.

Their governor indulged their mood. Listing supposedly harsh truths that need airing, Mr Christie began with the idea that government is broken, and that this is the fault of "bickering" Washington leaders. The crowd cheered that tired truism, and waved signs bearing the slogan: "Telling It Like It Is".

To be fair, one big, painful idea lurks within Mr Christie's presidential policy platform: that higher-income old folk may have to give up some of their Social Security pensions and Medicare health benefits in years to come, to stop entitlements from eating up the federal budget. That is rather brave, especially when Republicans so rely on older voters. Mr Christie alluded to this idea in his launch speech. But he did not spell out the cuts he had in mind, instead burying his argument in a rambling metaphor about a horse bolting from its barn that can be put back in only by force.

On current showing, it is not clear what New Jersey's governor brings to the presidential contest. So let him improve the quality of Republican debate by raising genuinely painful questions about federal benefits to rich oldies. An unexpected conclusion looms: Mr Christie must become less shy and retiring. ■

Also in this section

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Brazil's foreign policy

Making friends again

BRASÍLIA

Unpopular at home, Dilma Rousseff yearns for foreign successes—and luckily, plenty of other Brazilians want that too

WHEN Barack Obama took his Brazilian counterpart, Dilma Rousseff, for a stroll around the Martin Luther King memorial on June 29th, the sky over Washington was cloudless. There was no hint, either, of the heavy weather caused by revelations two years ago that American spooks had spied on Ms Rousseff's e-mail. She reacted by calling off a state visit, plunging relations into a wintry gloom. Nobody expects that upset to be forgotten, but the rapport between the presidents (pictured, with a ranger) has warmed.

So too have political ties, including in sensitive areas such as climate-change diplomacy. The leaders exchanged vows to generate 20% of their countries' electricity from renewable sources (other than hydropower) by 2030. For Brazil, some recent emollience in American foreign policy smoothed the path to reconciliation: it felt easier to make up with an American president who is exchanging embassies with Cuba (see page 24) and pursuing a nuclear deal with Iran.

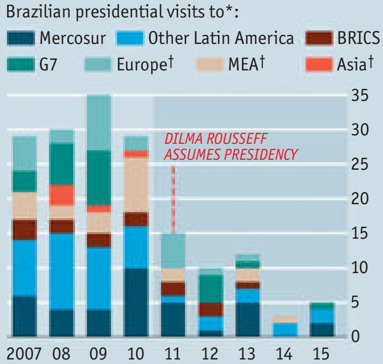
Apart from the fence-mending, Ms Rousseff's trip was dominated by trade. She wooed investors in New York with infrastructure concessions worth $64 billion; and on July 1st she sought advice on innovation from tech entrepreneurs in Silicon Valley. To coincide with the visit, America promised to lift a 14-year-old ban on imports of Brazilian beef. A deal easing non-tariff barriers and harmonising customs procedures could happen next year.

Ms Rousseff has reasons to be looking abroad for success. With her country mired in stagflation, a multi-billion-dollar corruption scandal ensnaring more and more of her political allies, and her approval rating barely in double digits, her best hope of good news lies in external dealings. To Brazilian eyes the American economy looks perky, despite a blip in the first quarter, compared with the sputtering of emerging markets. The value of Brazilian trade with China was 19% down between January and May from last year's level, as the price of oil and iron-ore exports plunged.

And the two big democracies of the western hemisphere could certainly do a great deal more together. Although the United States has been overtaken by China as Brazil's biggest trading partner, it is still the country that buys the most Brazilian manufactures. It has also invested more in Brazil, $116 billion in total, than any other country. Brazilians would love to sell the Americans more aeroplanes and cows, and attract more of their firms. The two countries exchanged just $110 billion of goods and services in 2014—a sixth of the trade between America and China—and both want that total to double in a decade.

Stay-at-home Dilma

Brazilian presidential visits to*:



Source: Ministry of External Relations

*Until June 30th †Excluding G7 and BRICS members

A quickening step

Whatever the domestic imperatives at work, the pace of Ms Rousseff's foreign activities, since her second term began in January, has amazed diplomats. Even now, admittedly, she jets around less (see chart) than her peripatetic predecessor and patron, Luiz Inácio Lula da Silva, did. But she seems to have carried out more foreign business in the past six months than in the previous four years. A hyperactive new foreign minister, Mauro Vieira, has helped.

Some substantial work has been done. On a visit to Brazil in May the Chinese prime minister, Li Keqiang, pledged $103 billion in loans and investments that will upgrade ports and other transport infrastructure. At a summit in Brussels last month Brazilians toiled to unlock trade negotiations between the European Union and Mercosur, an ineffectual regional trade bloc nobbled by Argentina's protectionist president, Cristina Fernández; these are poised to restart after more than a decade in the works, once Argentines pick a new leader in October.

Earlier Ms Rousseff had signed a (modest) trade deal with Mexico and a co-operation agreement with the OECD, a club of mostly rich countries which Brazil looks ▸▸

increasingly keen to join. In August she will host Germany's chancellor, Angela Merkel. There is talk of a visit to Japan before the end of the year.

Full marks for effort, but caution is advised in assessing the probable net result, especially when it comes to trade. Brazil has had liberalising spells before, only to revert to protectionist type. No matter how often they say *abertura* (opening), Brazilian officials cannot shake off a mercantilist obsession with exports. Unless prompted, ministers in Brasília hardly mention imports, which are still impeded by tariffs and red tape. And for all Mr Obama's talk of Brazil as a "global power" whose "national interests and values align" with America's, he is busy forging a huge free-trade deal with Pacific economies (which excludes China) and a transatlantic one with the Europeans. Both these projects leave Brazil on the sidelines.

On the positive side, Brazil's more outward-looking mood is a reflection of something more than the president's personal imperatives. Many Brazilian business leaders have realised that to survive the next wave of globalisation they will have to learn to compete with foreign rivals at home as well as abroad. Some, notably Brazil's highly efficient farmers, are already happy to do so, if it means gaining access to foreign markets, and their voice is being heard in government. "The biggest threat to Brazilian protectionism is Kátia Abreu," remarks one insider, referring to the formidable agriculture minister whom Ms Rousseff has recruited from the private sector.

For Brazil to achieve its long-discussed potential as a global player (economically and diplomatically), it will take more than a politically needy president. Fortunately, plenty of other influential Brazilians, both inside and outside politics, seem finally to understand that. ■

Bello | Time to call the FARC's bluff

Colombia's peace process risks drifting to collapse

IT WAS never going to be easy. Three times since the 1980s Colombian governments have tried but failed to broker peace with the guerrillas of the Revolutionary Armed Forces of Colombia (FARC). Even so, the latest talks seemed set to succeed in ending a conflict that has dogged Latin America's third-most-populous country. Facing strengthened security forces, the FARC, a narco-Stalinist outfit, has lost all hope of military victory. Unlike the previous efforts, the negotiations are following a tight agenda, of five points, aimed at ending the conflict for good. They take place in Havana, opaquely, in an effort to insulate them from the continuing conflict back home.

But the process has been grindingly slow. After 32 months agreements have been reached on only three of the five points. In the past year the two sides have become bogged down on the most difficult issue—transitional justice, or what punishment, if any, guerrilla leaders accused of war crimes should face.

Now, for the first time, the whole peace process looks in jeopardy. In April the FARC killed 11 soldiers bivouacked in a village sports centre in Cauca, in the south of the country. This broke an indefinite ceasefire declared by the guerrillas in December. With Colombians outraged, President Juan Manuel Santos ordered a resumption of bombing raids: more than 40 guerrillas, including two former negotiators, were killed. Their ceasefire formally abandoned, the FARC have staged almost daily attacks on oil pipelines and electricity pylons, on one occasion spilling 10,000 barrels of oil into a river.

Through all this, the talks in Havana have continued. On June 4th the two sides agreed on the terms of an 11-member Truth Commission, to take testimony from protagonists and victims of an extraordinarily messy conflict that has involved right-wing paramilitaries as well as the FARC and the army. Another accord, on reparations to victims, seems close.

But this evidence of momentum looks to be too little, too late. The Cauca attack and what followed have exhausted public patience with the talks. In a poll taken in late April Mr Santos's approval rating fell to 29%, from 43% in February. Divisions have appeared in the government.

The real damage from Cauca and its aftermath is what it reveals about the FARC. It suggests that some guerrilla units may not want peace. The leadership failed to condemn the attack, calling instead for the government to agree to a bilateral ceasefire. They know that this is politically impossible for Mr Santos until the talks are in sight of success and the FARC on the brink of demobilisation: the guerrillas used a government ceasefire during the previous talks in 1999-2002 to recruit and re-arm. The FARC's negotiators seem happy to spin out the talks indefinitely. But Mr Santos faces a drumming of fingers from across the political spectrum.

That makes it urgent to clinch a deal on transitional justice. The outline of such an agreement has long been clear. Those guerrilla leaders accused of war crimes should face a special judicial tribunal. Those found guilty must spend some time, albeit much reduced, in a facility that can be described as a prison. Similar terms would apply to senior army officers accused of atrocities.

Punishment of some kind is essential if a peace agreement is to stick, and to be endorsed by public opinion (polls find that up to 80% of Colombians want the FARC to do jail time). According to Javier Ciurlizza of the International Crisis Group, an NGO, the FARC have in private at last accepted the principle of punishment, but want it meted out by an international tribunal and only after they have had the chance to build a political base. Those conditions are unacceptable to the government. Behind these quibbles lies a worrying philosophical abyss. The guerrillas still portray themselves as rebels against an abusive state, but most Colombians see them as a bunch of criminals who must show remorse and accept the rules of democracy.

The president, whose hobbies include poker, now faces a choice. Call the FARC's bluff by laying on the table a take-it-or-leave-it offer on justice—or risk the talks collapsing anyway in the cycle of retaliation. Burdened by disappointments in other areas, Mr Santos has staked his presidency on a peace agreement. But objectively it is the FARC's negotiators who need it more. Return to war in Colombia, and sooner or later they will be killed.

"If the talks break down, I don't think anyone would have the patience to go through this again," Sergio Jaramillo, Mr Santos's chief peace negotiator, has said. True. But courting a breakdown may be the only way to succeed.

Canada's irate leftist

A furious beating of wings

OTTAWA

A prime minister-in-waiting tries to curb his hot Hibernian temper

MAKING a politician who is given to bursts of rage and colourful language seem cuddly and reassuring is a hard job. So too is transforming the image of a party that is branded by opponents as a bunch of tax-and-spend socialists who would bungle the nation's economy.

Both makeovers will be needed if Thomas Mulcair is to capitalise on the chance he has to lead his New Democratic Party (NDP) to victory and become Canada's first really left-wing prime minister. After overturning four decades of Progressive Conservative rule in the province of Alberta in May, the NDP is now tipped to come top in national elections in October.

But does the party, or its leader, have the gravitas to govern? The label of "Angry Tom"—fine for an opposition gadfly but not for the leader of a big, important country—has dogged Mr Mulcair at least since 2008. That was when, as a newish MP, he lost his cool with the Conservatives during a row over a Malaysian asylum-seeker. What happened is disputed, but he was called to order by the Speaker after some Tories said he made menacing gestures. He once called a reporter a "crap journalist" and admits to inheriting a "good Irish temper" from his paternal forebears.

Now aged 60, he claims to have mellowed and makes jokes about his reputation. Last Hallowe'en he dressed as an Angry Bird, a character from a computer game (see picture), and was photographed with his granddaughter, boosting his self-description as a "kindly grandfather" who could at times have a "frank way of dealing with things" but had now found more serenity. His latest campaign ad shows him in a coffee shop, smiling a lot.

Properly used, the struggles of Mr Mulcair's youth could be an electoral asset. He and his nine siblings were not raised in poverty (their father was an insurance executive) but he paid his way through law school by toiling on tar-and-gravel roofs, which is sweltering, sticky, dangerous work. At the same time, he must show that later life has refined him. His wife Catherine, born in France, seems to have helped him speak more elegant French.

Compared with presenting a new self, proving his economic competence ought to be easier. Mr Mulcair's courting of the business world has often been compared to Tony Blair's creation of New Labour, a formula that won three elections for the former British prime minister. But last

Prepare for a pecking

month Mr Mulcair's efforts went awry.

He began well, telling the denizens of Bay Street, Canada's equivalent of Wall Street, that New Democrats believed in balanced budgets and had shown this whenever they formed provincial governments. But the following day, on national radio, he flubbed a simple question on the rate at which corporations are taxed, and his plan to bring it closer to the G7 average.

Mr Mulcair thought the G7 mean was about 18-19% (actually it is 25%) and he thought Canada's was "about 12 to 13, something like that" when in fact it is 15%. That was a gift to the ruling Conservatives, who had failed (or maybe never tried) to go for Mr Mulcair's weak spots. Stephen Harper, the prime minister, mocked the muddled numbers: "Typical of the NDP...it does not know what the taxes are; it just knows everybody's taxes have to be higher."

Hitherto the Conservatives had directed most fire at their traditional rival, the Liberal party, pointing out the youth and inexperience of its leader, Justin Trudeau. They may have thought a high (but not too high) NDP score could split the centre left and help them remain in power.

Now Mr Mulcair will have to keep a close eye on the prime minister, not least for lessons on what to avoid. Mr Harper, who is also rather a bruiser, once tried to present a gentler self by sporting a pullover in a campaign ad. He was ridiculed as "sweater Steve"—and reverted to his usual formal attire. Canada's voters hate it when people pose as something they are not. ■

Caribbean passport sales

Tickets to paradise, and beyond

Travel papers from tiny islands help all sorts of folk reach bigger places

"THIS is a remarkably rewarding industry," Timothy Harris, the prime minister of St Kitts & Nevis, told the leaders of three similarly small island nations—Antigua, Dominica and Grenada—last month.

Selling passports is indeed a boon to those four mini-states. Clients do well too: their documents give them visa-free entry to many countries, including Britain and the 26 European nations of the Schengen area. (In May, Grenada and Dominica joined the other two in enjoying Schengen access.) Apart from money, the islands don't ask much. You have to spend five days on Antigua; the others do not demand even that.

In St Kitts, this year's budget statement called the sales a "mainstay". The country's income topped $100m in 2013: over 13% of GDP, and more than one-third of state revenue. It entered the business in 1984 but sales surged after the terms were revised in 2007. A cheap option is a $250,000 gift to the Sugar Industry Diversification Foundation, a state body that has published no accounts since 2011.

Every so often, there is trouble. In 2013 an Iranian flew to Canada on a St Kitts passport; he falsely claimed to be meeting the prime minister. Canada reacted by imposing a visa rule. Last year America's Treasury said Iranians had used St Kitts passports for dodgy financial deals. The island says it has tightened up, stopping Iranians and Afghans from buying its documents and insisting that country of birth, and name-changes, be shown.

Antigua decided in 2013 to enter the trade; it says this year's takings will be one-quarter of state revenue. Up to last month, it had sold 510 passports: two-fifths went to China and a third to the Middle East.

Investment* (any one) that qualifies for citizenship, 2015:
0.0 Government fund 0.0 Property 0.0 Business

Sources: Government statistics; Henley & Partners; *The Economist*

*Excludes due diligence, processing and agent fees, fees for dependents
†Includes a $50,000 government fee

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Vietnam and America

Power plays

HANOI

Vietnam's new friendship with America reflects political drama at home

SHOULD all go to plan, America's government will soon host an unlikely guest. Nguyen Phu Trong's visit to Washington—perhaps as soon as July 6th—will be the first by a serving chief of America's old enemy, the Communist Party of Vietnam (CPV). In theory Mr Trong is the most senior politician in his country (though not, in practice, the most powerful). His trip marks an upturn in relations between America and Vietnam, just as the latter's dealings with China have soured. But where the new friendship leads will in part depend on the result of struggles in Vietnam. A party congress in a few months' time could have a big impact on Vietnam's policies at home and abroad.

America and Vietnam have had diplomatic ties for two decades, but growing cuddliness is a recent trend. America frets about Vietnam's atrocious human-rights record, even if it may be improving (on June 27th Vietnam released a high-profile political prisoner, Le Quoc Quan, a human-rights lawyer—the latest of several high-profile dissidents to be freed). Yet it appreciates Vietnam's enthusiasm for the American-led Trans-Pacific Partnership (TPP)—a proposed regional trade pact that would not, at least initially, include China. America is thought to be particularly keen to find a way for its naval ships to dock more freely at Cam Ranh Bay, a base on Vietnam's southern coast.

For Vietnam the relationship is more urgent, and the stakes much higher. Last spring a state-owned Chinese company moved an oil-drilling rig into contested waters close to the Vietnamese coast, sparking anti-Chinese riots in parts of Vietnam's central and southern provinces. Spooked by this assertiveness—and by a gaping trade deficit with its moody northern neighbour (see chart)—Vietnam has been seeking new friends. Last October it convinced America partially to lift a long-standing ban on arms sales to Vietnam. But this strategy still worries some conservatives in the CPV, who fear inflaming China further and who believe that America may be quietly trying to undermine the party.

Unbalanced

Vietnam's merchandise trade, $bn

Source: IMF

American officials paint Mr Trong's visit as an exercise in "trust-building" between two countries still plagued by deep and troubled memories of their war, which ended 40 years ago. Mr Trong, however, may be thinking as much about burnishing the party's credentials at home. Many ordinary Vietnamese worry that the CPV is too close to China's Communist Party. His meeting with President Barack Obama may help to allay their suspicions that he and his ally, President Truong Tan Sang, have been soft on the Chinese.

Mr Trong may not be on the scene for much longer. He may well end up retiring after the party's next five-yearly congress, which may take place in January or February. There, Vietnam's three highest roles—party chief, president and prime minister, among whom power loosely circulates—will be dished out to three members of the 16-seat Politburo. Forecasting the result is difficult. But with public opinion tilting firmly against China, party factions seen to advocate a tougher line against the Chinese—and a friendlier one towards America, Japan, India and South Korea—look most likely to emerge as winners.

Their leader is Nguyen Tan Dung (pictured, above left, with Mr Trong) a self-styled economic reformer and the prime minister since 2006. Despite a poor record in fighting corruption, his government seems open to ideas from Western-educated Vietnamese. Mr Dung seems more eager than other leaders to promote reforms needed to boost feeble productivity growth, not least by pressing on with the part-privatisation of Vietnam's many state firms—changes which the TPP would probably require. On June 26th the government said it planned to relax limits on ownership by foreigners in several industries.

In part through patronage, Mr Dung has ▸▸

greatly expanded his power: prime ministers are normally much weaker in Communist systems. His ties with provincial party heads and the bosses of state firms have enabled him to dominate the party's 175-member Central Committee. But this does not necessarily mean Mr Dung will emerge victorious at the coming congress. Enemies will be looking for weaknesses, of which he has shown a few. Mr Dung suffered embarrassment in 2010 following a loan default by Vinashin, a state-owned shipping firm which was meant to be an exemplar of his reform agenda. In 2012 he narrowly survived a campaign by rivals in the Politburo to oust him. Yet he is still widely regarded as the country's most capable and charismatic politician. China's aggressive behaviour in the South China Sea, where the two countries are in bitter dispute over maritime boundaries, has strengthened his position by giving him a chance to assert his nationalist credentials.

Mr Dung has already served two terms as prime minister and is forbidden to seek a third. But he is thought to fancy the role of general secretary (Mr Trong's job, at present). Winning that would probably allow Mr Dung to install one of two allies as prime minister: Nguyen Xuan Phuc, a deputy prime minister, or Nguyen Thi Kim Ngan, a deputy chairwoman of the country's legislature, the National Assembly. Mr Dung's camp may still face a challenger, however. President Sang may choose to keep his job, or he may retire and find an ally to replace him (Phung Quang Thanh, the defence minister, and Tran Dai Quang, who controls the police, are possibilities.)

But there is also speculation that Mr Dung may try to take on the posts of general secretary and president and toss a concession to his opponents by offering the premiership to a politician close to Mr Sang. That would mark a "major transition" in Vietnamese politics, says a foreign analyst. It would, ironically, make Vietnam's political system more like China's, where Xi Jinping enjoys unrivalled influence as both the country's president and chief of the Communist Party.

Such a grab for power would make some in the party feel queasy. Mr Dung's ambition and strong personality have long seemed in conflict with the CPV's slow, consensus-based processes. But many think that perilous times call for decisive leadership. On June 25th a Chinese maritime authority announced that the state-affiliated oil rig that was moved close to Vietnam last year was again being positioned nearby (though this time just inside waters that are generally considered Chinese). The announcement is probably a sign that China is unhappy with Mr Trong's decision to visit America; the rig's next movements—towards or away from Vietnamese territory—will show how much displeasure China feels. ■

Civil society in Cambodia

The vice tightens

PHNOM PENH

New laws could curtail individual freedoms in Cambodia

SIX women sit in a loose circle on the concrete floor of a sparsely furnished apartment down a narrow alley in Phnom Penh, sharing a simple meal of rice and vegetables. All have made the familiar developing-world journey from field to factory. They came to the capital looking for work that pays better than farming small plots of rice by hand. They found it at one of Cambodia's roughly 1,200 workshops making shirts, shoes and other clothing for export to Europe and America. Such factories employ around 700,000 Cambodians and account for around 80% of total exports. They barely existed 20 years ago.

Five of the six women earn Cambodia's minimum wage: $128 per month. The sixth is a union leader who wangled a modest hike for herself and some fellow seamstresses, who now make $133. But she has been unable to stop the factory's owners from forcing employees to work overtime, or from refusing sick leave to anyone who fails to request it a day in advance. Neither she nor any other union leader in Cambodia has been able to curtail the practice of repeatedly rehiring workers on short-term contracts in order to avoid the protections granted to workers with more than two years' tenure. Her shop floor, she says, remains stifling. She complains that the factory's bathrooms are cleaned only when the owners get tipped off that an inspector is coming. Workers are warned that complaining may result in the factory being shut down and them losing their jobs.

Apoplectic in Phnom Penh

Cambodian unions may soon find their power even more limited. A draft law would require that a union can be established only if at least 20% of the workers in a company are members. It grants the government sweeping powers to punish or dissolve unions for working with groups deemed to have committed "economic sabotage" or acts that are "damaging" to Cambodia's interests. The law also specifies large fines for a range of ill-defined activities such as agitating for "purely political purposes". Its vague wording makes many worry that it will be enforced with more fervour against independent unions than those affiliated with employers or the government.

This is not the only restrictive legislation that Cambodia's government wants enacted this year. A law likely to be adopted in the coming weeks would require both foreign and domestic NGOs to register with the government or face fines, criminal proceedings or expulsion. It would allow the government to withdraw a group's registration for failing to be politically neutral, or deny it if a group's activities are deemed harmful to stability, national security or even just Cambodian "traditions". That could mean almost anything.

The law would also give the government sweeping power to seize NGOs' cash. Also likely to be adopted soon is a cybercrime bill that would impose heavy fines or jail sentences on those whose online writing is deemed to "generate insecurity" or undermine the "integrity" of any government agency. Cambodia's leaders may have been inspired by their counterparts in China, their country's close friend, who appear similarly keen to use laws to crush dissent (see page 35).

Many Cambodians are enraged by the legislation. Naly Pilorge, the head of a Cambodian human-rights watchdog, warns of "the end of independent civil society". On June 30th hundreds of people marched on the parliament to protest against the proposed laws (see picture). A few days earlier, some 32 international NGOs working in Cambodia—including Amnesty International, Human Rights Watch and Oxfam—complained that groups like theirs had not been consulted or asked to comment on the draft law relating to their work. Sam Rainsy, who heads Cambodia's main opposition party, has said he opposes the law on NGOs. But he is unlikely to be able to stop it. His party holds just 55 of the legislature's 123 seats.

The proposed bills share a common inspiration: fear of unrest. In 2013, protests over both parliamentary election results and factory conditions turned bloody. Though Cambodia's next general election is not due until 2018, the vice-tightening is starting now. ■

Australia's north

Taming the frontier

SYDNEY

Australia wants to turn its most remote region into an Asian investment hub

AUSTRALIANS have long viewed the north of their country the way America once regarded its West: as the last frontier. The region of red deserts and steamy coasts above the Tropic of Capricorn sprawls across the states of Queensland and Western Australia and the Northern Territory (NT), a federal domain (see map). It is the size of India, yet its population is tiny. Barely more than 1m of Australia's 23m people live there. But the north is changing. Once a haven for misfits and fortune-seekers, it is now attracting people at a faster rate than the rest of Australia, thanks largely to a boom resulting from the sale of its iron ore, coal and gas to Asia's resource-hungry economies. Tony Abbott, Australia's conservative prime minister, goes so far as to call the region an emerging "economic powerhouse".

On June 18th Mr Abbott's government published a white paper outlining plans for developing northern Australia over the next 20 years. Such attention is long overdue. Six of Australia's top ten trading partners are located in Asia. Darwin, the NT's capital, is closer to some Asian capitals than it is to Canberra, Australia's capital. Yet to succeed, Mr Abbott's scheme must overcome other tyrannies of distance that have crushed earlier dreams to unlock the north: scorched landscapes, few roads and high investment costs.

The plan drew on proposals by the Institute of Public Affairs, a libertarian think-tank. The institute has promoted its ideas in tandem with a group in Western Australia founded by Gina Rinehart, whose iron-ore wealth from the Pilbara region, in that state's north, has made her Australia's richest person. Both outfits want northern Australia to become a hub for Asian investment. To encourage this, they have pressed the government to make the region a "special economic zone". They want it to have lower business and income taxes than the rest of Australia.

The lobbyists have clout among Australia's political leaders. Five months before he became prime minister in 2013, Mr Abbott told those attending a dinner at the institute, including Mrs Rinehart, that his support for northern Australia's development was tantamount to a "big fat yes" to policies "you urged upon me". Later in that year's election campaign, Kevin Rudd, the former Labor prime minister, unsuccessfully tried to trump Mr Abbott by promising a 20% business-tax rate for the NT, a

third lower than the national rate.

Now that Mr Abbott has unveiled his plan, the government has dropped the idea of a distinct "special economic zone" (a disappointment to China, perhaps, which helped to popularise the term and may have enjoyed the notion of being invited to invest in one set up by a supplicant rich country). Andrew Robb, the trade minister, says officials "looked closely" at the idea. But Australia's constitution bans the levying of different levels of federal tax on different states. Instead, there are pledges to invest in infrastructure such as roads and dams (to trap water from monsoon rains). One aim is to boost the population, though the target for as far in the future as 2060 is still only 4m-5m. The government wants to relax visa rules to allow mining companies to recruit more overseas workers, and to abolish caps on seasonal workers from Pacific Island nations and Timor-Leste.

Potential investors face problems, however. Aboriginal Australians hold or claim much northern land under laws which recognise their traditional links to it. Other swathes of the north, known as pastoral leases, can only be used for livestock farming: a legacy of 19th-century laws aimed at stopping land grabs. The government wants to loosen rules governing both types of land. Mr Robb argues that more "certainty and flexibility" on land tenure could help "woo new investment".

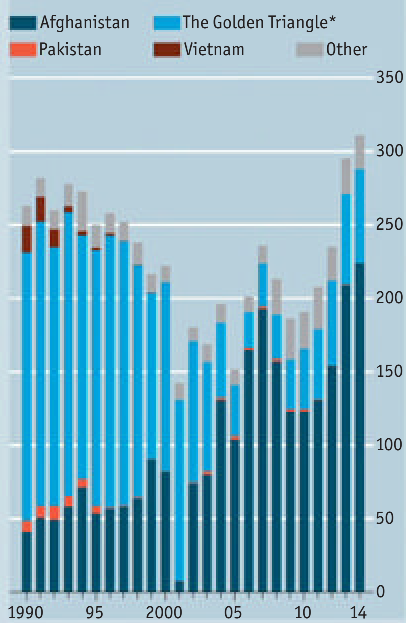
But Noel Pearson, an aboriginal elder from north Queensland, worries that such developments could leave indigenous people with "scraps". Such views carry weight. Two years ago Woodside, one of Australia's biggest energy producers, ditched plans to build a liquefied natural gas plant in Western Australia after a bitter dispute involving traditional landowners and environmentalists.

The scheme does have some promise. Northern Australia has already grabbed much of the foreign direct investment in Australia's booming mining business. In 2012 alone there was A$206 billion ($213 billion) of it. China, Australia's biggest trading partner, with which it recently signed a free-trade deal, has welcomed the latest plan. But coaxing post-boom investment in the food and service industries may not be so easy. And China's enthusiasm is not to be counted on. As its economy slows, so too does its demand for Australian minerals. As Saul Eslake, an economist, observes, the north's harsh landscape and remoteness are always likely to triumph over "emotional appeals" to the notion of populating vast empty spaces. ■

Afghan highs

As violence surges in Afghanistan, so too does the country's opium business. Last year was the deadliest year ever for non-combatants, with nearly 3,700 killed. In its latest World Drug Report, the UN says it was also a record year for the area of farmland used to grow opium: 224,000 hectares, which produced 85% of the world's opium and 77% of its heroin. When cocaine production was at its peak in Colombia in the 1980s, drugs produced 6% of that country's income. In Afghanistan, they generate at least 15%. The business thrives on the lawlessness of conflict, which has escalated in Afghanistan along with the withdrawal of a large part of the American-led international forces. Large-scale poppy-growers often use their connections to keep prying officials at bay. Eradication efforts thus mainly target poorer farmers. That risks making the violence worse. Desperate farmers stripped of their livelihoods may turn to the Taliban.

Global illicit opium-poppy cultivation, hectares '000



Source: UNODC

*Laos, Myanmar and Thailand

Nutrition in India

Of secrecy and stunting

DELHI

The government withholds a report on nutrition that contains valuable lessons

A REMARKABLE story has been unfolding in the past decade in India. A new study—conducted by the government and the UN agency for children, Unicef—offers evidence of a steady and widespread fall in malnutrition. But the picture is still grim. Judged by measures such as the prevalence of "stunting" (when children are unusually short for their age) and "wasting" (when they weigh too little for their height), India is still vastly hungrier than Africa.

India's government has been sitting on the report for months, though it has been ready since at least October. One rumour suggests official concern about the quality of the data, but Unicef has voiced no such worry. Another possible reason is the pride of India's prime minister, Narendra Modi, who ruled Gujarat for a dozen years. The new data indicate his relatively prosperous state performed worse than many poorer ones. *The Economist* has obtained the report, known as the Rapid Survey on Children (RSOC). It shows gains at both national and state levels.

Much of what hitherto was known about nutrition in India came from the National Family Health Survey (NFHS) conducted by the government in 2005 and 2006. Work on a follow-up is under way. Unicef and the government agreed in the meantime to conduct the RSOC. It involved 210,000 interviews across 29 states and territories in 2013 and 2014; more than 90,000 children were measured and weighed, as well as 28,000 teenage girls.

Unicef's nutrition adviser for South Asia, Victor Aguayo, says India's overall gains have been "unprecedented". A decade ago 42.5% of all children under five were underweight. Now the reported rate is just below 30%. That improvement coincided with a period of rapid economic growth, rising household incomes and more spending on welfare such as free cooked midday-meals in schools. Madhya Pradesh in central India cut the proportion of its children who go hungry from 60% to 36%; Bihar in the north, from 56% to 37%.

The case of Maharashtra, a wealthy state on the western coast, is revealing. The proportion of children there who are underweight fell from 37% to 25%. Mr Aguayo cites Maharashtra as a "good example" of how to deal with malnutrition, identifying four crucial changes there: better and more frequent feeding of infants, more care for pregnant women, higher household incomes and a rise in the age at which women begin having babies. Officials and politicians in Maharashtra played a crucial role by helping to target worst-afflicted groups such as tribal people known as *adivasis*.

Still suffering

Other national trends follow similar patterns. The RSOC suggests that the proportion of children who are wasted fell from nearly 20% to 15%, and the stunting rate fell from 48% to nearly 39%. Yet still, more than half of children in Uttar Pradesh, a massive northern state, are below normal height. And amazingly, even among the wealthiest fifth of Indian households, more than a quarter of children are stunted. This may be because of sexism: mothers and girls get less food, health care and education than males. Over half of all girls aged 15-18 had a low body-mass index, meaning they were likelier to produce undernourished babies.

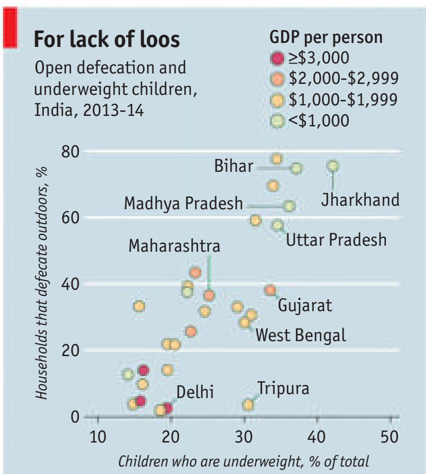
The RSOC highlights several failures. A deworming campaign has achieved little: not even 28% of under-fives had been given a recent dose. And though many women gave birth in institutions, fewer than half of babies were, as the WHO recommends, breastfed within an hour of birth.

India's age-old habit of defecating in the open—which distinguishes it from many other developing countries—makes matters worse. The proportion of Indians who do this has fallen from 55% a decade ago to 45%, but that is more than enough to help spread diseases, worms and other parasites that make it more difficult to absorb nutrients even when food is abundant. Poor public hygiene may account for much of India's failure to make faster improvements in nutrition. There is a clear correlation between open defecation and hunger (see chart).

Coincidentally or otherwise, states run in the past decade by Mr Modi's Bharatiya Janata Party (BJP) appear to be laggards compared with several states that are (or were) under the control of rivals. The most sensitive example is Gujarat, which Mr Modi has touted as a model because incomes there are high. The RSOC shows that the proportion of hungry children in the state fell from 44.6% to 33.5%, but that remains worse than the national average. Maharashtra next door has similar incomes and has fared much better. Gujarat is also worse than average for stunting (42%), severe stunting (18.5%) and wasting (18.7%). Nearly two-fifths of its population defecate out of doors.

Asked about child malnutrition in Gujarat in 2012, Mr Modi told the *Wall Street Journal* that it was a middle-class, vegetarian state, and that: "The middle class is more beauty conscious than health conscious...If a mother tells her daughter to have milk, they'll have a fight. She'll tell her mother, 'I won't drink milk. I'll get fat.'" Some found that answer about as satisfying as a cardboard biryani. Amartya Sen, an economist and Nobel laureate, says Mr Modi does not provide strong leadership on health policy. He notes that spending on health care fell in this year's national budget. India devotes barely 1% of GDP to it, far behind China, for example.

In African countries, the proportion of children who are underweight is 21%—well below India's level. For India to match that, more states will have to act like Maharashtra. Growth alone is not enough. Politicians also need to help women and other vulnerable groups get the food, medicine and toilets they need. ■



Source: Rapid Survey on Children, Unicef and Government of India

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National security

Everything Xi wants

BEIJING

A new national-security law hints at the Communist Party's fears

SINCE taking over as China's leader in 2012, President Xi Jinping has shown an unusual preoccupation with challenges to the country's security. A year later, to handle these, he set up a new national security commission and made himself chief of it. On July 1st the country's parliament helped him further by adopting a new law on national security. It conveys the remarkable range of Mr Xi's worries, with potential threats seen to be emanating from sources as diverse as the internet, culture, education and outer space. For its insight into the often opaque psychology of China's elite, the bill will be welcomed—not so, however, by anyone with grievances against the Communist Party.

The law is a dense 6,900 characters of party-speak, with little in the way of detail (not even any specific punishments), but plenty of obligations such as to "defend the fundamental interests of the people" and take "all measures necessary" to protect the country. Many countries, including America and India, have laws on national security. But the variety of concerns covered in China's is striking, as is the vagueness of its language (an exception is that April 15th will henceforth be observed as National Security Education Day). It may be followed by detailed regulations later. But it is unlikely that its key terms will ever be defined more precisely. To Mr Xi, vagueness is a useful weapon.

The law's first article sets out the document's intention: to "protect the political power of the people's democratic dictatorship and the system of socialism with Chinese characteristics". As always, the party's grip on power and state security are treated as synonymous. Mr Xi's role as national-security chief is primarily concerned with domestic threats. These include ones commonly regarded as national-security problems, such as terrorism. But they also include the challenges posed by free speech and liberal ideology.

Mr Xi has moved more decisively than his predecessor, Hu Jintao, to head off these perceived dangers, by rounding up numerous dissidents and tightening controls on the internet, as well as launching a "people's war" on terror among Muslim Uighurs in the western region of Xinjiang. An important difference between an earlier draft of the law, released in April, and the final document is the greater prominence and space given to clauses related to the party's monopoly on power. The bill (which replaces one passed in 1993) is one of five new laws currently in draft form or recently passed that may help Mr Xi strengthen the muscle of the security apparatus. The others are an anti-espionage law, passed last year, and laws currently in draft form on counter-terrorism, cyber-security and foreign NGOs.

The law makes a nod to one of Mr Xi's pet causes, strengthening "rule of law". Article 15 requires the state to "strengthen the mechanism for conducting checks on and oversight over the exercise of power". That is not as it sounds. At an annual party meeting last October, Mr Xi set out a vision of the "rule of law" that clearly suggested it was to be used to keep the party in control, not to hamstring its power. On July 1st the legislature also declared that from next year, officials will have to swear loyalty to the constitution when taking office. That document supposedly protects freedom of speech, of the press, of assembly and of association. Yet its first article also specifies that China is a "people's democratic dictatorship". Mr Xi never seems to mention the nicer-sounding parts.

A "duty" to snitch

His anxieties have some justification. The party has long since lost its ideological legitimacy: the madness of the Maoist era from the 1950s to the 1970s put paid to that. Its economic legitimacy may also be waning: a slowing economy, rising prices and rising taxes make it harder to buy people off. Ordinary citizens are increasingly willing to express their grievances—protests involving thousands of people broke out in a suburb of Shanghai on June 22nd over rumours of a plan to build a chemical factory in the area, for example. The unrest lasted for several days until police began arresting dozens of participants. The rapid expulsion of air in recent days from the colossal bubble that is China's stockmarket is also causing jitters in Beijing: millions of investors are people who have borrowed heavily to pour money into dodgy shares.

Under the new law, the duty of individual citizens to protect national security (for which read, not stir up trouble) is emphasised. This aspect is clearer than it was in ▸▸

the initial draft. Equivalent laws in most countries tell citizens what they must not do, such as leak state secrets. China's law tells them what they are required to do, including reporting anything that may pose a threat. That is likely to add to anxiety among members of the country's beleaguered community of political activists, who are already victims of vague legislation that has long been in force. In the southern city of Guangzhou, prosecutors are reportedly preparing a case against a blogger, Liang Qinhui, for "incitement to subvert state power". His alleged crime was posting "sensitive" tweets. (One supposedly said he would "rather be an American dog than a Chinese pig".)

Those alarmed by the new bill include foreign businesses. Some had already expressed concerns about the other security-related laws packaged with it, such as the draft counter-terrorism law, released in March, which demands that companies release encrypted data on request. The new law asserts China's right to ensure that critical infrastructure and information systems are "secure and controllable". Given China's current anxieties about the use of foreign technology in computer systems it deems important, foreign firms worry that such innocent-sounding language could eventually result in stricter curbs on the use of their products. The draft law on foreign NGOs has similarly sown anxiety. It will require such organisations to register with the police.

There may be a little relief in Hong Kong. The document mentions the former colony's obligation to uphold national security. But officials were quick to point out that the bill would not be applied in the territory, which has its own British-inspired legal system. Its exemption may not last forever. Chinese officials would like Hong Kong to pass its own law on national security; it says the territory is obliged to do so by its post-colonial constitution. But when Hong Kong's government tried to pass such a law in 2003, massive demonstrations erupted that eventually caused the then chief executive, Tung Chee-hwa, to step down. Officials in the territory are unlikely to be in a hurry to try again (notwithstanding an unusually low turnout on July 1st for an annual parade in Hong Kong by supporters of greater democracy; a movement that appears to have lost steam in the face of China's intransigence).

Elsewhere in China, the chill being spread by Mr Xi's new laws is unlikely to dissipate soon. A senior legislator told reporters after the latest one was passed that China's national security was "more complicated than at any other time in history". The state news agency, Xinhua, said all of the 155 legislators who voted on the law were in favour, apart from one who abstained. At least Mr Xi need not worry about the loyalty of his parliament. ■

Rich kids

Lifestyles of the rich and infamous

BEIJING

It's not easy having it all

NOW decades old, China's economic boom has brought a better life to hundreds of millions. But it has also created new problems, such as pollution and inequality. And, for the super-rich, a moral conundrum: how, wealthy parents wonder, can they raise children who do not behave like arrogant brats?

China now has an estimated 1.09m people with personal wealth of at least 10m yuan ($1.6m), and 67,000 "super-rich" ones with assets above 100m yuan, including 213 dollar billionaires. Their children, the "second-generation rich", or *fuerdai*, are the object of rapt attention in national media and a mixture of envy and revulsion among ordinary folk.

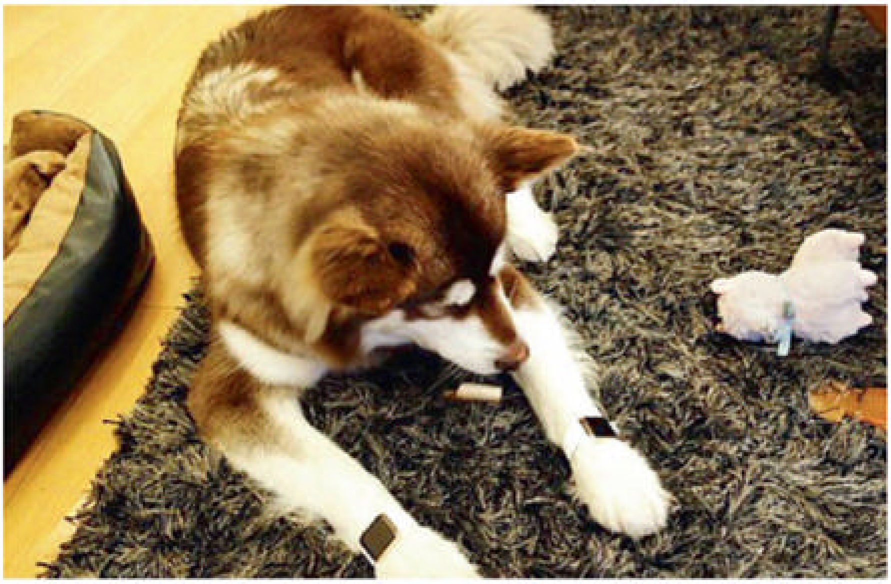
They can be seen driving outrageously posh cars which, thanks to stiff import duties, can cost $1m or more. Some of them post ostentatious pictures and vulgar rants about their exploits on social media. Wang Sicong, the son of one of China's richest tycoons, recently aroused a storm of criticism for saying that his main criterion when selecting a girlfriend was that she must be "buxom". He also posted snaps of his Alaskan husky wearing two gold Apple Watches, worth tens of thousands of dollars—useful, no doubt, if the dog ever needs to surf the internet.

In June Xi Jinping, China's president, told a government meeting that China's young rich must curb their hedonistic ways. They should be guided, he said, "to think about where their wealth comes from" and be patriotic, law-abiding and hard-working. A week after his remarks were made public, state media reported on a training session in the prosperous coastal province of Fujian for 70 offspring of billionaires, where they were taught "traditional Chinese culture, social responsibility and business knowledge"—and fined 1,000 yuan if they turned up late.

According to some *fuerdai*, all this will be an uphill battle. Wang Daqi, a 30-year-old from a monied family, profiled several of his peers in "Burden of Wealth", a book published in May. It sought to paint a more nuanced portrait of the lives the *fuerdai* lead, but he acknowledges that ostentation is the only value many of them know. "It's pretty pathetic, actually," he says. Among those who do work, he adds, most choose to invest their family wealth in other businesses. "To build a new business of your own takes a lot of work, but if you just seed startups you don't have to do the hard work or carry too much responsibility."

Another member of the *fuerdai*, a 26-year-old Beijing native whose father is a self-made investment banker, says some of his friends are from politically well-connected families and probably owe some of their wealth to corrupt dealings. Others have honest family fortunes built from scratch, and many, he reckons, fall somewhere in between. "We don't talk too much among ourselves about where the money comes from," he says. "We all understand it can be very sensitive."

China's ongoing anti-corruption campaign, he thinks, is doing more than any training programme to get rich kids to tone things down—at least in public. They still party hard and buy new cars every six months. "But now when they go out, they just take the BMW 7 Series instead of the Aston Martin." ■



Two smartwatches? I'd rather have a bone

Middle East and Africa

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Islamic State

Spreading its tentacles

CAIRO, LAGOS AND TUNIS

Islamic State is making itself felt in ever more countries. But how much influence does it really have outside Syria and Iraq?

WHEN Abu Bakr al-Baghdadi declared a caliphate in June last year he dropped "Iraq and Syria" from his group's name. From then on, he said, it should be called simply Islamic State (IS), which was more in line with its ambition to spread its ghastly version of "Islamic" rule across the globe. A year later it does indeed have influence well beyond those countries' borders, as the bloody past week shows.

Groups using the name of IS claimed responsibility for the shooting of tourists in Tunisia (see next article) and the bombing of a Shia mosque in Kuwait on June 26th. French officials say IS may also be linked to a beheading in Grenoble on the same day. Days later IS said it was behind the bombing of a mosque in the Yemeni capital of Sana'a, while some speculated that it was also behind a bomb that killed Hisham Barakat, Egypt's prosecutor general, in Cairo. (IS has not claimed that attack, but earlier threatened the judiciary.) On June 29th it grabbed a town in Afghanistan. Two days after that, Egypt's IS-linked group was in gory action against the army.

IS has connections in the Middle East and beyond, but the relationships between its leaders in Syria and Iraq and those who carry its name elsewhere are varied and murky. In 11 countries, including Yemen and, its most recent addition, Russia (see page 42), IS has recognised a group as one of its own. Elsewhere, eg, in India, groups claim to be IS but are not (yet) accepted by Mr Baghdadi. In Tunisia the gunman may simply have heeded IS's call

on Muslims to carry out attacks; although a group there has pledged allegiance, IS has not recognised it.

Once Mr Baghdadi accepts a *bay'a*, or pledge of allegiance, IS declares a new "province" of the caliphate. But according to *Dabiq*, IS's English-language magazine, the group sets strict criteria for each affiliate. To have a chance of attracting favour, it must appoint a governor, set up a ruling council and implement IS's version of Islamic rule. It must have a plan to conquer territory. With its claims to statehood, IS sets itself apart from other terrorists.

Dabiq also stresses a need for communication and says approved groups will receive support. But for the most part, even these recognised groups appear to have limited operational contact with IS's leaders in Syria and Iraq. Its Libya outfit appears the most intertwined. That group was established in the northeastern town of Derna in late 2014 by locals who had fought with IS in Syria and Iraq. Its grisly beheading of 21 Coptic Christians in February resembled similar atrocities in Iraq and Syria, right down to the orange jumpsuits worn by the victims. Video of the killings was produced by the IS media branch.

Egypt's "Sinai Province", which grew out of Ansar Beit al-Maqdis, an established outfit, also has links with IS's leaders. It has become more lethal since joining up. On July 1st it killed dozens of soldiers during co-ordinated attacks in Sinai. This may be because the Egyptian and Libyan provinces were cultivated by IS's Khilafa army, which is sent out for foreign operations, including training prospective affiliates.

Other groups simply adopt the IS brand, but show no sign of controlling territory or attempting to rule. The group's affiliate in Algeria has carried out just one attack, beheading a French tourist, and that was before Mr Baghdadi accepted its oath. Boko Haram, the Nigerian jihadist group, has put out slicker videos with an IS flag at the bottom since joining up in March. It has copied IS's savage beheadings and started to call itself the "West Africa Province", but little else has changed. "Boko Haram's leadership is not Arab and won't be well known to IS," says Will McCants of the Brookings Institution, a think-tank.

The financial relationship between IS and its offspring is unclear. The group may not have much cash to spare since the coalition against it is targeting the source of its funds, especially oil. Movement of weapons between non-contingent areas of the caliphate is nigh on impossible. Tunisia's attacker appears to have been trained in Libya rather than Syria or Iraq despite the vast areas under IS control there. Even basic communication may be tricky.

IS may, however, have some sway over ▸▸

where recruits join the fight, which would explain why the large number of Tunisians going to Syria and Iraq has started to drop off. More foreigners are now heading to Libya or staying home to carry out attacks.

Affiliates use varied tactics. In the Gulf, IS members have targeted Shia mosques to foment sectarian strife. In places such as Yemen and Afghanistan, IS seeks to undermine strong branches of al-Qaeda, its jihadist rival. Elsewhere spectacular attacks, such as the massacre in Sousse, have helped IS live up to its slogan of "remaining and expanding"; conveniently diverting attention from the group's losses not only in Syria and Iraq but farther afield. IS fighters in Libya were kicked out of Derna by rival jihadists, and are now trying to assert themselves in Sirte. Boko Haram used to control an area the size of Belgium until a February offensive pushed it out of almost all its territory.

And expansion can be a weakness. Al-Qaeda found it was undermined by franchises that had their own aims. Islamic State in Iraq, the progenitor of IS that subsequently broke from al-Qaeda, was even more brutal, ruining attempts to woo Muslim hearts and minds. IS appears not to worry that people might think it too extreme, but it does not want to appear weak. If its affiliates cannot hold territory, they undermine the group's raison d'être. And for now, it looks like they cannot. ■

Tunisia's economy

The other victim

Terrorism will slow growth, but Tunisia's economy has deeper problems

Evil under the sun

THE loss of human life is of paramount concern, insisted Selma Elloumi Rekik, Tunisia's tourism minister. But the killing of 38 tourists by an Islamic State-inspired gunman at a beach resort in Sousse on June 26th prompted another worry. "This is a catastrophe for the economy," she said. Sadly, she is right. Last year Tunisia's beaches and museums attracted 6m tourists, whose spending accounted for 7% of GDP and supported more jobs than anything but agriculture. Now thousands of visitors have fled. More are cancelling trips.

Tunisia has made political progress since protesters toppled the dictatorship of Zine el-Abidine Ben Ali in 2011. Last year it adopted a new constitution and held parliamentary and presidential elections. But those achievements have not been matched in the economic arena, which is still haunted by Mr Ben Ali's abuse. Growth slowed to 2.2% in 2014, from an already sluggish 2.6%, estimates the World Bank. The jobless rate remains above pre-revolution levels at 15.3%.

The attack in Sousse comes just three months after jihadists entered the Bardo National Museum in Tunis, the capital, and killed 22 people, most of them foreign tourists. A fall in tourism revenue will not only slow the economy further, but also lead to smaller foreign-exchange reserves and a higher current-account deficit, which was 7.4 billion dinars ($4.4 billion) in 2014. Foreign direct investment, already low, may be scared off. Still, many expect the economic blow to be softened by other exports, cheap oil, a foreign-reserve cushion and backing from the West. Tunisia's small stockmarket and its currency have fallen only slightly.

Spillover from the war in Libya and a downturn in Europe, Tunisia's biggest trading partner, also threaten the economy. But the country's biggest problem is of its own making. The government has failed to cut the red tape and end the corruption that have long stifled business. Tunisia's revolution—and the Arab spring itself—began after Muhammad Bouazizi, a fruit vendor, set himself on fire to protest about officials who would not let him ply his trade without bribing them. The old regime was so crooked that by the time Mr Ben Ali was deposed, firms connected to him reaped 21% of private-sector profits, while employing just 0.8% of the workforce and producing just 3.2% of output, according to a report from the World Bank.

Most Tunisians think graft has got worse since then. The system that favoured Mr Ben Ali's cronies remains largely in place, benefiting other businessmen. "It poses a big obstacle to a swift recovery," says Bob Rijkers, the report's lead author. Domestic and foreign investors continue to face barriers to entry in sectors representing nearly 60% of the economy. The woes of McDonald's are typical. Under Mr Ben Ali the fast-food chain was denied access to the country for not picking the "right" partner—ie, a government insider. Four years after the revolution there are still no golden arches in Tunisia.

The public is not just missing out on fast food. Prices are higher than they should be. Based on data from December 2013, Mr Rijkers and his colleagues found that incoming international calls in Tunisia cost about 20 times as much as the market price in the region. Red tape and graft have also distorted the jobs market. Firms that cannot cope with all the paperwork operate in the shadows, but this makes it hard to obtain capital and hire new workers. Outside agriculture, up to 40% of jobs are informal. The official solution has been to hire more government workers.

The new ruling coalition, which has a large parliamentary majority, may enact reforms. But there is still a reluctance to open up certain sectors and little debate over the large role of the state. Powerful trade unions can slow things down and Nidaa Tounes, the party with the most seats, includes many former members of the old regime. Its founder, Beji Caid Essebsi, now Tunisia's president, has lamented the state of the economy. "We must…confront the fact that poverty is producing terrorism," he wrote last year. So far, though, little progress has been made on either front. ■

Stunted

Tunisia's:

Sources: Haver Analytics; Tunisia Statistics Office

The Iran nuclear talks

I wonder what he meant by that?

A deal on Iran's nuclear programme may depend on one sick, old man

JUNE 30th was never going to be an immutable deadline for reaching a comprehensive agreement between six world powers and Iran to constrain its nuclear programme. Diplomats know that the endgame is always the hardest part of any negotiation; and so it has proved. It remains likely, but far from certain, that a deal can still be done in Vienna by July 7th, the new deadline the negotiators have set themselves. Should the talks drag on any longer, a sceptical American Congress will get 60 days rather than 30 to review the accord, thanks to the August recess. That would give critics more time to muster support.

But if Congress represents a problem to be overcome later, Iran's supreme leader, Ayatollah Ali Khamenei, is a far more immediate obstacle. On June 23rd, just as the negotiators were starting on the final lap, Mr Khamenei set out seven red lines that, he said, Iran would never cross.

All American and UN sanctions must be lifted immediately after an agreement is signed, he said. Curbs on Iran's nuclear R&D programme were also unacceptable. And he declared that inspectors from the International Atomic Energy Agency (IAEA) would be refused the access needed to verify that all Iran's nuclear activities are peaceful. Military sites would be entirely out of bounds, he insisted, as would the interrogation of Iran's nuclear scientists. Iran's parliament has also passed a law banning inspectors from military sites.

It is not the first time that Mr Khamenei has made such statements. But both the timing of his remarks and their apparent rejection of the framework agreement hammered out in Lausanne three months ago look aimed at scuppering a final accord. John Kerry, America's secretary of state, dismissed it as just playing to the gallery at home. That, however, fails to explain why Mr Khamenei would risk the political humiliation of a deal being struck by Iran's negotiators which would inevitably drive a truck through his red lines. Mohammad Javad Zarif, Iran's foreign minister and chief nuclear negotiator, flew to Tehran on June 28th to consult the special council that oversees the negotiations and reports directly to the supreme leader. Two days later, hours before the "deadline", he returned to Vienna still insisting that a "final deal" was possible.

The Americans and the Europeans are adamant that there will be no backsliding over the Lausanne "parameters". On inspections, that means the IAEA's full-fat Additional Protocol (AP), which is in force in 126 states and has become the norm for nuclear safeguards. The AP does not quite provide for the "anywhere, any time" inspection regime that might be desirable in Iran's case, given its history of cheating. But it does require access to military bases if there are grounds for suspicion about what might be going on at them. The agency has made numerous military site visits in other countries. Once a state accepts AP, it is legally obliged to implement all aspects of it.

There may be some wriggle room when it comes Iran's past nuclear activities (which the IAEA euphemistically calls the "possible military dimensions" of its nuclear programme). The Americans say they are not looking for a public confession. But there must be enough co-operation for the inspectors to find out about Iran's past efforts to make nuclear weapons (much of which probably ceased in 2003, but some of which may have continued up to 2009). They need to draw the broad conclusion that such activities have stopped and that the intent of the nuclear programme is now peaceful.

Another question is what limits will apply to Iran's work on advanced centrifuge development during the first ten years of an agreement, and how many it may deploy in the next five. The new IR-8 centrifuges Iran is working on can reportedly enrich uranium at up to 20 times the speed of the old IR-1s. In 15 years' time Iran could have enough of these new centrifuges to reduce its "breakout period" (the time needed to produce enough fissile material for a bomb) to no more than a week or so.

The remaining areas where agreement is proving hard are over the pace of sanctions relief and the mechanisms for reimposing some or all of them if Iran is found to be cheating again. America, France and Britain want an automatic "snapback" of UN Security Council sanctions in the event of a major violation that no other permanent member of the council (ie, Russia or China) could veto.

This is all far beyond Mr Khamenei's red lines. So what is going on? One possibility is that he has completely misjudged how far Barack Obama is prepared to go to get a deal, not to mention the opposition he will face if there is any backsliding. Another is that he does not know what constitutes the greater threat to the regime he leads: the ending of Iran's pariah status or its continuation.

Most ordinary Iranians are desperate for the economic opportunities the former will bring; but the regime's ideologues and their cronies quite like things as they are and fear change. Whether or not there is a nuclear deal may depend much less on the arcane technical details being thrashed out in Vienna and more on how the 75-year-old supreme leader, ailing from prostate cancer, resolves this dilemma. ■

Syria's conflict

Drawing in the neighbours

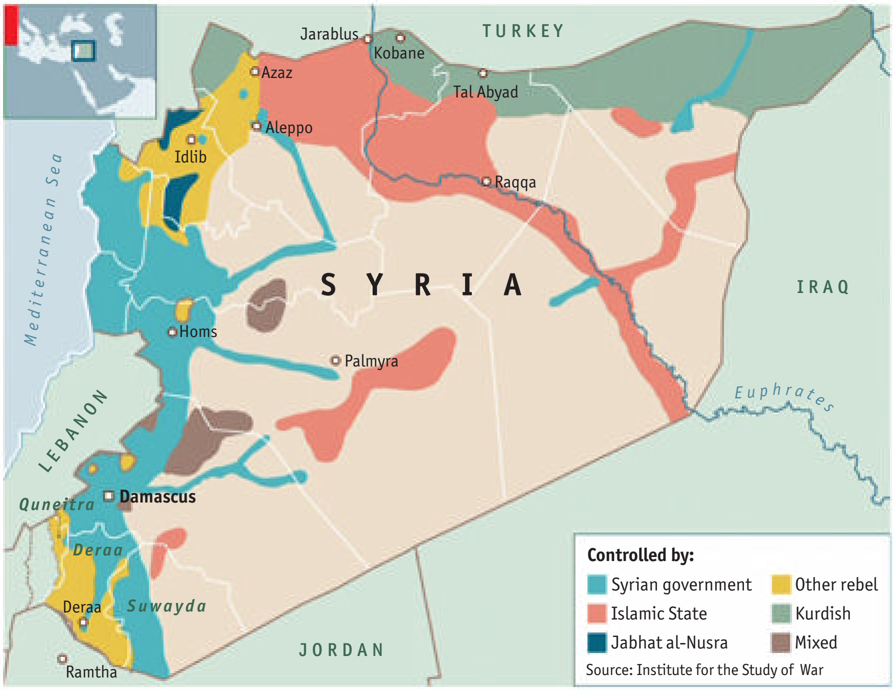
CAIRO AND ISTANBUL

Turkey and Jordan are considering setting up buffer zones in war-scorched Syria

BACK in 2011, when Bashar Assad started to slaughter Syrians protesting against his dictatorial rule, the neighbouring states of Turkey and Jordan were keen to stop the bloodshed. Mainly due to America's reluctance to get embroiled in another messy Middle Eastern affair, neither acted. Four years later, both are once again giving serious consideration to wading into Syria.

Independently of one another, the countries' officials are said to be planning to set up buffer zones along their borders just inside the war-torn country. Turkish papers talk of an area 110km long and 33km deep (70 miles by 20 miles) along Syria's northern frontier. The *Financial Times*, citing anonymous officials, reports that Jordan plans to establish a haven across the provinces of Deraa and Suwayda in southern Syria. In the case of Jordan carefully vetted Syrian rebels, rather than foreign forces, would man the areas.

Such zones have been mooted many times before, but the urgency has risen as ▸▸



Syria continues to disintegrate. Several years ago the idea was to give the Syrian rebels an area in which to organise. Later on, as the war worsened and thousands of refugees fled, it was justified on humanitarian grounds. Today Syria's neighbours are more interested in protecting themselves. "It's a matter of national security," says an adviser to Jordan's king.

Turkey's chief concern is that Syrian Kurds might carve out a state for themselves, which would become a magnet for Turkey's own Kurds, who have at times called for self-rule within Turkey. Syrian Kurdish fighters linked to Turkey's Kurdistan Workers' Party (PKK) took over the town of Tal Abyad in mid-June with the help of rebel units and American bombers. As a result, three enclaves that they hold are now pretty much joined together. On June 26th Recep Tayyip Erdogan, Turkey's president, vowed that he would "never allow the establishment of a Kurdish state in northern Syria".

Although the Kurds accuse Mr Erdogan of tacitly supporting IS, the jihadists are also a growing worry for Turkey. They are too close for comfort in Jarablus, a border town that abuts the Turkish province of Kilis, and look poised to grab Azaz, a key supply route for other rebels supported by Turkey, Qatar and Saudi Arabia.

It was IS's conquest in May of Palmyra, 240km from the Jordanian border, that startled the kingdom into intensifying what the king's men call "precautionary measures". Officials fear the jihadists will fill any vacuum left by the Assad regime, which has lost key southern bases and the Druze heartland of Suwayda in recent weeks. A buffer zone would help allied rebels hold them off, while putting Jordan's northern towns out of reach of rockets, which last week rained down on Ramtha, killing one person. Syria's neighbours would also like to see more Syrians stay inside their own country. Turkey is home to 1.8m Syrian refugees; uprooted Syrians are now a fifth of Jordan's population.

The weakened Assad regime poses little threat to these plans. A buffer zone is easier to set up in the south than the north, where rebel groups are more fissiparous and devout. After months of vetting, the Southern Front, a conglomerate of over 50 rebel groups, is already receiving training, salaries and weapons from Jordan.

But there is scepticism that either country will do more than sabre-rattle. Analysts question their ability to control rebels from a distance. Turkey's army is reluctant to get bogged down in a conflict that is likely to draw in Kurds and IS alike. And unlike previously declared buffer zones, such as that in northern Iraq after the 1991 Gulf war, the safe havens would not be protected by a UN-sanctioned no-fly zone.

America, the only power that could enforce such a restriction, does not want to get involved, creating the biggest obstacle to any buffer zone. Its relations with Turkey are acrimonious. Barack Obama recently complained that Turkey should be doing more to stop the flow of foreign fighters heading through its territory to join IS. The Americans are also irritated by Mr Erdogan's refusal to let the coalition against IS use Incirlik airbase to carry out air strikes. (Turkey says the price is American agreement to a no-fly zone.)

The best model for what Jordan and Turkey could achieve may be Israel's. It has quietly facilitated something akin to a buffer zone along its (shorter and UN-patrolled) frontier with Syria. It has fostered links with southern rebels. They recently kicked Mr Assad's forces, reinforced by Hizbullah and Iranian Revolutionary Guards, out of the adjoining province of Quneitra. Today, Israel looks like the safest of all Syria's neighbours. ■

Nigeria

Learning from Lagos

LAGOS

Nigeria's commercial capital is crowded, noisy, violent—and a model for the rest of the country

FOR a city that dubs itself the "centre of excellence", Lagos has a lousy reputation. The mere mention of Nigeria's commercial centre conjures images of crime, corruption and motionless traffic. The bodies of people run over in car accidents can be left on the street for hours and commuters in even the poshest parts of town are sometimes caught in shoot-outs between robbers and policemen. Little wonder then that in a ranking of the "liveability" of 140 cities by the Economist Intelligence Unit, a sister company of this paper, it sits in the bottom five. The besieged Libyan capital Tripoli scores higher, and war-threatened Damascus only fractionally worse. Its citizens are also an unruly lot: men urinate on the don't urinate signs, people hawk by the don't hawk signs and loiter by the no loitering signs.

Yet the city is a lot better now than it was two decades ago. Bola Tinubu, who became the governor of Lagos State when civilian rule was restored in 1999, remembers taking over a "slum". "The traffic was chaotic. The infrastructure was disintegrating. There were mountains of refuse all over," he recalls. "People were being murdered. Armed robbery was rampant. Dead bodies were picked on the street on average 10-15 times every week. There was no control of any kind."

Lagos was rundown in the late 1990s because it was badly run. Rapid population growth, as rural migrants flocked to the big city, outstripped its infrastructure. No one really knows how many people live in Lagos: estimates range from 10m to ▸▸

21m, but its congested roads and bridges have space for just a fraction of them.

Under military rule, the city was neglected by the central government. In 1991 Nigeria's capital was moved to Abuja, an orgy of grandiosity built in the middle of the country to symbolise unity. Public spending followed the politicians there to pay for wide boulevards and marble-floored palaces. After the restoration of democracy in 1999 Lagos still found itself neglected, largely because its citizens had the temerity to vote for opposition parties, the forerunners of the All Progressives Congress (APC) that earlier this year unseated the incumbent People's Democratic Party (PDP) that had run Nigeria for 16 years.

Mr Tinubu and his successor as governor, Babatunde Fashola, both say their efforts to reform were often frustrated by the PDP-led federal government. It failed to upgrade the main roads in the city that were under federal control, including one leading to West Africa's biggest port. It delayed approval for an important train line that the state government was willing to pay for. "I don't want to be understood as recriminating," Mr Fashola says, "but I know things could have been better."

Instead of relying on Abuja for funds, Lagos learned to generate its own. It created passable systems to monitor its own spending and squeeze taxes out of citizens not known for their eager compliance with such things. Internally generated revenue has risen to 23 billion naira ($115m) per month, from almost nothing a few years ago. That still amounts to only a few tax dollars per person. But the state has been able to borrow against that income to finance projects such as a much-needed bridge linking the upmarket areas of Ikoyi and Lekki. Moreover, its reliance on local tax collection has forced it to improve its services in order to attract businesses.

And in this regard it has done well. The state produces about $90 billion a year in goods and services, making its economy bigger than that of most African countries, including Ghana and Kenya. Much of Nigeria's industry, which once thrived in the north, can now be found in the suburban manufacturing estate of Agbara. Cranes hang over the city and land is being reclaimed from the sea as developers rush to satisfy the vast appetite for property.

Seth Kaplan of Johns Hopkins University in Baltimore argues that whereas national elections in Nigeria are a squabble over petrodollars, local elections in Lagos favour candidates who show competence and pragmatism. The opposition's success in managing Lagos played a big role in its sweeping victories in state and national elections earlier this year.

Now that the APC holds power in Abuja as well as Lagos, the city has a chance to do better still. Many hope its efforts will not now constantly be stymied by a ruling party afraid of being shown up.

It could also teach politicians in the capital a thing or two. One lesson is that it helps to foster a broad tax base, instead of just relying on oil (which provides more than two-thirds of the central government's revenues). Better tax collection would make the budget less vulnerable to wild swings in the oil price. It might also lead to more accountable governance: people who pay tax tend to demand better services in return. Another moral is that better infrastructure boosts economic growth, and if you don't have the money to pay for it upfront, you can get private investors to do so instead: witness Lagos's toll-roads and bridges.

For badly run countries in other parts of the world, the big lesson of Lagos is that reforms in one big city can sometimes kick-start wider change. ■

Surprisingly orderly these days

Nigeria's currency

Toothpick alert

Desperate measures from the bank

CENTRAL bankers may talk in martial terms of defending currencies against bloodthirsty speculators, but they seldom suffer wounds more grievous than a bruising of their egos. They can, however, cause untold harm to economies, as the Central Bank of Nigeria (CBN) is doing in puffing up its exchange rate.

The naira has been hit hard by a fall in the price of oil, Nigeria's main export. The official exchange rate has slumped by almost 20% over the past year to about 196 naira per dollar. The black market rate, a more accurate gauge, is close to 230. Instead of allowing the naira to devalue, the central bank is trying to defend it by blocking imports. It has drawn up a list of disfavoured goods, and will not grant foreign exchange to import them.

Godwin Emefiele, the governor of the central bank, said he wants to conserve foreign reserves (which have fallen by about a fifth over the past year and now cover only six months of imports) and stimulate local production. "Nigeria cannot attain its true [potential] by simply importing everything," he said.

The hit list appears to have been drawn up by someone wandering around a home and a building site and randomly pointing at items. It includes Indian incense, toothpicks and wire rods as well as more obvious luxuries such as private jets (demand for which could be slashed by simply barring government officials from flying in them). It also includes basics such as rice and tinned fish. Nigeria does not produce enough of these things to feed itself, but no matter. The nation must be shielded from foreign sardines.

Economists find the policy baffling. Central banks usually prop up their currencies if they are worried about inflation, or allow them to devalue to depress imports and stimulate exports. Nigeria, by contrast, appears to be set on achieving both an uncompetitive exchange rate and higher inflation. Whereas many investors were impressed by the previous CBN governor, Lamido Sanusi, who was sacked for exposing corruption, they fret about the harm being inflicted by the current one. Some wonder which would be worse for Nigeria: allowing him to serve the remaining four years of his term or undermining the independence of the central bank by sacking him.

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Russia and Islamic State

Caucasian jihad

MAKHACHKALA

Islamic State is recruiting volunteers in the Caucasus. Russia may be letting them go

IN OCTOBER 1832 Russian soldiers besieged the village of Gimry (pictured) in the mountains of Dagestan in an effort to capture Gazi-Muhammad, the first imam of the Caucasus Imamate, who had defied their rule. He was killed, but his follower, Imam Shamil, jumped over the line of Russian bayonets and escaped. Ever since then, Gimry has been a symbol of defiance and a stronghold of Islamic rule.

In the autumn of 2014 Russian soldiers again besieged the village. They were trying to capture Magomed Suleimanov, a native of Gimry who had been proclaimed emir of the Emirate Caucasus, an al-Qaeda-linked insurgency launched in 2007. The soldiers sacked a neighbouring settlement, forced out its population of 1,000 and looted their houses. Mr Suleimanov escaped, but Gimry remains surrounded by Russian soldiers; only residents are allowed in.

Yet the Russian army, it seems, is fighting yesterday's war. While it is still trying to catch Mr Suleimanov, his insurgency seems to be on its way out. "The Emirate Caucasus is dead," says Abdurakhim Magomedov, an aged leader of the puritanical Salafi movement from the village of Novosasitli. "It has not been effective."

The Emirate Caucasus has been replaced by something even nastier: Islamic State (IS). Up to 2,000 young men from Chechnya and Dagestan may be fighting for IS, according to estimates by Russian security experts. Several commanders from the Emirate Caucasus in Chechnya and Dagestan have switched their allegiance to the IS leader, Abu Bakr al-Baghdadi.

Young men are drawn to IS by its perceived strength and success, says Abas Makhmudov, an ex-member of the *shura*, or Islamic council, of Chechnya and Dagestan. Others speculate that the risks of fighting in Syria are less awful than at home: a young jihadi may be killed, but his killers will not be able to threaten his family back in Dagestan or Chechnya. Mr Makhmudov opposes IS, yet his own son was recently killed fighting for the group in Syria. "I tried to stop him, but he was enticed by his friends and the images on the internet—particularly the ones of atrocities by the Assad regime," he says.

What baffles Mr Makhmudov is how his son, who had a criminal record, obtained the Russian passport needed to travel abroad—even after he alerted the authorities to his son's intentions. It is even less clear how Nadir Medetov, a radical preacher who had been under house arrest in Dagestan, made his way to the Middle East, where he swore allegiance to IS.

In a recent interview Nikolai Patrushev, the secretary of Russia's Security Council, claimed it would be impossible to stop the flow of recruits to IS. Coming from an official of the security apparatus that sealed off the entire region ahead of the 2014 Winter Olympics in Sochi, that sounds disingenuous. Most people interviewed for this article who have had contact with those who have gone to Syria suggest that Russian security services have been complicit. "They are certainly not trying to stop them," says Magomedrasul Saaduev, the chief imam of the central mosque in Makhachkala, Dagestan's capital.

Formally, Russia supports the regime of Bashar Assad and deems IS illegal. It recently outlawed the participation of Russian citizens in armed conflicts abroad with aims that "contradict the interests of the Russian Federation". (The caveat is presumably meant to distinguish IS fighters from Russians fighting in eastern Ukraine.)

However, Russia may hope that letting jihadists leave the country is good riddance. Insurgent activity in the North Caucasus has certainly gone down. The chances of IS militants returning are slim; Russia does, in fact, tightly control its borders. Yet Akhmet Yarlykapov, a Dagestan expert at the Russian Academy of Sciences, says the tactic is short-sighted. Russia itself is faced with a major threat from IS: it recently claimed the entire territory of Cau- ▶▶

casus as one of its provinces (see page 37).

Over the past two years, the regional commanders of the Emirate Caucasus pledged not to target civilians and ruled out the use of female suicide bombers. But switching allegiance to IS may entail employing its methods, says Mr Yarlykapov.

As a preventive measure, the authorities are piling pressure on anyone who practises Salafism. Ikramudin Aliev, who was fired as a co-ordinator of the pro-Kremlin youth movement in Dagestan for growing a beard, says the authorities are trying to shut down his Salafi mosque by planting weapons and drugs on its clerics. Ziyautdin Uvaisov, a young Salafi imam who opposes IS, argues that instead of letting people like him do his job and educate Muslims, the authorities are radicalising them and pushing them into the hands of IS or the local insurgency.

A recent report by Human Rights Watch found that the use of extra-judicial harassment is widespread. Yet while the state can apply force, it can scarcely supply social services or justice. Magdi Kamalov, the editor of *Chernovik*, an independent newspaper, says the presence of Russian power in Dagestan is mainly decorative. "We see more and more people coming to us for justice," says Mr Saaduev, the imam of the main mosque in Makhachkala, who adheres to the state-endorsed Sufi creed.

Just a few years ago, Dagestan's Salafi and Sufi leaders were on the verge of religious conflict. Now they are uniting in the face of twin threats: IS recruitment and the Russian government's lawlessness. The Emirate Caucasus might be losing its grip. So, however, is the Russian state. ■

Chechnya dispatch

Diamond ring, iron fist

GROZNY

Ramzan Kadyrov rules his fiefdom with money and fear

CHECHNYA and Dagestan are both nominally inside Russia, but the road between the two features a checkpoint as elaborate as a border crossing. On the Chechen side, the roads get better and the drivers more nervous. Under Ramzan Kadyrov, its strongman president, Chechnya has become visibly richer and less free than Dagestan. It also feels distinctly separate from the rest of Russia.

Chechnya's capital of Grozny, once a bombed-out ruin, today boasts not only the largest mosque in Europe but Dubai-style skyscrapers and a five-star hotel (rarely more than a quarter full). The main drag, Putin Prospect, is lined with glitzy restaurants frequented by Grozny's golden youth. Behind the facades lies a republic steeped in fear, corruption and poverty. Chechnya has become a mini-totalitarian state, in many ways a caricature of today's Russia.

Mr Kadyrov, who spends millions of dollars sponsoring appearances by Western pop singers and celebrities, has developed a personality cult inside Chechnya and celebrity status outside it. (His Instagram account has a wide following.) Always referred to simply as Ramzan, he appears to be omnipresent. The local television news consists almost entirely of his daily deeds. His reach extends well beyond Chechnya; some observers say he is the second-most powerful man in Russia after Vladimir Putin, the president.

Visitors on the roads into Chechnya are greeted by arches displaying photographs of the strongman's father Akhmad Kadyrov, a warlord and imam assassinated in 2004, and of Mr Putin, the younger Mr Kadyrov's benefactor and protector. Men linked to Mr Kadyrov's security services were charged with the murder in February of Boris Nemtsov, an opposition politician, outside the Kremlin. The speed with which the alleged assassins were arrested shows how exasperated the Russian security services now are with Mr Kadyrov. But Mr Putin responded by giving Mr Kadyrov a medal—a clear signal to his *siloviki* to stay away from him.

Although Mr Putin hails Mr Kadyrov's rule as a model of conflict resolution, Chechnya is only technically part of Russia. A new report by the International Crisis Group, a think-tank, argues that the republic is "virtually independent, with its own ideology, religious policy, parallel economy, taxes and laws". It also has a well-trained army of some 20,000 men answerable only to Mr Kadyrov.

Russian laws are effectively suspended in Chechnya. In April, after Russian police from a neighbouring region shot a Chechen suspect in Grozny, Mr Kadyrov told his men to shoot back at Russian police if they operate in Chechnya without his permission. "The long conflict between Russia and Chechnya has not been resolved but has been only suppressed," says Ekaterina Sokiryanskaya, the author of the report. It could erupt again at any time.

Stately pleasure domes, by decree

Why the Dutch oppose windmills

Dutch Quixote

AMSTERDAM

Wind energy once powered the Netherlands. Not anymore

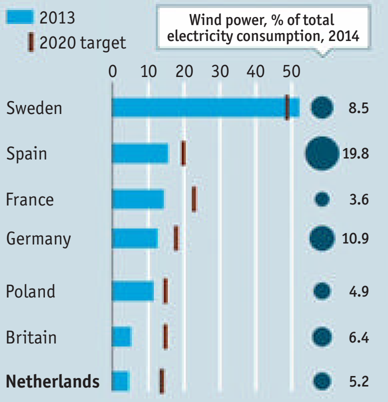
DURING its 17th-century golden age, the Netherlands was the world's most enthusiastic exploiter of wind technology. Over 10,000 windmills dotted the landscape; the city walls of Amsterdam were crowned with a row of them. Today many Dutch find the stereotype of their country as the land of windmills irritating—and inaccurate. Wind turbines supplied just 5.2% of the Netherlands' electricity in 2014, far behind Germany, Spain or Denmark. Renewable sources as a whole make up 4.2% of the country's energy mix, putting the Netherlands 26th in the European Union, ahead only of Malta and Luxembourg.

That leaves the government in a fix. It has five years to meet an EU-wide mandate to generate 14% of energy from renewable sources. Among other things, it plans to build a lot of new wind turbines. This, however, runs up against the reason why the Netherlands has so few of them: a severe case of not-in-my-backyard syndrome. Almost everywhere new turbines are mooted, locals howl that they will be ugly and noisy. One proposed wind park prompted a group calling itself the Don Quixote Foundation to block a drawbridge on the 32km dike connecting North Holland and Friesland. The far-right Party for Freedom rails against "the sinister green-windmill subsidy complex".

To minimise local anger, the government has turned to the sea. A national energy accord reached in 2013 calls for new wind parks in the North Sea that could generate 3,450 megawatts, more than triple the country's current offshore capacity. But these parks are meeting resistance as well. Two of them will be as little as 18km from ▸▸

Out of puff

Renewables, % of total energy consumption



Sources: Eurostat; European Wind Energy Association

shore, within sight of beach towns north of The Hague. The town governments say the 200-metre masts will ruin the view and drive away German tourists. They want to push the parks back to an area midway between the Netherlands and Britain. The Dutch government says the more distant site would cost an extra €45m ($50m) per year, in part due to longer cables.

Those costs may be the least of the government's worries. On June 24th a climate-action group won a suit in a Dutch court arguing that the government's target for reducing greenhouse gases is not ambitious enough. Current policy would reduce emissions in 2020 to 17% below 1990 levels. But the court ruled that if the world's governments cut 2020 emissions by anything less than 25%, it will ultimately put Dutch citizens in danger from rising sea levels. Since all governments should meet that 25% reduction, the court reasoned, the Dutch government must do so as well. If the decision is upheld, the government will have to slash emissions even further within five years.

Doing so is not impossible, says Pieter Boot, an economist at the Dutch government's environmental assessment agency. The agency estimates that if the government fulfills its promises under the 2013 energy accord—which it is not currently on track to do—that could generate half of the necessary reductions. But more renewable energy would also be needed. New wind parks will not be part of the solution, as it would take five years to build them.

Despite the opposition to individual wind parks, polls show that over 70% of Dutch approve of wind energy in principle, a figure similar to Germany. The problem may simply be that the Netherlands is very densely populated; nearly every mast is in someone's backyard. But other polls show that once turbines are built, local opposition tends to fade. As readers of Don Quixote know, not everyone liked 17th-century windmills either, at first. ■

Denmark's new government

Coalition of one

COPENHAGEN

The centre-right Liberals depend on a far-right party bigger than themselves

THE anti-immigrant Danish People's Party (DPP) has been in the vanguard of Europe's populist right for a decade and a half. It scored huge gains in elections on June 18th, coming second with 21% of the vote. But the DPP will not be joining the centre-right government announced last week by Lars Lokke Rasmussen of the Liberal Party. Indeed, no other parties will. Unable to form a coalition due to policy divisions, Mr Rasmussen will lead a single-party minority government, with tacit parliamentary backing from the DPP and two other right-leaning parties. Together they have a fragile one-vote majority in Denmark's 179-seat parliament. And with 37 seats to the Liberals' 34, the DPP is already starting to show its power.

Mr Rasmussen's defeat of Helle Thorning-Schmidt's Social Democrat-led administration was far from definitive. The Social Democrats remain the largest party in parliament with 47 seats. While no left-leaning coalition was possible, the so-called "blue bloc" is deeply split too. The Liberals and the DPP disagree on taxes, social spending and the European Union, leading the DPP to turn down Mr Rasmussen's offer of cabinet seats.

Denmark's multiparty political system frequently produces minority governments, but this one seems unusually tricky. The surge in support for the DPP has it brimming with confidence and determined to drive hard bargains. While Mr Rasmussen was still trying to form a coalition last week, an EU summit required the attendance of Ms Thorning-Schmidt as caretaker prime minister. Mr Rasmussen gave her his blessing. But the DPP's Eurosceptic leader, Kristian Thulesen Dahl, warned her to keep a low profile and caustically remarked that she would enjoy a last meeting with her Brussels friends.

While Mr Thulesen Dahl's refusal to enter a coalition disappointed many of his voters, the DPP is well-versed in exercising power from the sidelines. From 2001-2011 it bartered its parliamentary weight for concessions on social spending and tighter immigration rules.

To counterbalance the DPP's power, Mr Rasmussen has promised to "work broadly in parliament", the Danish euphemism for cobbling together support on a case-by-case basis. One of his first acts was to reintroduce a tax break for home improvements, an idea backed by two small leftist parties but opposed by the Liberal Alliance, a putative ally. Yet he also dispatched his foreign minister to Berlin to explain Denmark's plans for beefing up border security. This is a central plank of the DPP's platform, and may violate Europe's Schengen open-border rules.

By making both moves in his first week in office Mr Rasmussen showed his willingness to cross ideological divides. But piecemeal governance is hard, even in consensus-driven Denmark. Just one defector on the right could topple him.

Spanish politics

Los indignados in power

MADRID

Left-wing parties are taking over cities

AIDA DEL VALLE lives in a block of new flats owned by Spain's "bad" bank, Sareb, with big windows overlooking a small Barcelona square. The 34-year-old former schoolteacher, who receives unemployment benefits of €300 ($331) a month, pays no rent or utility bills. She owes her tenancy to a housing-activism group that broke into the unfinished building and took it over. One of the group's founders is Ada Colau, who on June 13th became Barcelona's mayor.

Ms Colau is one of a number of candidates who have infused the Spanish left with fresh vigour. Her rainbow coalition of activists and parties, including the insurgent party Podemos, narrowly beat the incumbent Catalan nationalist Convergence and Union coalition (CiU). Podemos-backed candidates also took control of Madrid and other major cities. Ms Colau's first moves included slashing her salary by three-quarters to €2,200 per month and dropping prosecution of student activists accused of vandalism. Her counterpart in Madrid, the 71-year-old Manuela Carmena, met the heads of Spain's mighty Santander and BBVA banks to discuss the thousands of homes they have seized since Spain's property bubble burst. The left's victories mean Spanish cities may start fining banks for holding on to empty houses.

City halls will provide a first taste of how Podemos, which is just 18 months old, handles power. It may get a lot more of it in parliamentary elections this autumn. Current polls show the governing conservative Popular Party losing power to the Socialist Party. The Socialists would then have to form a minority government heavily dependent on Podemos.

But while Spanish politics is shifting to the left, it is also fracturing. Barcelona's city hall now has seven groups on the 41-member council. On June 18th Catalan politics splintered further when the 37-year-old CiU coalition, made up of the Convergence and Union parties, fell apart over separatism. The Convergence leader, Artur Mas, who is also president of the region, wants to lead a separatist platform into the local elections on September 27th. The Union party calls for moderation and a negotiated settlement with Madrid.

Many in Convergence are happy to be rid of Union. But they must now scrap for separatist votes with the Catalan Republican Left and the radically left-wing Popular Unity Candidates. The divorce is a major upheaval for Catalan politics, which had been dominated by CiU ever since the region regained a degree of self-government in 1980. Political institutions must be restructured. The CiU's deputies in the Madrid parliament, who have occasionally held the balance of power, have split too.

Catalans are now divided into separatists, anti-separatists, and third-way federalists who believe the region should nonetheless be allowed to vote on independence (an option blocked so far by Mariano Rajoy, the prime minister). All three camps have at least two parties competing for their votes. But the eruption of Podemos has seen public interest shift from secession towards social matters like poverty and housing. "Mas's government has used independence to cover up its cuts in health and education," says Carlos Macías, a housing activist in Barcelona. Podemos-style radicalism is an alternative to separatism for those with a Utopian bent.

As if things were not complicated enough, the rise of the centrist Ciudadanos party has made Spain's general election a four-way race. The fracturing of politics is forcing politicians to learn how to build alliances. The task of forming governments has become harder. But solutions to some problems—including Catalan separatism—may become easier to find. ■

Colau: begone, housing shortage

Terrorism in France

On home soil

PARIS

A horrific attack reminds the French of their vulnerability

HE STRANGLED his employer in the back of a van, hacked off his head with a kitchen knife and attached it to the gates of the chemicals factory where he worked, next to two Islamic banners. Yassin Salhi, a French citizen, confessed this week to a grisly murder on June 26th, at Saint-Quentin-Fallavier near Lyon, that shook France. Four days later, the public prosecutor concluded that Mr Salhi had acted with a "terrorist motive".

The French have become grimly accustomed to news of beheadings by jihadists in far-flung places. Last year a French mountain guide was decapitated in Algeria by a group linked to Islamic State (IS). But such a horror on French soil was a far greater shock. After displaying the severed head, Mr Salhi rammed his van, loaded with gas canisters, into the chemical plant, in what appeared to be a failed attempt at a suicide attack.

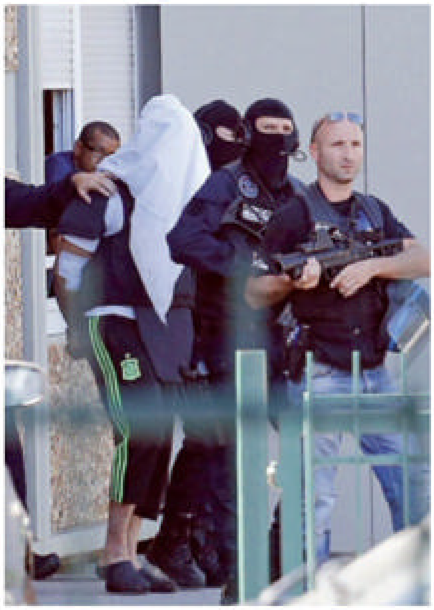
Although no group has claimed responsibility, the public prosecutor said that the aim was clearly to terrorise with "maximum publicity". Mr Salhi sent two photos of the severed head, one of them a selfie, to a French convert in Syria, and cried "Allahu akbar" (God is great) as he tried to set off further explosions. His sister told investigators that he had spent a year in Syria in 2009 (before IS was formed). Thanks to contacts with radicals, from 2006 to 2008 Mr Salhi was on an intelligence watch-list.

The attack has reminded the French of their vulnerability. Since France joined air strikes on IS in Iraq last year, several jihadist videos have called on the faithful to strike French infidels. "If you don't manage to get a gun, there are stones and knives," urged one. Home to Europe's biggest Muslim minority, France has been a fertile recruiting ground for "self-service" jihadists, such as those who committed the murders at *Charlie Hebdo* and in a kosher supermarket in January. "France has the sad honour of supplying the most numerous contingent" of Europeans to fight in Syria and Iraq, noted a recent Senate report. French citizens account for nearly half of the 3,000 or so Europeans known to be in the two countries or on their way there. At least one French citizen is suspected of taking part in IS executions; seven French citizens or residents have carried out suicide attacks.

The use of a kitchen knife demonstrated that arms control and surveillance are only part of the battle. Leaky borders and a continental location mean that there are far more illegal guns circulating in France than in Britain, says one former foreign intelligence official. Yet Mr Salhi had with him only a fake gun. He decapitated his boss with a 20cm (8-inch) blade, the sort used domestically to slice tomatoes.

So the focus is on identifying and stopping those drawn to jihadist terror. François Hollande, the president, has already boosted the intelligence budget, legalised various forms of electronic eavesdropping and begun to recruit more spies. But it will take time to turn trainees into enhanced operational capacity. As it is, some 3,000 French individuals are thought to be "involved in terrorist movements", according to Manuel Valls, the Socialist prime minister. The intelligence services cannot monitor them all.

The government has now upped the political rhetoric. Islamist terror represented a "war of civilisations" declared Mr Valls, to the consternation of some on the left who regard such martial terminology as belonging to the right. A former interior minister, Mr Valls has made tough talk his hallmark. After the January murders he told high-school students that they had "to learn to live with the danger" of terrorism. Such words shock, but after this latest attack they do not appear excessive. ■



Horror close to home

Charlemagne | The end of fudge

The euro zone thought it could muddle through with Syriza. It was wrong

ANDREAS PAPANDREOU, a proud Greek socialist who stood up to his country's coup-mongering generals in the 1960s, won an election in October 1981 by fulminating against the European Economic Community (as it was then known) and vowing to lead Greece out of NATO. But in office he executed a graceful *kolotoumba* (somersault), discovering a taste for European subsidies that could be used to expand his crony state and turning himself into an engaged, if awkward, NATO partner. Greece's interests, Papandreou determined, were best served by exploiting the rules of the clubs it belonged to, not by tearing them up.

The ties that bind Europe's political elites have often turned out to be extraordinarily strong. Sometimes they oblige weak leaders to jettison election pledges. Take François Hollande, who took office in 2012 promising to end European austerity but instead finds himself battling to please Germany by reforming France's sclerotic economy. When referendums go the "wrong" way, as with Ireland's rejection of the Lisbon treaty in 2009, leaders tweak the text and ask citizens to vote again. The serial bailouts of the past five years may have empowered populists in creditor and debtor nations, but they have not led to irreparable ruptures. Indeed, these days many politicians in Portugal, Ireland and Cyprus speak warmly, if *sotto voce*, of the reforms and cuts they had to undertake to stay in the euro zone.

Small wonder Greece's European creditors thought the radical leftists of Syriza too would fall into line, despite having won power in January on a promise to end austerity. Soon after Greece's election Charlemagne was told by a senior official in the European Commission, one of the institutions that monitors bailouts, that Alexis Tsipras, Syriza's leader and the new prime minister, would turn out to be another Papandreou: a fire-breather on the campaign trail who would soon learn the responsibility that comes with membership of the European family.

It is not the official's fault that this prediction turned out to be spectacularly wrong. Bar a few lonely Greeks who warned that Syriza was not a party Europe could do business with, almost everyone thought the mysterious forces that keep Europe together would drive Mr Tsipras to accept a cash-for-reforms deal. Early signs of trouble, such as the preening lectures on macroeconomics delivered by Yanis Varoufakis, Greece's finance minister, to his euro-zone peers in the Eurogroup, were written off first as amusing, and then irritating. Mr Tsipras, who oozes charm and good cheer, seemed like the sort of man with whom European leaders could strike an agreement. Some thought he might ditch his infuriating finance minister. Almost all believed he would, eventually, perform his own *kolotoumba*. Yet despite the endless summits, conference calls and late-night negotiations, it never happened.

The moment of truth came on June 26th, when Mr Tsipras called a shock referendum on the creditors' latest bail-out offer. Officials had thought a deal was close; the negotiations were ongoing when Mr Tsipras made his announcement. The surprise was apparent everywhere: from the face of the commission official with whom Charlemagne was sharing a drink when the news broke, to an emotional speech on June 29th by Jean-Claude Juncker, president of the commission, who declared himself "deeply distressed and saddened" by the Greek move.

Now Mr Tsipras has come to the end of the road. This week he continued to seek a deal, even as Greece defaulted on an IMF payment and its bail-out expired. But at the same time he was denouncing his partners on television and urging Greeks to vote "no" to the agreement he sought. No one has been more infuriated than the Germans. On July 1st Angela Merkel, the chancellor, dismissed the latest Greek proposal with uncharacteristic haste. Her government now seems determined to see the back of Mr Tsipras. What many saw as a poker game has turned out to be an unequal bout of Ultimate Smackdown.

This is an extremely unhappy affair for the EU, which thought it had found an unusually effective way of resolving differences between democracies. Now that the rupture with the Greeks is clear, officials in Brussels do not know what to make of it all. "I've never in my life seen such people," says one senior figure involved in the talks. "They are irresponsible! Irresponsible!"

Something had to give

Perhaps the creditors deserve a share of the blame. Their own tactics could have been more sensitive: their response to a Greek proposal last week, which featured paragraphs struck out with red lines and entirely rewritten, infuriated Greeks who are no fans of Syriza. They could have offered some accommodating words on debt relief. Yet that would have been a stretch for many creditor countries. Greece's government, despite Mr Tsipras's protestations, is not the only one to enjoy a democratic mandate.

A better argument is that the creditors should have had the foresight to know what the austerity they brought upon Greece might wreak. Few democracies could withstand a 25% contraction in GDP over five years, a calamitous growth in unemployment and the humiliation of having endless budgets written by unelected outsiders. Greece's pre-2008 boom may have been unsustainable and its politicians venal, but that is of no comfort to retirees whose pensions have been slashed or graduates forced abroad to find work. Syriza appealed to voters who had lost all hope. It offered a false prospectus, perhaps a deceitful one. But it was, in part, the creation of the euro zone's failed policies.

One still hears European officials lament that Syriza began its reign of calamity just as Greece was starting to recover, as if voters should have merely exercised more patience. Mr Tsipras's amateurishness has, lamentably, given Europeans an excuse not to examine their own culpability. If Greece does fall out of the euro, its leaders must bear the blame. But Europeans might consider what they can do to ensure a return to the glorious days of fudge. ■

Also in this section

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London's airports

Decision time

After three years' work, an independent report recommends building another runway at Heathrow. That will be tricky

WHEN Heathrow opened in 1946 it was little more than a muddy airfield and a series of tents. Since then the airport, now the second-busiest in the world by international passenger numbers, has changed dramatically. Each day about 200,000 people pass through its gleaming terminals. But as Heathrow has grown, so too has opposition towards its further expansion. This means that the recommendation on July 1st by Sir Howard Davies, an economist, that the government build another runway there could provoke a big political fight.

Few doubt that London, Europe's financial centre, needs more airport capacity. Last year its three main airports (Heathrow, Gatwick and Stansted), with four runways between them, handled 130m passengers, 16m more than New York's main three, which have nine. Heathrow is operating at full capacity, and has been for at least five years. It carries more freight by value than all other British airports combined. Gatwick, Britain's second-busiest airport, is full 80% of the time.

This congestion is damaging. As routes become busier, ticket prices go up and other hubs, such as Dubai International, become more attractive to travellers. Dubai has already overtaken Heathrow in terms of the number of international passengers (see chart).

Without expansion, both regional and international passengers lose out. As airports become more crowded, fewer domestic flights can be slotted in, potentially hindering businesspeople in places such as Manchester and Newcastle who use Heathrow to transfer to America or Asia. Crowding also leaves less scope for links to emerging markets. In 2013 just over 40 weekly flights went to China from Britain, compared with 60 from France and nearly 80 from Germany. Sir Howard and his team estimate that expanding Heathrow could boost GDP by 0.65-0.75% by 2050.

Yet if the costs of leaving bulldozers idle are big, the political consequences of getting them started could be equally colossal. When David Cameron, the prime minister, was a fresh-faced leader of the opposition he boasted "no ifs, no buts, there'll be no third runway at Heathrow". When in government, rather than deal with the issue he appointed Sir Howard to look into it, which conveniently put off the decision until after the recent election. Now Sir Howard's report is out, but at a time when Mr Cameron is already dealing with his MPs squabbling over Europe.

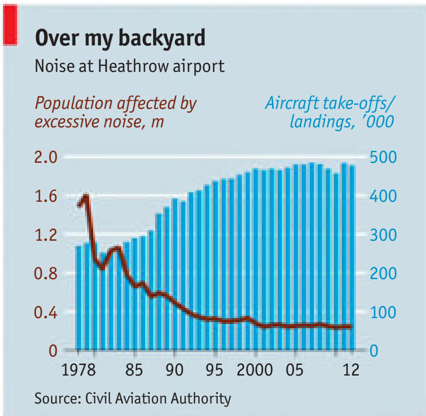
At least five cabinet ministers are against it, along with several well-known MPs. Opposition to the expansion of Heathrow helped Boris Johnson, the Conservative mayor of London, achieve a resounding victory, and he is still staunchly opposed to it. If Mr Cameron wants another Tory in City Hall then expanding Heathrow could put him in a pickle. Zac Goldsmith, the MP for Richmond, the Tory front-runner to replace Mr Johnson, has already threatened to resign from his seat if another runway goes ahead.

Meanwhile, six marginal seats sit under the flight path in west London, and their well-heeled constituents are more vocal than most. Two of these—Brentwood and Isleworth, and Ealing Central—were won by Labour from the Tories in May's general election by candidates who specifically asserted that they were against expansion. Although the number of residents affected by aircraft noise has decreased sharply over the past two decades, as planes have become quieter, it still affects over 200,000 people (see chart on the next page). Air pollution, already high in areas near the airport, would increase and could blight up to 47,000 homes unless a low-emission zone was put into place.

Sir Howard and his team have tried to pre-empt the protesters. They suggest that a new runway at Heathrow, to the north-west of the two existing ones, be comple- ▸▸

mented by a series of concessions to local residents. Flights leaving after 11.30pm and arriving before 6am should be banned. A fourth runway should be ruled out by the government through law, they think. Compensation to those who have to move should be more generous, while the airport should pump more cash into the local area. The government should impose a noise levy on airports that are particularly disruptive, similar to those in France and America. The commission looked at the question of airport capacity as a "kind of balancing act," says Sir Howard. With enough compensation, local opinion may be tipped in favour of expansion.

But all this depends on how the government reacts to the report. It would be embarrassing for Mr Cameron, who claims to be pro-business, to ignore it. Yet there is always the chance that ministers will prevaricate, postponing a definite decision yet again. After all, Sir Howard's report follows on from others in 1971, 1978 and 2003, all of which were shelved after a few years. Or, ministers could plump for the politically and environmentally less toxic option of building another runway at Gatwick. Sir Howard and his team did not back the idea, but neither did they dismiss it.



Either way, a decision needs to be made, and swiftly. Mr Cameron may have several difficult rows on his hands already—over Europe, cuts to welfare and Scotland. But he also has a majority, and was elected on a promise to keep the economic recovery going. Without another runway, Britain's economy will be weighed down on take-off. ■

Fracking stumbles again

Seismic

A decision against fracking in Lancashire puts the government in a bind

IN AMERICA shale-gas extraction has been creating jobs and transforming energy markets. In Britain, by contrast, the shale-gas revolution promised by the prime minister, David Cameron, has run up against a familiar foe: NIMBYism.

On June 29th crowds of people who do not want fracking, the process by which shale gas is extracted, gathered outside the offices of Lancashire County Council. Most of them expected the council's development-control committee—more used to analysing planning-permission applications than geology—to accept an application by Cuadrilla, an energy company, to start fracking in north-west England. The council's own legal and planning departments had advised them to approve it.

But the councillors surprised everyone by voting nine to three, with two abstentions, to reject the application, citing not geology but "unacceptable noise impact" and "adverse urbanising effect on the landscape". Protesters rejoiced with some noise impact of their own. Daisy Sands, a Greenpeace campaigner, called the decision "a Waterloo for the fracking industry".

Fracking in Britain was suspended in 2011 after initial drilling by Cuadrilla was believed to have led to earth tremors near Blackpool. A spokesman for the company said it was "surprised and disappointed" by this week's decision but was committed to the responsible exploration of natural gas in the shale rock beneath Lancashire.

Cuadrilla's boss, Francis Egan, says he believes the company has strong grounds for an appeal to the minister responsible, Greg Clark, which could trigger a public inquiry. If the government were to make fracking a "nationally significant infrastructure project", it would be taken out of the local-planning system. But, having long promoted local decision-making, that would leave Tory leaders open to accusations of hypocrisy. Some observers believe councillors were afraid of a backlash at local polls if they approved the application, but knew their decision was likely to be overturned on appeal, enabling them to blame the central government.

Either way, it drags out what has already been a long process. Ken Cronin, chief executive of the UK Onshore Operators Group, the fracking trade body, urged the government to review the time frame for such decisions. This one has taken 15 months as opposed to a guideline of 16 weeks, he says. "It is bad for the industry and the communities involved."

It also delays confirmation of whether gas deposits in the north of England are as substantial as Cuadrilla and others believe. Without fracking, by 2019 Britain is expected to import 70% of its gas. But if even 10% of the British Geological Survey's estimate of deposits are recoverable, that could make the country self-sufficient in gas for up to 50 years.

However, even if Cuadrilla's appeal is successful, it will take a long time for Britain to build up its onshore drilling infrastructure. Fracking large quantities of gas requires thousands of wells. Even a pilot project such as Lancashire's would need 10-20 wells. The problem in Britain, says Quentin Fisher of the University of Leeds, is that "we don't have a supply chain". The industry will not make a profit until this is well-developed, he says. But supply services won't invest in equipment until they know the industry is likely to be successful. This week's decision will delay things in the short term and could have much longer-term implications, too. ■

Fracktious

Bagehot | Death on the beach

Britain, a country accustomed to violence, cannot make sense of the massacre in Tunisia

AS THE shots got louder and the gunman appeared, moving methodically along a row of sunloungers, killing every sunburnt, cowering European holidaymaker he could find, Stephen and Cheryl Mellor, a middle-aged couple from Cornwall, clung to one another, saying, "I love you, I love you". Seconds later, on the afternoon of June 26th, both had been shot, he fatally, as he lurched to save his wife, who lay, playing dead, in the sand.

Up and down the beach in Sousse, a north Tunisian resort town, similar scenes of panic and intimacy were taking place. By the time police marksmen caught up with Seifeddine Rezgui, a radicalised engineering student, he had scoured the beach, a hotel and its swimming-pool, then doubled back to cover the hotel reception area twice. Of the 38 he killed, perhaps 30 were British, making this Britain's worst terrorist atrocity since the bomb blasts on the London Underground a decade ago. It was also, in its savage indiscriminateness, particularly difficult to comprehend.

Those bombings in 2005 were carried out by similarly indoctrinated British Muslims. Yet they were not a random assault on Westerners, as the Sousse attack was, but an attack on the British state, through its flesh and blood occupants, which put them in a long history of violence, stretching back through the Irish Troubles to many colonial struggles before. This sense of a nation under siege guided the response of Londoners and the then Labour government, which was of national defiance leavened by understatement, ingredients of the stiff upper-lip that remains Britain's default setting against adversity.

When 67 Britons perished on 9/11—easily the heaviest toll of any nation other than America—the same national impulse was evident: America, one of Britain's closest allies, was under attack, so Britain was too. Yet that is now hardly the case. Rezgui was not targeting Britons over any other Western holidaymakers. Nor even is there evidence that he was linked to two other slaughters, of 27 worshippers in a mosque in Kuwait, and a man in France, on the same day. His butchery was remote, random, disjointed and senseless. It throws up no target for national reprisal. It elicits no emotion so much as sadness and despond. This made it difficult for the Conservative government to gauge its response.

It showed. The government announced plans for a minute's silence, at noon on July 3rd, which is a decent enough idea, plainly intended to fill the place where a tough policy response would normally be. To show his government was nonetheless on top of the global jihadist menace, David Cameron, the Tory prime minister, additionally assured Parliament that: "defeating this terrorist threat requires us to do three things". Whereupon, he read out a list of things his government was already doing.

It was not a bad list. To help Britain's security forces identify and respond to future threats, Mr Cameron reiterated recent moves to bolster their powers to seize passports and prevent travel, as well as a big, and long-planned, counter-terrorism training effort, held in London this week. Rid of the Liberal Democrats, his erstwhile coalition partner, the Tory prime minister also promises legislation to allow British spooks more power to snoop online. Second, to "deal with this security threat at source", as Mr Cameron described the conflagration in Mesopotamia, he also rehearsed Britain's modest contribution to the American-led bombing campaign there. That it does not extend to Syria, Islamic State's headquarters, is patently absurd; pressed on this, Mr Cameron suggested Britain may well join that fight.

But, given Britain's fading military strength, even that would be a small contribution to what is, notwithstanding Mr Cameron's upbeat phrasing, a no-win American strategy. Islamic State will be around, to provide inspiration and an exciting destination for aspiring jihadists, including up to 2,000 Britons, for a good while yet. Indeed, a growing anxiety about those British renegades was apparent after the atrocity in Sousse—for Rezgui, with his love of breakdancing, recreational drugs and his girlfriend, fits a pattern of sudden, unpredicted radicalisation recently seen in many British cities. Which is why the third item on Mr Cameron's to-do list, clamping down on home-grown jihadists, by being "stronger at standing up for our values", seemed more intriguing.

Mr Cameron had signalled this shift shortly before the attack, in a speech in Slovakia in which he warned that tacit approval of Islamic State "paved the way" for radicalisation. No one with any knowledge of British Muslims, among whom flow deep currents of conservatism, cultural disorientation and resentment, could doubt the truth of that; "I agreed with him," says Dilwar Hussain of New Horizons, a Muslim activist group. "We should be tougher." Yet Mr Cameron's promised change may be little more than rhetorical. In practice, it appears to consist mainly of a new, probably unenforceable, responsibility for schools and universities to report signs of extremism among their students. It would then befall the few dozen civil servants dedicated to responding to such warnings, who are already overstretched and of mixed ability, to act. "The rhetoric is always tougher than the reality," says Mr Hussain. "Probably this means little."

Remember Sousse

It is tempting to note that this is often the case with Mr Cameron. The Tory prime minister is a talented communicator and nimble crisis manager, but a shallow thinker. Set that aside, however: it is not as if anyone, anywhere, has a more convincing plan for ending the jihadist scourge.

Note, instead, the quiet courage, the steadfast decency, of many of Rezgui's victims: like Gina Van Dort, who, with her face half shot off, had to be prised off the corpse of her husband. Or consider the Tunisian waiters and shopkeepers who shielded other tourists from the killer, or the construction workers who pelted him with rubble as he tried to flee. There is no bigger counterweight to the jihadist madness than this; but it is a lot. ■

Capital punishment

On the way out—with grisly exceptions

A few countries are applying the death penalty more freely. But the global trend is towards abolition

DEPENDING on where you are, the death penalty may look as if it is in rude health. On June 29th America's Supreme Court upheld Oklahoma's use of midazolam, a sedative, in executions—despite evidence that it can fail to cause unconsciousness, leaving those being killed in agony from the lethal drugs with which it is combined. Meanwhile some countries in the Muslim world, notably Indonesia, Iran, Pakistan and Saudi Arabia, are executing people with increasing enthusiasm. Several others, including Nigeria and Egypt, are sentencing large numbers to death, though most of those sentences are unlikely to be carried out.

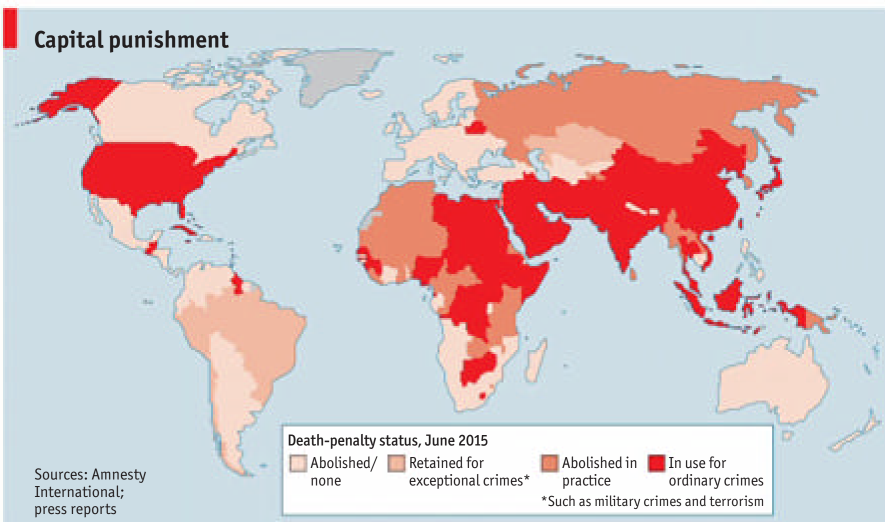
Indonesia has executed at least 14 people this year for drug crimes, most of them foreigners. Between 1994 and 2014 it executed at most 30. Using figures from official and human-rights sources, Amnesty International, a watchdog, counts 352 executions in the first four months of this year in Iran, which for its size probably executes more people than anywhere else. The true figure may much higher. Since ending a moratorium in December, Pakistan has hanged or shot at least 150 people. Saudi Arabia has beheaded or shot 100 already this year, more than in the whole of 2014. In May it advertised for eight new executioners (no experience required).

In Nigeria, which has not carried out an execution since 2013, 54 soldiers have been on death row since December for mutinying. They say they refused to fight against the jihadists of Boko Haram because they had not been adequately armed. Amnesty International says that 589 civilians were sentenced to death last year in Nigeria; 1,500-plus are on death row. Last week another nine joined them after being convicted of blasphemy by a *sharia* court in the northern city of Kano.

But despite these punitive hot spots, the global total of executions continues to fall—and the trend is towards abolition, whether *de jure* or *de facto*. Since December Fiji, Madagascar and Suriname have joined the countries without the death penalty, pushing the total over 100. Another 40 or so still have it, but do not apply it. In December a record 117 countries voted for a moratorium at the UN General Assembly; 37 voted against and 34 abstained. The number voting yes was notably higher than in 2007.

The Western world's chief executioner, America, is putting fewer people to death, too. Last year it executed 35; even if every execution scheduled for this year were to be carried out, which is unlikely, the total would be no more than 33. Of the 31 states that still have the death penalty, half have executed no one since 2010. In May Nebraska passed a law repealing it, the 19th state to do so—and the first conservative one for many years.

In 1994 80% of Americans said they endorsed the death penalty in principle. The Pew Research Centre reckons that fewer than 60% do so today—and notes that young Americans are less keen than their elders. Blacks are solidly against, as are a small majority of Hispanics. Even the Supreme Court's recent pro-death-penalty ruling gave comfort to abolitionists by pro- ▸▸



viding a chance to rehearse their case. The death penalty, argued one of the four dissenting judges, Stephen Breyer, is "highly likely" to violate the constitution. Evidence suggested that innocent people, he wrote, had been executed. People on death row had frequently been exonerated. The system was blighted by racial discrimination. Delays between sentencing and executions may violate the eighth amendment, which bars cruel and unusual punishment. And he noted that it is not proven, anyway, to deter crime.

Even China, the global leader, is cooling on executions. The number is a state secret but the Dui Hua Foundation, an American NGO, reckons there were about 2,400 in 2013, the last year it has been able to track. Campaigns against corruption and terrorism mean the fall may not have continued last year. But the long-term trend is steeply down. In 1983 24,000 people are thought to have been executed. In 2012, when Dui Hua put the tally at 12,000, a deputy health minister said the fall had contributed to a shortage of organs for transplant.

One reason is that the president of the Supreme People's Court, Xiao Yang, has sought to create a more professional and accountable judiciary. Another is that some modernisers are embarrassed by China's position at the top of this ugly league table. And though most Chinese are still thought to approve of capital punishment for murder, revulsion has grown as the media expose wrongful convictions.

Introducing the latest edition of "The Death Penalty: A Worldwide Perspective", Roger Hood and Carolyn Hoyle, two experts at Oxford University, cite a Chinese professor, Zhao Bingzhi, recently conceding that "abolition is an inevitable international tide and trend, as well as a signal showing the broad-mindedness of civilised countries." It was now, he added, "an international obligation". ■

Islam and punishment

By the book

CAIRO AND RIYADH

Why harsh punishments are more prevalent in the Muslim world

MUSLIMS the world over are horrified by the executions carried out by Islamic State (IS) in the name of their religion. On June 28th the Syrian Observatory for Human Rights, an NGO based in Britain, said it knew of more than 3,000 in the past year. More than half were of civilians—and 74, of children. Yet the self-declared caliphate is not the only Muslim "state" keen on the death penalty and other brutal punishments. At least nine countries have stoning as a judicial sentence, and five have amputation. All are Islamic.

Cruel, but not unusual

Why? Islam's sacred texts are not more bloodthirsty than those of Judaism or Christianity. The Old Testament names 36 misdeeds, including using magic and striking a parent, as meriting death; the Koran just two: *hiraba* ("spreading mischief") and murder. It says that the family of a murder victim may forgive and therefore spare the killer. Death, stoning, amputation and lashes are reserved for a small number of serious crimes, including theft and adultery, collectively known as *hudud*.

Under the Ottoman empire, just one person was stoned to death in 600 years. But since the early 1970s, when only Saudi Arabia ruled according to the Koran, the trend has been for ever-harsher punishments. In 1979 post-revolutionary Iran brought in *sharia* (Islamic law); Pakistan, Afghanistan and Sudan soon followed. In 2014 Brunei introduced a strict *sharia* code; Malaysia's opposition wants to see *hudud* laws enforced. "Spreading mischief", literally meaning "waging death against Allah and his angels", is generally now taken to include homosexuality and apostasy. Such definition-stretching is possible since Islamic law relies on not only the Koran, but also thousands of *hadith*—supposed sayings and doings of the Prophet Muhammad—and later scholarship. For some crimes, judges can choose to order whippings and the like, even if the Koran does not insist on it—and many do.

The intertwining of state and religion is only a partial explanation. Though all Muslim countries mention Islam in their constitutions, they differ in the weight they give it. Saudi Arabia and Pakistan regard it as the only source of law. But far more pick and mix. Egypt's criminal code is inspired by those of Britain and France. Across much of Iraq, tribal law holds sway.

A bigger reason for reliance on bloody sentences, often carried out in public, is the instability that plagues the Islamic world. "Governments tend to use Islamic law according to their interests," says Ahmed Taleb, a cleric in Lebanon. An ongoing flurry of death sentences in Egypt targets the Muslim Brotherhood, the main opposition. The Saudi regime must curry favour with hardline clerics, who prop it up. Jordan and Pakistan recently revived the death penalty in response to growing insecurity: Jordan after IS burned to death a pilot who crashed in Syria; Pakistan after the Taliban slaughtered children in a school.

Reformist scholars point to Koranic verses and *hadith* in favour of mercy, and the strict conditions set for the harshest punishments. A conviction for adultery, for example, requires eyewitness testimony from four male Muslims—a high bar. They argue that the use of religion to cloak political decisions is distorting Islam to such an extent that some rulings contradict the Koran. Today adultery is punishable by stoning, whereas the Koran prescribes 100 lashes—and 80 lashes for falsely accusing another. According to Sadakat Kadri, a barrister in London who studies Islamic law, in the seventh century, when Islam was founded, that was rather progressive.

Others argue that interpretation needs to move with the times. "History shows that the penalty is related to the circumstances of the society," says Hossam Mekawy, an Egyptian judge. But public opinion, as well as hardline clerics, makes talk of reform difficult: a Pew survey in 2013 found that many Muslims in South Asia, the Middle East and north Africa favoured cutting off thieves' hands and executing apostates. Governments who ease up do so *de facto* rather than *de jure*: Iran imposed a moratorium on stoning for adultery, for instance, rather than getting rid of it.

Liberal lawyers in Saudi Arabia want more penalties codified to stop judges using harsher sentences than prescribed: more than half of this year's death sentences have been for crimes for which other sentences were available. Still, as a lawyer in Riyadh, the Saudi capital, points out, that brings you only so far. "It's impossible to get away from the fact that the current jurisprudence says lashes, stoning and the death penalty are required in certain cases," he says. Without open debate about crime and punishment within the Islamic world, the killing and maiming will continue. ■

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Shale oil and gas

Fractured finances

HOUSTON AND MIDLAND, TEXAS

America's shale-energy industry has a future. Many shale firms do not

FROM atop Houston's skyscrapers you can see evidence of the good times just gone. New towers are still being erected all around the city centre, a lagging indicator of the energy boom that ended abruptly in mid-2014 when the price of crude in America dropped from $100 to $43 (today it is around $57). The victims of that crash are harder to spot. "Look! Over there!," says an oil man, pointing down at the offices of Goodrich Petroleum. A midsized exploration firm specialising in shale oil, its share price has collapsed, its debts are six times as big as the market value of its equity and it does not currently have any rigs in operation. (Goodrich says it has ample liquidity and may sell assets to raise funds.)

At the start of 2015 it seemed that there would be a lot more firms like Goodrich. When OPEC, the oil cartel led by Saudi Arabia, decided to keep pumping oil, it hoped that lower prices would irreparably damage the finances of America's shale-oil companies. They have revolutionised the energy industry, using junk bonds and a technique known as fracking—that blasts water, sand and chemicals at rock to release oil and gas—to boost America's share of global oil production from 8% a decade ago to 13% today. Yet six months after the oil-price slump only five firms out of the hundreds in the shale-drilling business have gone bankrupt.

American oil production has actually risen slightly, reaching 9.6m barrels per day in June. Output of shale gas, the other component of America's fracking revolution, is holding up, too. In Houston oil men proudly declare victory: the Saudis have failed to put Texas out of business.

The industry argues that the past six months have shown its true grit. Before shale came along the oil industry relied on mega-projects. Kashagan, in the Caspian Sea, involves one autocrat, ten man-made islands, 20 years of toil and $50 billion—and has yet to deliver the Western firms who bet on it more than a drop or two of oil. In contrast the typical shale well costs just $10m and can be producing within a matter of months. That means the industry can adapt fast. Since December shale firms have cut costs by 20-25%, according to Bob Brackett of Sanford C. Bernstein, a research firm. This has been achieved by brutally squeezing the oil-services firms that provide them with rigs, pumps and staff—big services companies such as Halliburton have fallen into losses and small ones are on life support.

The shale producers have also cherry-picked which wells they drill, concentrating on the best prospects and fine-tuning their engineering methods. As a result the number of rigs active in America has dropped by half since the start of the year.

This era of frugality can be seen in Midland, a Texan town in the Permian basin, one of six big shale areas (see map, next page). Midland has witnessed multiple booms and busts since the 1920s. Graced by Ferraris during the 2012-14 boom, its highways are now populated by pickup trucks. Some 20,000-30,000 temporary workers have left. On the town's outskirts idle equipment is being auctioned off at 20 cents on the dollar, burrito vans ply a dismal trade and the static-caravan parks advertise vacancies. Yet viewed from a plane Midland is surrounded by wells as far as the eye can see, most still busy pumping.

The shale industry's dazzling response to low prices—austerity combined with growing production—has enthralled Wall Street, which has continued to supply shale firms with an abundance of their most vital raw material, capital. So far this year oil-production firms have raised $15 billion of equity and $20 billion of bonds, helped by frothy markets, a near-zero Fed Funds rate and a partial recovery in the oil price. Even Goodrich, the troubled firm in Houston, managed to issue in February $100m of "second-lien" debt, which is secured against assets, at an 8% interest rate. Most firms have paid far less than that on new debt. The buyers of these securities are mainstream investors on the hunt for yield, but also distressed-debt funds that were set up in early 2015 to pick over the carrion of the shale industry. They have found fewer carcasses than expected and instead are bidding up prices.

Exuberant when oil prices were high and resilient when they are low, the shale industry appears unbeatable. Yet just how good are its finances? *The Economist* has examined the books of the 62 largest listed exploration and production (E&P) firms in America whose collective output is mainly ▸▸

from shale. The results (see charts below) suggest many firms are more vulnerable than the bullish noises from their bosses suggest. There are three sets of concerns: the juicing-up of the results announced for the first quarter of 2015; high leverage; and the industry's returns on capital.

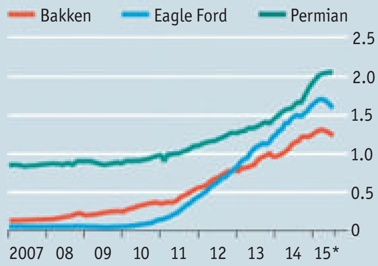
First, consider the juicing-up of performance. During the quarter to March the industry reported aggregate cashflow from operations of $15 billion—this is the money the business throws off before capital expenditure and financing activity. But this reflects the benefit of derivative hedges taken out in 2014 when oil prices were much higher, and which in most cases will largely run out over the course of the next year or so. Exclude derivatives, and cashflow was 31% lower. Almost half of firms, accounting for 1% of global oil production, relied on transitory gains from derivatives for over half of their cashflow.

All firms have slashed their capital-investment budgets for 2015—a reduction of a third is planned in aggregate. Having traditionally invested far more cash than it generates, financing the gap with debt, the industry is keen to show it can live within its means. Yet while promising cuts it continued to spend heavily in the first quarter, to the tune of $35 billion, about the same as a year earlier. Were the industry to have balanced its books (excluding the benefit of hedges), capital investment would have needed to be 70% lower. Capital investment feeds through to production volumes with a lag of 3-9 months. Today's healthy production figures are no guarantee of future bounty.

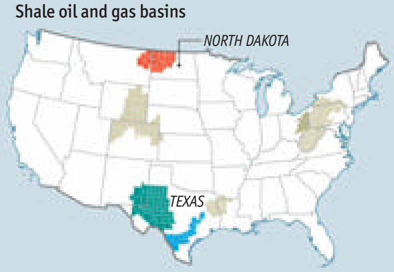
The second concern is a deep well of debt. Listed E&P firms owe $235 billion and during the first quarter debt rose, reflecting continued heavy spending. Assume a firm is in trouble if its net debt is more than eight times its annual cashflow from operations (based on the annualised first-quarter figures and excluding the benefit from derivatives). On the basis of this snapshot, 29 of the 62 firms are distressed, owing a total of $84 billion. Listed shale firms with distressed balance-sheets account for 1.1m barrels a day of oil production, or 1.2% of global oil production.

Fractionally weaker

US shale-oil production, barrels per day, m



Shale oil and gas basins



Sources: US Energy Information Administration; *The Economist*

*April-June estimate/ July forecast

The final worry is the returns on the $570 billion of capital the industry has invested. David Einhorn, a noted shortselling fund manager, has said frackers are bottomless pits. In most industries returns can be gauged by comparing a firm's capital to its "steady state" cashflow, after deducting the capital spending needed to maintain its assets. This is how Exxon and Shell measure the value they create. But this approach does not work for shale firms: rather than husbanding long-term assets, like conventional oil firms, they are constantly investing in creating and depleting a whirl of ephemeral assets. If conventional oil firms are like ranching, shale is a rodeo.

Notwithstanding this, it is fairly clear that listed shale firms are unable to earn a fair return on the historic capital they have invested at the current oil price. Based on the first quarter (excluding derivative gains), their overall annualised return on capital was 8%, before any taxes or any capital investment. After deducting a rough guess at the capital investment required to keep production flat in the short term, returns on the historic capital invested fall to zero. Some 55 of the 62 firms, accounting for 4% of global oil production, are making inadequate returns, by our reckoning.

Despite this dismal snapshot, investors value E&P firms at more than their capital employed. This could mean they think costs will fall further or that oil prices will rise. But they may also expect the drilling firms to get better at identifying profitable new investments than they were during the boom. Most shale firms say that by being thriftier and more selective they can earn annualised returns of 25% or more on new wells at $60-a-barrel oil. Reinforcing their optimism, there is a buoyant secondary market for new wells once they are producing, with pension funds and tax-free investment vehicles the buyers. An E&P firm active in the Eagle Ford basin, in Texas, says it can sell newly drilled wells for 1.4 times their cost. Sceptics grumble that they have heard it all before.

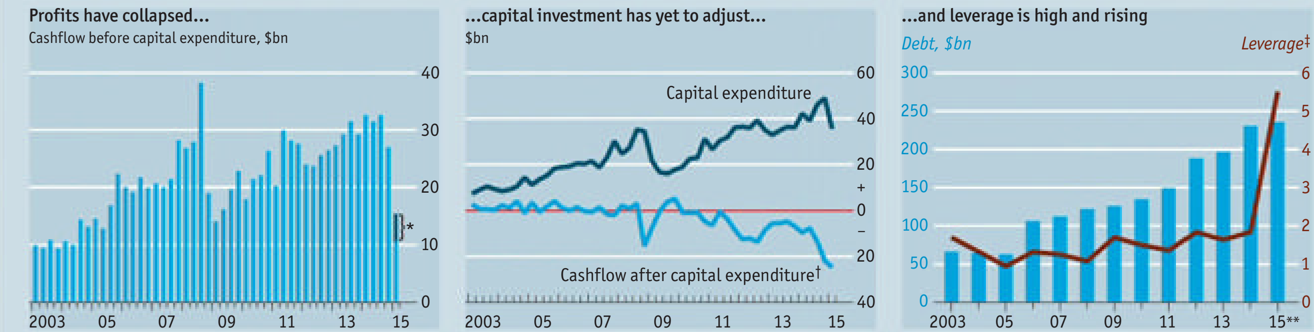
The oil industry, among other things, is betting on higher prices. Bulls can think of plenty of arguments to support their case, from a stronger economic recovery in America to violence and instability in the Middle East. The futures market is predicting only a modest recovery. Having risen from its low-point of $43 in March to $57 now, West Texas Intermediate will rise to $66 by 2019, the market is indicating.

Meanwhile as the debate over the economics of shale rages in America, capacity is being cut elsewhere, particularly in projects with high production costs, from deepwater drilling in places like the Arctic or Canada's oil sands. Of the worldwide investment cuts by listed energy firms expected to happen by 2016, only about half are forecast to come from shale, according to Oswald Clint, also of Bernstein.

In Texas and North Dakota oil men secretly dream that the global supply of crude will shrink without shale declining. The biggest oil firms, which have vast re- ▸▸

Drills and spills

Top 62 US exploration and production firms



Sources: Bloomberg; *The Economist*

*Cash from derivative sales †Excluding derivative sales ‡Debt to annualised cash flow before capex, excluding derivative sales **Q1 serves of cash, are continuing to invest heavily in shale. In May ConocoPhillips, which says it has some of the lowest-cost shale properties in America, committed to invest $3 billion a year and forecast rising production up to 2017. By this account America's smaller E&P firms are being astute: they are using their derivatives hedges and their mastery at raising capital on Wall Street to bridge a difficult patch. When oil prices pick up later this year they will start investing even more heavily in growth, but with leaner cost bases. In a decade's time the 2015 oil-price dip will seem as transitory as that in 2009 during the financial crisis.

But there is another, less rosy scenario for America's shale barons. Oil prices may remain flat. Towards the end of this year their hedges run out; shale-oil production dips markedly as the lagged effect of capital-investment cuts kicks in. (Output has already dipped in the Bakken basin in North Dakota.) With growth evaporating and cashflow faltering it becomes harder to sell shares—the pace of capital-raising has indeed slowed in recent weeks. The junk-bond market becomes jittery and E&P firms start to worry about refinancing the $66 billion of debt and interest that is due in 2016-18. As firms' oil-reserves estimates are marked down to reflect lower prices, banks cut their loans, which they typically tie to reserves figures.

In this eventuality, indebted shale firms would slip into crisis. This being America, their fields would keep pumping as their balance-sheets were restructured. Their assets would be sold, probably to the bigger E&P firms or global majors. But there might still be a dip in the 1-2% of global oil supply that they account for, and as their reserves deplete they might not be entirely replaced. There would be a bad-debt problem among banks and investors.

Shale energy is here to stay. There are a lot of rocks and clever people between the Redwood forests and the Gulf Stream waters. The industry has proved its entrepreneurial spirit and its skill in both geological and financial engineering; and its new investments are likely to earn better returns than past ones. But not all shale firms will survive. If oil prices do not rise soon then their viability will deplete even faster than their wells. ■

Nestlé in India

Instant karma

MUMBAI

Supposedly contaminated noodles can be sold abroad, but not eaten at home

IT TAKES only minutes to prepare, but India's most popular processed-food dish is at the centre of a drawn-out dispute over its safety. On June 30th the Bombay High Court said that Nestlé India was free to export its Maggi brand of instant noodles but a ban on local sales remains in place. The Indian subsidiary of the Swiss food giant was making a second visit to the court to try to overturn the ban, which was imposed by the Food Safety and Standards Authority of India (FSSAI) on June 5th.

Nestlé's troubles began when a local food-safety agency in Uttar Pradesh state said it had found excessive levels of lead in the noodles. Nestle insisted they were safe to eat but recalled them hours before the ban was imposed, saying the public's trust had been compromised. Nestlé has so far incinerated 17,000 tonnes of suspect noodles. Rivals such as Unilever have also pulled their instant noodles from the market until the air clears.

The FSSAI told the court it did not object to Nestlé exporting its noodles, although it stood by its earlier decision to ban them in India. This seems a curious decision given that Singapore had lifted a temporary ban on imports of Maggi noodles after its food-standards agency found they were safe to eat; and that Hong Kong had also given Nestlé's Indian-made noodles the all-clear. On July 1st Britain's Food Standards Agency said it had tested a batch of Maggi noodles imported from India and found them to be well within European Union limits on lead content, and safe to eat.

Such findings strongly suggest that the tests in India were faulty. But the court has still to decide on that. The hearing was adjourned until July 14th to allow Nestlé to respond to affidavits from the FSSAI and other parties including the Food and Drug Administration (FDA) of Maharashtra, the state where the court sits.

Foreign companies may feel they are being singled out. In 2006 both Coca-Cola and PepsiCo had to fend off claims by environmentalists that their colas contained pesticides. In June KFC, a fast-food chain, dismissed "false allegations" by a children's-rights group that there were traces of poisonous bacteria in its fried chicken. But the usual beef about India's industry regulators is not that they are too active but rather that they are ill-equipped to monitor their charges. Satya Prakash, a retired food-safety expert, has warned the government that some of the food laboratories it uses are unable to carry out basic tests. In January 2014 America's aviation authority downgraded India's air-safety ranking a notch because its regulator had too few trained officials (the downgrade was reversed in April).

Nestlé might have limited the damage if it had dealt more readily and speedily with the regulators. But it can take comfort from the fact that other foreign food companies have come back from similar adversity. In 2003 the FDA in Maharashtra seized stocks of Cadbury's chocolates when worms were found in a few bars. Cadbury initially said the infestation could only occur because of careless storage by retailers. The FDA countered that chocolate wrappers should be worm-proof. Cadbury then revamped its packaging and relaunched its products with a heavy advertising campaign. It is now, once again, the leading brand in India.

Investors seem to be betting that Nestlé can likewise restore its reputation. The share price of its local subsidiary, which had slumped by a fifth at its worst point, had recovered about half that loss following the court's hearing this week. The most regrettable thing about the affair, especially in a country where so many people go hungry, is that in all likelihood a lot of food has been destroyed unnecessarily. ■

Noodlegeddon

LG

Plucky contender

SEOUL

A South Korean underdog is making a bold bet on OLED technology

Lovely picture, but will people pay for it?

AN EXECUTIVE at Samsung, asked recently what he thought of LG, his company's domestic arch-rival, said with a wry smile that customers for electronic goods will always want to have a second, third or fourth choice, but that his competitor does not have the engineers, the technology, the budget or the leadership to be number one in most types of gadget. There was a time when LG was the local champion. In 1959 Lucky Goldstar, as it was then called, produced South Korea's first radio and, soon after, its first electric fan and telephone. By 1970 it was selling the country's first fridges, televisions and air conditioners. Yet now it beats its old adversary in selling only one type of appliance, washing-machines, and is struggling to recover the ground it has lost.

Samsung has emerged in recent years as one of the world's dominant makers of microchips and smartphones. Last year its electronics businesses, including display screens, had almost four times as much revenue, and almost 15 times as much operating profit, as LG's equivalent divisions. LG was once big in semiconductors, but was arm-twisted by the government into exiting the business as the country's industries were restructuring after the Asian financial crisis of 1997-98. It was once far ahead in selling mobile handsets, too.

Kim Dae-won, author of a study of the two firms' strategies, explains that Samsung sealed its lead when it decided in 2009 to introduce a new range of premium-priced smartphones in direct competition with Apple's iPhone. LG's initial reaction was just to bring out a new version of its earlier hit, the more basic Chocolate phone. As a result, while its rival went on to enjoy fat profits from the smartphone boom, LG Electronics suffered two years of heavy losses in its handsets business. In 2010 its boss resigned, to be replaced by a member of LG's founding Koo family.

Following its belated entry into making smartphones, LG now has less than 5% of the world market, whereas Samsung has about a quarter. The field is getting more crowded, with the entry into the business of Chinese firms such as Lenovo, Huawei and Xiaomi, and Micromax of India. But LG continues to invest heavily in developing upmarket models such as its G4, launched earlier this year, which has a high-specification camera and an optional stitched-leather back.

Shin Moo-young, a former manager at both firms, is sceptical that such gimmicky features will do the trick, and likens the future of LG's mobile business to the "sad decline into oblivion" of HTC, a once-prominent Taiwanese handset-maker. Though it is early days, some analysts recently downgraded their expectations for the G4's sales, whereas Samsung's latest model, the Galaxy S6, seems to be doing fine.

Faced with the difficulty of catching up in smartphones, and increased competition from low-cost rivals in domestic appliances, LG is betting heavily on some emerging technologies, in the hope of shaking off its also-ran status. In particular, since 2013 it has been making televisions with organic light-emitting diode (OLED) displays. These displays produce notably crisper pictures than even top-of-the-range liquid-crystal displays (LCDs). However, large OLED panels are costly and fiddly to make. Production yields (the ratio of flawless displays to duds) are depressingly low.

Last year LG said it had made a breakthrough in a mass-production technique for big displays, and it now says it is achieving yields of up to 80%. When it launched the first version of its 55-inch curved-screen OLED television in 2013 it cost $15,000 but now the latest version of that model can be bought for about $2,500 on Amazon.com, around the price of a similar, top-end LCD set. Later this year it will open a second OLED factory, and it is considering a third.

The thin, lightweight OLED displays, which do not need a backlight, are allowing LG to experiment with transparent, rollable, foldable and curved screens. LG is now the world's biggest maker of large displays of all kinds; in a decade its display business has more than tripled its revenue, to 26.4 trillion won ($26.3 billion) last year. As for smaller displays, it expects that within five years up to 40% of the world's smartphones will have flexible OLED screens. LG already has a strong position selling LCD screens to Apple for its mobile devices. DisplaySearch, a market researcher, says LG has the biggest share (over 90%) of the global market for smartwatch panels, mostly on the back of sales to Apple.

These days cars are increasingly stuffed with electronics, and LG is also taking advantage of this trend. It is one of the world's four main suppliers of display screens to global carmakers. It supplies electric-car batteries to 13 of the world's 20 largest automotive brands, including Renault-Nissan, which has the broadest range of battery-powered cars. Last December LG sealed a partnership with Mercedes-Benz to work on camera systems for automated driving. LG is also using OLED technology to create bendable, energy-efficient light panels.

Screen test

But big OLED TVs are the area in which it is taking the biggest punt. Samsung is still investing heavily in its display division, though it is being more cautious than LG in rolling out large-screen OLED TVs. Sony and Panasonic of Japan have abandoned a proposed partnership to mass-produce them. As a result, LG is emerging for the first time in a long while as the leader in a particular component, says Shaun Cochran of CLSA, a stockbroker.

However, in a sense the lack of competition makes things harder for LG. It is having to work alone to create a market for such appliances by getting retailers and consumers to take an interest in them. LG is thought to be enduring heavy losses on its OLED TVs, and is a long way from seeing a return on the $3 billion it is said to have invested in production facilities since 2010. And even if consumers the world over fall in love with ultra-slimline, crystal-clear OLEDs, LG's advantage might not last. Samsung would surely throw its vast resources at trying to catch up. In the one area of technology in which LG earns a gold star, keeping it will not be easy. ■

Jardine Matheson

Return to China

SINGAPORE

A grand old trading house seeks a new propellant

EACH day on the dot of noon, a former naval artillery piece is fired from a platform at the eastern end of Causeway Bay in Hong Kong. Pulling the trigger is one of the 430,000 employees of Jardine Matheson, a British-run and family-owned conglomerate with interests in retail, property and carmaking. The ceremony harks back to Jardines' origins in the 1830s as an intrepid tea-and-opium trader, and is usually attended by a gaggle of tourists. It is an oddly public display by a firm that otherwise prefers to pass unnoticed.

Over the past decade few Asian conglomerates have performed as consistently as Jardines. Propelled by a well-timed expansion into South-East Asia, the group's revenues have risen by about 18% annually since 2005. As the chart shows, the performance of its main listed vehicle since Britain's handover of Hong Kong to China in 1997 has been strong even compared with that of two other successful "hongs" with roots in colonial times: Swire and Hutchison Whampoa. (The latter has just merged with Cheung Kong, another of Li Ka-shing's companies, to form CK Hutchison.) It is a sharp contrast to Jardines' sickly state at the turn of the millennium, when some of its investments in Britain had done poorly, and its future was unclear following the Hong Kong handover. The question is whether, now that Asian growth rates have fallen, it can find new ways to grow.

Jardines owns Mandarin Oriental, a chain of hotels, and its companies run some Asian branches of Pizza Hut, KFC and IKEA. It said last month that it would open the first Pizza Huts in Myanmar, bringing a slice of modern civilisation, such as it is, to the long-isolated Burmese. But most of its profits come from only three of its firms. Hongkong Land's property portfolio includes many valuable sites in the territory's central business district. Dairy Farm, a retailer with interests across East and South-East Asia, owns among other things the Wellcome, Giant, Cold Storage and Hero supermarket chains. Jardines' crown jewel is Astra, an Indonesian vehicle-maker and palm-oil producer, in which it began building a stake in 2000 and which it now controls. Astra accounts for roughly half of the group's revenues, and its stellar growth helped underlying profits at the group's two main listed vehicles—Jardine Matheson Holdings and Jardine Strategic—roughly to triple in the five years to 2010.

It seemed a gamble at the time, but in retrospect buying into Astra was a far-sighted bet on Indonesia—a sprawling country of 250m people that continues to fox many multinationals—just as aftershocks from the Asian financial crisis had made its firms look cheap. Analysts say Jardines seems a more disciplined investor than others: it tends to buy small chunks of companies in a fairly narrow range of industries, before expanding its ownership of the spriteliest ones. By contrast with their peers at Swire, executives at Jardines prefer not to get involved with the day-to-day running of their subsidiaries, concentrating instead on broad strategy. They pay good money for companies that are already well-run: Gerald Wong, an analyst at Credit Suisse, says many of the group's firms are "best in class".

Keeping it in the family

Jardines' run of success until recently bought the group respite from once-fiery battles with outside investors over the Keswick family's continuing control. Ben Keswick, its managing director, is a descendant of one of the firm's Scottish founders. The Keswicks are among the last of a once-crowded field of upper-class British families who run firms set up by their Georgian and Victorian forebears.

The family are said to train their youngsters energetically, but not to coddle princelings who disappoint. Networks built during generations of hobnobbing have probably helped the Keswicks to spot and seize opportunities more swiftly than competitors. But keeping the family at the helm has required controversial contortions. In the mid-1990s, amid fears of what might follow after the handover of Hong Kong, Jardines switched its Asian stockmarket listings from there to Singapore. In the early 2000s some shareholders waged a noisy yet unsuccessful campaign to unwind a convoluted corporate structure that helps to keep the Keswicks in control.

There was much less fuss when the issue arose again last year, as new rules in Britain prompted the group to downgrade its London listing from "premium" class to "standard" (an indication of compliance with regulatory and governance standards). However, the agitation could return if a recent flattening of Jardines' profit growth starts to look permanent. In the past few years its food businesses have been hit by rising wages and increased competition. A bigger concern is Indonesia's slowing economy. The end of a commodity boom has reduced demand for the cars and agricultural and mining machinery which Astra produces. The largest impact, though, has come from the plummeting rupiah. In March it reached a 17-year low against the American dollar, in which Jardines compiles its accounts.

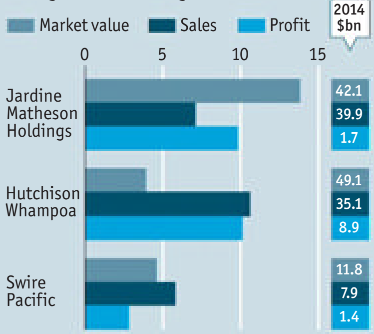
Recent acquisitions may help Jardines to return to growth. In April it spent $615m acquiring a 25% stake in Siam City Cement, a Thai firm, perhaps hoping that Thailand's military government will get going on some big, long-promised public-works projects. But lately its biggest bets have been in mainland China. At the start of 2014 the group took a 20% stake in Zhongsheng, a Chinese car dealer, for $731m. Last summer Dairy Farm paid $925m for a one-fifth stake in Yonghui, a chain of supermarkets. That was Jardines' biggest acquisition by value in at least a decade.

Bulking up in China pleases analysts who worry that Jardines has become over-exposed to Indonesia. The risks are not just to do with the weakness of the Indonesian economy or the prickly nationalism of its government; campaigners worried about the environmental impact of Astra's palm-oil plantations in Indonesia have lately taken to demonstrating outside Jardines' Mandarin Oriental hotels around the world. Last month Astra promised to stop clearing forest to make way for plantations.

Well-read Chinese will be aware that Jardines' 19th-century founders lobbied hard for Britain to wage the first Opium War against China, over its attempt to curb imports of the drug by Jardines and other traders. But any lingering animosity—from that, or from the war of words that preceded the firm's move to Singapore—does not appear to have held up Jardines' recent big deals on the Chinese mainland. And the group has proved deft at navigating economic nationalism in Indonesia, where Astra is considered a local success story. Jardines' long history is far more an asset than a liability, thinks Jonathan Galligan, an analyst at CLSA, a stockbroker: "They don't make the same mistakes twice." ■

Hongs since the handover

Average annual % change 1997-2014



Sources: Bloomberg; *The Economist*

Schumpeter | McJobs and UberJobs

Lawsuits about what it means to be an employee could shape the future of big industries

THE French enjoy nothing more than resisting the forces of Anglo-Saxon capitalism. On June 25th French taxi drivers paralysed Paris in protest against Uber, a ride-sharing service, and attacked a few Uber cars for good measure. On June 29th police arrested two of Uber's managers in France for "illicit activity". But from Uber's point of view, all this is but a minor inconvenience: Paris is just one of 300 cities it serves. Far more worrying is what is happening in the company's own backyard in San Francisco.

On June 3rd the California Labour Commissioner ruled that Uber owes a former driver, Barbara Ann Berwick, $4,152, mostly in expenses, on the ground that she was an employee rather than, as Uber claims, an independent contractor. Uber is appealing against the ruling. But it is a harbinger of things to come: San Francisco courts are also hearing two more cases that hinge on the same question. If the rulings go against the company, its labour costs may rise significantly, as it is forced to pay drivers' social security and other benefits as well as their expenses. Its valuation, which is currently above $40 billion, may suffer.

Uber is not the only big American company whose business model may be upended by employment law. Last year the National Labour Relations Board's general counsel said he would treat McDonald's as a joint employer, together with franchisees, of staff in the chain's franchised restaurants. This opinion will soon be tested in a case brought by ten employees who claim that they were sacked by a franchisee in Virginia on racial grounds.

Both Uber and McDonald's are up against powerful interest groups that are capable of both fighting prolonged legal battles and playing on the public's heartstrings. Uber has to confront state governments which stand to gain sizeable tax revenues if on-demand workers are classified as employees. McDonald's has to wrestle with the Service Employees International Union, which has been trying for years to unionise fast-food restaurants.

The legal situation seems to be murky in both cases. A pro-Uber lawyer could argue that the firm is essentially little more than a marketmaker that provides a forum for buyers and sellers of rides to come together. Its drivers own their vehicles and choose their working hours. They are free to work for rivals, such as Lyft. An anti-Uber lawyer could retort that the company exercises considerable control over its workers. It screens them for criminal records, and weeds out those who get poor reviews from passengers. Likewise, a pro-McDonald's lawyer could argue that it is the franchisees who hire and fire workers, and who run the business from day to day. An anti-McDonald's lawyer could point to the detailed rules that the company lays down on how workers in franchised restaurants are trained and how they should serve customers.

The fundamental problem is that in America, as in many other rich countries, employment law has failed to keep up with the changing realities of modern work. Its labour rules are rooted in a landmark piece of legislation, the Fair Labour Standards Act, passed in 1938 during Franklin Roosevelt's presidency. In those days a far larger proportion of American men worked in manufacturing; most women did not work; and the difference between employees, who worked full-time for a company, and contractors, who were typically tradesmen such as plumbers, seemed much clearer. The post-war growth of franchising, and the expansion of companies like Amway and Avon that used freelance door-to-door sellers, began to blur the distinction. Now, the "on-demand" economy is all but obliterating it, by letting people sell their labour and rent out their assets—from cars to apartments—in a series of short-term assignments arranged by smartphone app.

That the law is so dated suggests that judges should exercise as light a touch as possible. The franchise model has thrived because it allows local entrepreneurs to join forces with a global goliath to scale up their businesses quickly while operating them according to local labour-market conditions. Forcing McDonald's to become a co-employer would expose those franchisees to co-ordinated union action and make it much more difficult for them to respond to local circumstances.

The benefits of flexibility

The case for a light touch is even more compelling when it comes to Uber and its peers. The most important thing to remember about the on-demand economy is that it has been a dramatic success not just for consumers but also for workers seeking flexibility. That is why Uber's number of drivers has been doubling every six months for the past couple of years. Some on-demand companies will choose to classify their workers as employees: for instance, Instacart, a grocery-delivery service, has invited some of its freelancers to become part-time employees, in the belief that this will make it easier to train and supervise them. But other firms should be free to decide otherwise. Uber's drivers, and their peers at on-demand firms, would get expenses and other benefits if they were declared employees—but they would have less flexibility over working hours and, more important, the increased cost of employing them might mean fewer jobs.

America needs to update its employment law to take into account the fact that FDR is no longer president. This will involve some careful balancing. Policymakers need to recognise that people want to work more flexible hours and that technology has made it possible to create spot markets in surplus labour and idle assets. But they must also recognise the state's need to raise taxes to pay for public services and benefits. Given the dysfunctional nature of America's politics, such updating will take a good deal of time and will probably involve many false starts. Until then judges should leave open as many options as possible. The last thing the country needs is for over-strict interpretations of outdated laws to kill exciting new businesses and sabotage jobs. Do that and you end up like France. ■

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China and commodities

Cornering the markets

How China continues to reshape the world of commodities

THE world's biggest consumer of commodities is no longer just an insatiable buyer of everything from coal to gold. A richer, slower-growing and choosier China is becoming an exporter as well as importer. It is also using its clout to change the way commodities are traded, bringing markets closer to home and drawing up rules that suit its needs instead of those of producers and Western financiers.

This week, for example, Chinese regulators gave the go-ahead for foreigners to trade crude-oil futures in Shanghai. When that starts—probably by November—it will be the first time that outsiders have been allowed to buy and sell a listed Chinese futures contract. This is part of a clear plan to change the way commodities are traded, says Owain Johnson of the Dubai Mercantile Exchange (DME). The exchange in Dalian, a port through which many commodities enter China, has become the biggest trading centre for iron ore in the world in less than two years. Shanghai has developed big markets in nickel and copper.

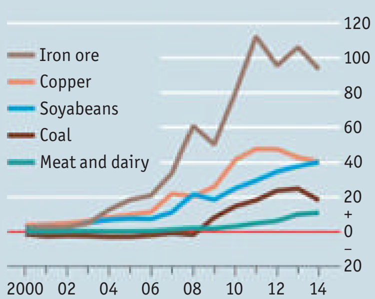
Many expect more gold trading to move to China too. Allegations of rigging have rocked the current hub, in London. China—the world's largest producer of bullion—announced on June 26th that it would launch a yuan-denominated gold contract in Shanghai by the end of the year. China is reaching "critical mass" in its influence on commodity prices," says Grant Sporre of Deutsche Bank.

This is a much more sophisticated way of wielding clout than in the past. An attempt by China in 2010 to corner the market in rare earths—17 exotic metals used in tiny quantities in many modern devices—failed spectacularly. China, which at the time produced 97% of the ores for rare earths, banned exports in the hope of bringing the business of processing these deposits onshore. But rare earths proved not so rare: companies elsewhere revived old mines and ramped up production; by late 2011 prices had plunged.

The goal now is to seize control of price formation. The main global benchmark for crude oil, Brent, relies on data compiled by price-reporting agencies about deals done during a short "window" in the middle of the trading day. State-controlled Chinese oil companies have been playing an increasingly active role in that process, but from the Chinese government's point of view, bringing the trading closer cuts costs and reduces the impact of events in faraway places from which the country imports little oil. "They ask: 'Why should a Norwegian oil workers' strike affect our economy?'" says Mr Johnson.

Waistlines, not skylines

China's net imports, $bn



Source: UN

As the world's biggest importer, China wants its own benchmark instead, based on transparent and comprehensive data, priced in its own currency and governed by its own laws. The Shanghai oil-futures contract aims to achieve that goal.

As exchanges in mainland China grow, rivals are feeling the squeeze. The Shanghai Futures Exchange is impeding efforts by Hong Kong Exchanges and Clearing to expand its metals-trading business, following the acquisition of the London Metal Exchange in 2012. In March the Shanghai exchange threatened to sue its Singaporean counterpart for copying a futures contract.

Several obstacles lie ahead, however. Outsiders will not be keen to bear the exchange-rate risk of trades denominated in yuan. The security of the English legal system in case of disputes will be hard to match. Confidence has been dented by a scandal involving Chinese commodity warehouses, in which metals were used as collateral for letters of credit to get around foreign-exchange restrictions.

China is putting a fresh imprint on commodity markets in other ways too. As its economy slows and investment gives way to consumption as the mainstay of growth, the country's needs are changing. Demand for primary products used mainly in housing and infrastructure—coal, iron ore, steel ▸▸

and aluminium—is slowing. China has already hit "peak coal" (consumption is falling, amid worries about air pollution); peak steel is not far off, with growth of only 1-3% likely after a dip last year. Even copper is fading a bit. Consumption used to grow faster than GDP, notes Colin Hamilton of Macquarie, a bank; now it lags. A related headache is that China, once a sponge for raw materials, is becoming an exporter of things like stainless steel and aluminium, thanks to cheap and abundant power, growing technological nous and a glut of smelting capacity.

Instead, exporters must look to other commodities for growth. Richer Chinese consumers are stoking demand for dairy products, meat, chocolate and jewellery. That has an effect both on those items directly and on the commodities used to produce them. While imports of iron ore wane, for example, demand for soyabeans, which are used mainly to feed livestock, continues to grow rapidly (see chart on previous page). That is partly because China has paved over lots of soya farms, but mainly because meat consumption is up.

Yet it is not certain that this trend will persist. The average Chinese already consumes more calories than the global average, and almost 85% of the American level. A healthy switch from pork to chicken would actually cut demand for agricultural commodities, notes Capital Economics, a consultancy. Hershey, a big confectionery company, has had to trim its forecasts for sales growth in China.

Whether China adopts old Western habits or opts for thriftier and healthier ones will shape the commodities industry. But its impact on trading is even more immediate. As every good capitalist knows, the customer is always right. China is using its buyer's clout to ensure that commodities are traded the way it wants. ■

Buttonwood | Right back where we started

Three lessons from the first half of 2015

ANY investor who fell asleep on January 1st and woke up on June 30th might feel they had not missed anything. The S&P 500 index ended the first half pretty much where it started; the same is true of London's FTSE 100 index. The ten-year Treasury-bond yield edged up by around a fifth of a percentage point (see chart). Nor would a reawakened investor be particularly surprised to find that Europe was still engulfed in a Greek crisis.

But a lot did change in the first half of the year and recent events have emphasised three lessons. The first is that political risk is very real. Over the past decade or so, investors seem to have decided that such risks are overblown. Middle East crises have come and gone without the straits of Hormuz being blocked and oil supplies impeded. Congress has repeatedly threatened to shut down the government and drive America into technical default by refusing to raise the limit on its debts—but at the last minute, deals get done. Scotland did not vote to leave the United Kingdom. Russia and the West may be at loggerheads over Ukraine, but that has affected Russian markets, not those in Europe or America.

For much of this year, investors have accordingly assumed that politics would proceed as usual: a Greek deal would be done, albeit at the last minute. Hedge-fund managers who would shun the socialist views of the Syriza leadership piled into Greek shares and bonds. Some apparently hired body-language experts to assess the gestures of Alexis Tsipras and Yanis Varoufakis so as to anticipate their actions. But Syriza was elected on a promise to break with the past; ideological opposition to austerity has pushed the Greeks all the way to capital controls and bank closures. Even if a deal is agreed in the end, a lot of damage has been done.

There are other insurgent parties in Europe that reject the old politics. Although none has yet had the same electoral success as Syriza, they are still having an effect on the mainstream parties. Britain's frantic attempts to renegotiate the terms of its EU membership are a response in part to the rise of the UK Independence Party.

In a world where growth has been hard to achieve, politicians do not have a bigger pie to divide up and dish out. A concession made to one group must be at the cost of another. The temptation then is blame outsiders (foreigners) for the mess and to seek to gain at their expense. This makes it harder to achieve compromise in international negotiations, as the Greek saga and the refugee crisis in the Mediterranean have amply illustrated.

The second lesson is that investors are still dependent on the largesse of central banks. There was a sell-off in equities on June 29th when fears of a Greek exit from the euro zone resurfaced. But it was not as big as it would have been in 2011. Crucially, the bonds of euro-zone members such as Portugal and Italy suffered only minor losses. That is because the European Central Bank has the monetary firepower to buy those countries' bonds and ward off contagion.

More heat than light

Source: Thomson Reuters

But what central banks give, they can take away. The big guessing game for investors in the first half of the year was when the Federal Reserve would increase rates—the first rise since 2006. It is clearly a tricky decision: the American economy was weak in the first quarter and core inflation is below target. A big Greek shock may have an impact. On June 29th, as Greece imposed capital controls, the futures market indicated that investors were less sure rates would rise in September. If Greece strikes a deal, the Fed will have more freedom to act.

The third lesson is that, because of reduced liquidity, markets can move very rapidly indeed. In the government-bond market, German ten-year yields went from 0.5% to almost zero in April, before shooting back up to nearly 1% and then falling back again. These are huge moves for a "risk-free" asset.

Illiquidity makes the markets vulnerable to a truly unforeseen shock. Greece's epic woes, which have been dragging on for five years, do not really count. Asia, where economic data have been mixed, could be the source of a nasty surprise: the latest South Korean and Taiwanese purchasing managers' indices for the manufacturing sector are well below 50, indicating declining activity. According to Markit, a data firm, the global purchasing managers' index dropped to 51 in June from 51.3 in the previous month.

The consensus has been that both the global economy and corporate profits will strengthen in the second half. If that doesn't turn out to be the case, equity markets could be vulnerable.

Economist.com/blogs/buttonwood

Puerto Rico

A Caribbean fuse

NEW YORK

An American territory wants to restructure its debts but doesn't know how

FOR more than two years Alejandro García Padilla, Puerto Rico's governor, told the island's creditors what they wanted to hear. The autonomous American territory, he said, had a "moral obligation" to service its $72 billion debt. It could not default on its "general-obligation" bonds, he added, because its constitution gives payments on them priority over all other expenses. He called attention to his record of tax increases and spending cuts. But after 30 months of reassurances, the governor reversed course this week and announced that he would seek to restructure Puerto Rico's liabilities. "The public debt…is unpayable," he declared on June 29th. "This isn't about politics. It's about math."

Mr García Padilla demanded a multi-year moratorium on debt service. "The alternative", he says, "would be a unilateral and unplanned non-payment of obligations." Puerto Rican bond yields duly soared, and shares in the island's banks, which own lots of the bonds, plunged.

Mr García Padilla's announcement coincided with the release of a report by Anne Krueger, a former IMF official, that painted a grim picture of the island's economy. It has been contracting in real (ie, inflation-adjusted) terms since 2006, and is now 14% smaller than a decade ago. In nominal terms it has been flat since 2012 (see chart). One reason is the expiry in 2006 of an exemption from federal tax for the Puerto Rican operations of firms from the mainland. But Ms Krueger lists a litany of woes, with striking parallels to the week's other troubled debtor, Greece.

Both sit at the southern edge of a large currency union and have benefited from big transfers from richer regions. Both lost competitiveness as a result of the strength of those currencies combined with inflexible labour markets. America's minimum wage applies in the territory, but local workers are less productive than their counterparts on the mainland (the minimum wage is equivalent to 77% of Puerto Ricans' average income). Worse, federal welfare payments can exceed the minimum wage by half. The disincentives to hire and to work have suppressed Puerto Rico's workforce-participation rate to a dismal 40%. High labour costs have been compounded by the exorbitant prices charged by the inefficient power company.

Puerto Rico, like Greece, added to its problems by borrowing profligately to fund generous public payrolls at artificially low interest rates—in Greece's case because lenders assumed the European Union would back the debt; in Puerto Rico's because income from its bonds is tax-exempt for mainlanders. Both have seen their tax bases dwindle as younger workers have emigrated: Puerto Rico's population has shrunk by 10% over the past decade. Both hid their liabilities amid a thicket of bureaucracy: Ms Krueger calculates that, what with losses at state-owned firms and unfunded pensions, Puerto Rico's public sector runs a bigger deficit than the government admits—perhaps 5% of the island's output. Both have responded to surging bond yields with austerity, which has deepened their recessions and made it harder to service their debts as tax revenue has fallen. Puerto Rico's latest fiscal report said that, without new loans, it would run out of cash by October.

Swaying palms, tottering finances

Puerto Rico's:
In nominal terms, $bn

Sources: Government Development Bank; *The Economist* *Forecast

Ms Krueger's report reinforces the consensus that debt relief is needed. But finding a mechanism to trim the island's liabilities will not be easy. Because Puerto Rico is not independent, it cannot repudiate its debts and devalue its currency. But it is not one of America's 50 states either, and so does not qualify for the municipal-bond section of federal bankruptcy law. The island's assembly passed a law allowing state-owned firms to restructure their debts, but America's courts threw it out.

Puerto Rico's municipal-style debt contracts do not have the "collective action" clauses that allow many sovereign defaulters to force minorities of recalcitrant investors to accept a loss. As a result, every creditor who does not receive full payment can file a lawsuit. The legal protection the island has given to some creditors—the constitutional guarantee on general-obligation bonds, and special recourse to sales-tax revenues for another category of bondholder—gives them little incentive to be flexible. Unflinching investors may even be able to stop their more conciliatory counterparts from receiving a penny until they are paid in full, by exploiting a recent precedent regarding Argentine debt.

Resolving this impasse will require intervention from America's federal government. Congress could appoint a committee to administer the territory's finances, allow Puerto Rico's state-owned firms to declare bankruptcy or bail out the island directly. Making permanent an interim ruling that allows firms whose subsidiaries pay excise tax in Puerto Rico to claim a federal tax credit would help. Many reforms needed to revive growth must be ordered from Washington, such as exempting Puerto Rico from the minimum wage and from a law that bans foreign vessels from shipping goods between American ports. Unfortunately, although Mr García Padilla says he will no longer "kick the can down the road", the federal government has not displayed the same urgency. ■

On the verge of a tumultuous descent

China's banks

Small is ugly

SHANGHAI

Bad loans pile up at China's small, unlisted banks

IF THE recent actions of China's regulators are anything to judge by, its lenders need help. Over the past ten days alone, the central bank has pumped extra cash into the financial system, cut interest rates and lowered the portion of deposits banks must hold in reserve; the government has scrapped a ceiling on their loan-to-deposit ratios. The combined effect is to free more cash for banks to lend—a boost for banks seeking to improve the return on their assets as well as a prop for the sputtering economy and plunging stockmarket. The official data, though, suggest China's lenders are still in rude health: bad loans make up just 1.4% of their balance-sheets. That is a touch above the level of the past few years, but still more than two-thirds lower than before the global financial crisis.

How to explain the discrepancy? One possible answer is that bad loans are a lagging indicator. It is only after the economy has struggled for a while that borrowers begin to suffer. Looked at this way, China is trying to anticipate problems, keeping its banks in good nick by sustaining economic growth of nearly 7% year-on-year. Another, more worrying possibility is that bad loans are worse than official data indicate. Many in the market have long suspected this: bank shares are priced as though bad loans constitute 5-10% of their books.

That has consistently looked too pessimistic for China's biggest banks, which are managed conservatively and largely focus on the country's highest-quality borrowers. But there is mounting evidence that when it comes to smaller banks, especially those yet to list on the stockmarket, bad loans are piling up. That is important, because unlisted lenders account for just over a third of the Chinese banking sector, making them as big as Japan's entire banking industry (see chart).

Although non-performing loans have edged up only slowly, the increase in special-mention loans (a category that includes those overdue but not yet classified as impaired) has been much bigger. At the end of the first quarter, they accounted for 3.5% of banks' balance-sheets, up one percentage point from a year earlier, according to the banking regulator. Special-mention loans are about 2% at most of China's big, listed banks, suggesting that they must be much higher at their smaller, unlisted peers. Many of these overdue-but-not-impaired loans are simply bad debts which banks have not yet admitted to.

Another troubling omen is China's roaring trade in dud loans. Some 15 years ago, the government created asset-management companies (often referred to as "bad banks") to take on the non-performing loans of its lenders. After the initial transfer, the bad banks had little to buy. But last year, they began gobbling up troubled loans again. Cinda, the biggest of the bad banks, bought nearly 150 billion yuan ($24 billion) of distressed assets last year, two-thirds more than in 2013. Without the disposals, these assets would have nudged up the banks' bad-loan ratio by a few tenths of a percentage point.

Although such numbers are still not very alarming, a bleaker picture emerges from a close reading of the balance-sheets of unlisted lenders. Jason Bedford and Stephen Andrews of UBS, a bank, reviewed last year's results for 138 banks, of which only 20 are listed. They found that "shadow loans"—loans recorded as investments—have grown to as much as 8.7 trillion yuan, or 5% of the industry's assets. These are heavily concentrated on the balance-sheets of smaller, unlisted banks (see chart). Banks need not specify whether their shadow loans have gone bad or not.

A handful of banks do spell things out and, for a few, the figures are frightening. Bank of Changsha's impairments on its shadow loans are 12 times higher than on its conventional loan book. Leshan City Commercial Bank's impaired shadow loans are 80 times higher, in effect putting its bad-loan ratio at a jaw-dropping 20% (the bank says this reflects investments at risk, not in default). These may be extreme cases but, given scant disclosures from other unlisted banks, it is impossible to be sure. They may be deliberately disguising bad debts as shadow loans. At a minimum, all this points to a need for recapitalisation. Small banks can make big waves. ■

Italy's bad debts

Beautifying bankruptcy

MILAN

Legal reforms may help chip away at the mountain of non-performing loans

IN MEDIEVAL Italy, when a merchant did not pay his debts, the bench at which he conducted business was smashed to force him to stop trading. The word "bankrupt" derives from *banco rotto*, meaning "broken bench". Italy's contemporary bankruptcy laws are less violent (though until 2006 debtors lost their right to vote, and had their mail read by liquidators). But the system is painfully slow, and usually ends in liquidation rather than restructuring.

Italy's justice ministry has appointed a commission to come up with plans for a comprehensive overhaul. It is due to report in December. In the meantime, the government last week introduced an emergency decree aimed at unblocking a backlog of bad loans. The hope is that this would allow banks to lend to more deserving companies instead and so boost the economy, which after three years of recession grew by 0.3% in the first quarter.

Italy's slow and inefficient civil-justice system is one of the biggest constraints on growth and investment. The World Bank's "Doing Business" report ranks Italy 147th out of 189 countries on the ease of enforcing contracts. The process typically takes 1,185 days, compared with a rich-country average of 540. Italy fares better on resolving insolvency: it comes 29th. But that still puts the country far behind most advanced economies.

Bankruptcies take more than six years ▸▸

Heavy weather for small businesses

Rome wasn't wound up in a day

Typical duration of a foreclosure procedure
Months, 2014

Source: ECB

on average—down from nine in 2008—and foreclosure lasts four-and-a-half, longer than almost anywhere in Europe (see chart). This has become especially problematic as the financial crisis has caused the number of companies in distress to soar: annual corporate insolvencies rose from around 6,000 in 2007 to more than 14,000 a year in 2013 and 2014. The result is a mass of impaired loans—€325 billion ($360 billion) as of December—weighing down banks' balance-sheets. That is 16% of all loans, up from 5% in 2007. Roberto Nicastro of UniCredit, Italy's biggest bank, says bad debt is so common that some firms avoid creating receivables for fear they will not be paid, choosing instead to sell only to those who pay straight away.

These bad debts stay with the banks for reasons both of supply and demand. On the one hand, banks are reluctant to sell them or write them off because they do not want to acknowledge the losses involved. Write-off periods have slowed to more than six years, compared with four before the crisis. On the other hand, there are few buyers because restructuring is so hard. Mediobanca, a Milanese investment bank, estimates that buyers typically offer 25% less for dud loans than banks are hoping to receive.

The emergency decree aims to speed things up and increase the amount creditors recover. In bankruptcy proceedings, deadlines will be imposed that, if unmet, will result in the liquidator's dismissal. In the case of a *concordato preventivo*, Italy's equivalent of America's Chapter 11, creditors holding at least 10% of the overall debt will be able to file competing restructuring plans (until now creditors could only approve or reject the debtor's plan). These will then be submitted to the creditors for a vote and the most popular plan presented to the court. The decree also introduces a scheme by which a restructuring plan can be approved if at least 75% of the creditors agree on it. In addition, credit losses will now be tax-deductible in a single year rather than over five, which should make admitting them more attractive.

These measures are intended to increase the value of Italy's impaired loans and facilitate sales. Lorenzo Stanghellini of the University of Florence thinks they might speed foreclosures by about a year and bankruptcy proceedings by two. But their impact will not be seen for a while, since most of the rules apply only to new cases. Moreover, Mediobanca estimates that shortening recovery periods by a year would reduce the gap between banks' expectations for bad debt and buyers' offers by only three percentage points.

More dramatic successes will depend on the sweeping reforms to be unveiled later this year. Tommaso Foco of Portolano Cavallo, an Italian law firm, says that bankruptcy is still a source of shame in Italy, so that by the time entrepreneurs admit they are struggling it is often too late to save the company. Taking the stigma out of bankruptcy may be just as hard as streamlining the proceedings it involves. ■

Wages in America

A middle-class mirage

The president wants businesses to pay more overtime

AMERICA'S workers have seen better days. Over the past decade private-sector wages have grown at an average yearly rate of just 0.3% after accounting for inflation—a fraction of their typical pace of growth. One response, embraced by Barack Obama this week, is to oblige firms to grant 5m more workers "overtime pay"—1.5 times their normal wage—for any period they work in excess of 40 hours a week. Hillary Clinton, the probable Democratic candidate for president, called it "a win for our economy and workers". The economic evidence behind the policy, though, does not justify her enthusiasm.

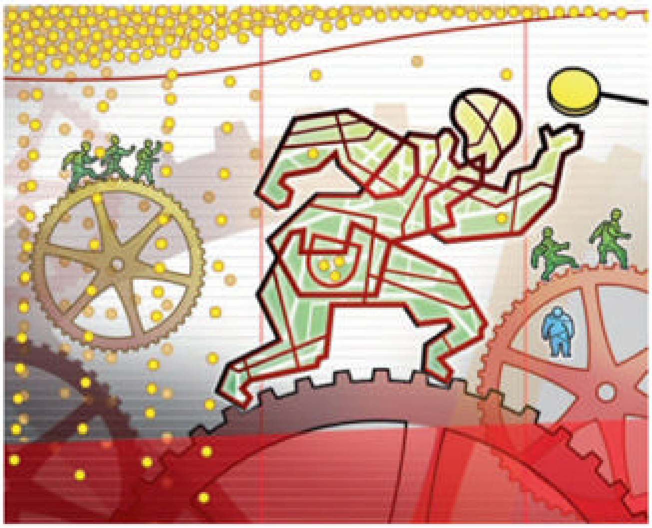
The Fair Labour Standards Act (FLSA) of 1938 fixes a threshold salary above which workers are not entitled to overtime. The intention is to strip out managers and supervisors who, the argument goes, are harder to coerce into working unreasonable hours and are well compensated for their trouble anyway. But the exemption has not kept pace with inflation. It is now $23,660 a year, below the poverty line for a family of four ($24,250). The proportion of full-time salaried workers eligible for overtime pay has fallen from 62% in 1975 to 8% today. Mr Obama plans to increase the threshold to $50,440 a year by executive order, and to tie it to the 40th percentile of earnings, so that it gradually rises along with wages.

If businesses reacted passively to the new policy and followed it to the letter, it would make middle-class workers roughly $10 billion richer. Things will not work out so simply, however. Accidentally or deliberately, employers often fail to pay overtime. The Economic Policy Institute, a left-leaning think-tank, estimates that after accounting for other types of "wage theft" low-wage workers miss out on $50 billion each year. The Department of Labour has cooked up a down-on-his-luck cartoon character, Jason, to increase awareness of the rules. It wants people to tell it what "getting paid overtime [would] mean to you".

Even if the new policy can be enforced, opponents say it risks altering hiring policies. If bosses know how many hours each week they intend to employ someone (including overtime), they may reduce the base wage they pay new recruits so that the total amount they end up forking out is just the same. Cutting the nominal salaries of already-employed workers is tough, so some companies may simply stop them from working overtime to avoid the extra costs. Such firms may well stock up on new employees to fill the resulting gaps. But if the only effect of Mr Obama's plan is to create lots more low-paid jobs, he will presumably consider it a failure.

Free exchange | Credit where taxes are due

Reducing wage subsidies would hurt workers more than their employers



IN RECENT years tax credits for the poorly paid have become a big part of the welfare systems of America and Britain. Nearly a quarter of Americans are eligible for the Earned Income Tax Credit (EITC), which can boost the income of workers with big families by over $6,000 a year by reducing their taxes. In Britain similar credits account for 14% of all welfare spending.

The credits have critics. Left-wing activists have long complained that although the tax credits are paid to the poor, it is really "corporate welfare queens" such as McDonald's and Walmart that benefit, since the credits allow them to pay lower wages. Now politicians on the right are joining in. David Cameron, Britain's prime minister, has hinted that tax credits might be next for the chop in his government's austerity drive.

Wage subsidies had been politically popular because they help the poor while still encouraging work. But politicians like Mr Cameron wonder whether the same objective could be achieved at less cost to taxpayers by raising the minimum wage that firms must pay workers. The hitch, of course, is that a higher minimum wage might dent employment. Tax credits, in contrast, are supposed to encourage hiring.

In practice, their design means that tax credits often have a more nuanced effect on employment. They do seem to pull single mothers into the workforce, but have the opposite effect on married women who are already working. That is because credits paid to men allow their wives to leave work without reducing the family's income. Moreover, credits are gradually withdrawn beyond a certain level of income, which diminishes the incentive to work once the threshold has been reached.

A review of the evidence from Britain by Mike Brewer and James Browne of the Institute for Fiscal Studies, a think-tank, concludes that the extra jobs for single mothers outweigh the reduced work for married ones. A recent paper by Austin Nichols of the DeBruce Foundation, an American charity, and Jesse Rothstein of the University of California, Berkeley, reaches a similar conclusion about the EITC. In both cases, the impact on married couples diminishes the number of jobs created. What is more, there is little indication that the credits draw many men into work, though this is unsurprising given that few childless men are eligible and most married fathers work no matter what.

The evidence that tax credits reduce poverty seems much stronger. A report last year from the Census Bureau in America found that the rate of poverty among children would rise from 16% to 23% if the EITC were eliminated. Moreover, the fear that they benefit employers more than employees seems misplaced.

Tax credits create a wedge between the wages firms pay and the income workers receive. In a free market, you would expect firms and workers to respond to that difference, the former by hiring more workers, the latter by wanting to work more. Economists know that how much they respond determines who really benefits—the "incidence" of the subsidy, in the jargon. Counter-intuitively, whoever responds least gains most.

Suppose an ice-cream parlour has room for only two employees, meaning however much wages fall it will not take on any more. It employs the cheapest available workers, who cost $10 an hour to hire. If the government introduces a tax credit worth $4 an hour, it need only pay the workers $6 an hour. All of the benefit of the tax credit flows to the parlour and none to the employees.

Instead suppose the ice-cream parlour could take advantage of cheaper workers and expand. The next-cheapest worker available wants $12 an hour. Assuming the parlour must pay all employees the same wage, it now pays its three workers $8 an hour before the tax credit ($12 an hour after it). The parlour's existing employees are $2 an hour better off, but the parlour is paying them $2 an hour less. The benefit of the tax credit is split (and a new job is created too).

An analysis of the EITC published in 2010 by Andrew Leigh of the Australian National University found that most of the benefit of the credit went to workers. Not all of it did though: a 10% increase in the credit was associated with a 5% dip in wages of high-school dropouts. By the same token, a study conducted the following year by Mr Rothstein found that for each dollar spent on tax credits, existing workers' income rose by $0.73 (although $0.09 of this was because they chose to work more). Employers gained $0.36, as they spent less on wages.

Economists at Britain's National Institute of Economic and Social Research are conducting a similar study of the British system of tax credits. Childless workers become eligible for the credits at the age of 25. By comparing wages either side of this threshold, they have been able to estimate how much the credits are depressing wages. Their preliminary (and unpublished) results suggest that, of the 76p an hour the government forks out in tax credits for someone on the minimum wage, 72-79% goes to workers.

Cross-subsidy

A higher minimum wage, meanwhile, might have unintended costs for workers and the government. Imagine a supermarket choosing between employing an extra cashier or investing in a self-service checkout machine. A tax credit would encourage hiring by reducing the wages paid by businesses, whereas a higher minimum wage encourages automation by increasing them. Messrs Rothstein and Nichols point out that a minimum wage and tax credits work best in tandem: a wage floor can restrict the amount by which wages sink due to a tax credit. Mr Cameron should bear their results in mind when his government presents its ideas for reducing welfare bills in the budget on July 8th. ■

* Studies cited in this article can be found at www.economist.com/taxcredits15

Economist.com/blogs/freeexchange

FOR SALE Central Lisbon

ESTAMO

Rua Castilho, 36, Lisboa

Area Above Ground ■ 2227m2
Area Below Ground ■ 420m2

Rua Artilharia I, 33, Lisboa

Area Above Ground ■ 3959 m2
Area Below Ground ■ 474 m2

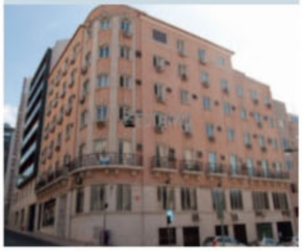
Rua Gomes Freire, 18, Lisboa

Area Above Ground ■ 3676 m2
Area Below Ground ■ 1812 m2

Rua Alexandre Herculano 42/Castilho 30, Lisboa

Area Above Ground ■ 3399 m2
Area Below Ground ■ 525 m2

Rua Duque de Loulé, 39, Lisboa



Area Above Ground ■ 3107m2
Area Below Ground ■ 800m2

Rua D. Carlos Mascarenhas, 46, Lisboa

Area Above Ground ■ 915m2
Area Below Ground ■ 495 m2

Rua Estefânia, 14, Lisboa

Current Lot Area ■ 690m2
Gross Area Construction (expected) ■ 5686 m2

Rua Sociedade Farmacêutica, 36, Lisboa

Area Above Ground ■ 1388 m2
Area Below Ground ■ 274 m2

Rua Visconde Valmor, 19, Lisboa

Area Above Ground ■ 1632 m2
Area Below Ground ■ 742 m2

Rua de Santa Marta, 55, Lisboa

Area Above Ground ■ 4450 m2
Area Below Ground ■ 2237 m2

Largo Andaluz, 17, Lisboa

Total Gross Area Construction ■ 1272 m2

Largo do Intendente, Lisboa

Current Lot Area ■ 1733m2
Gross Area Construction (expected) ■ 6398 m2

Proposals should be delivered by registered mail with acknowledgment of receipt or hand delivery protocol, till 17h00 (local Time) of 17/07/2015 to the following address: AVENIDA DEFENSORES DE CHAVES, 6-4º ANDAR, 1049-063 Lisbon, Portugal.

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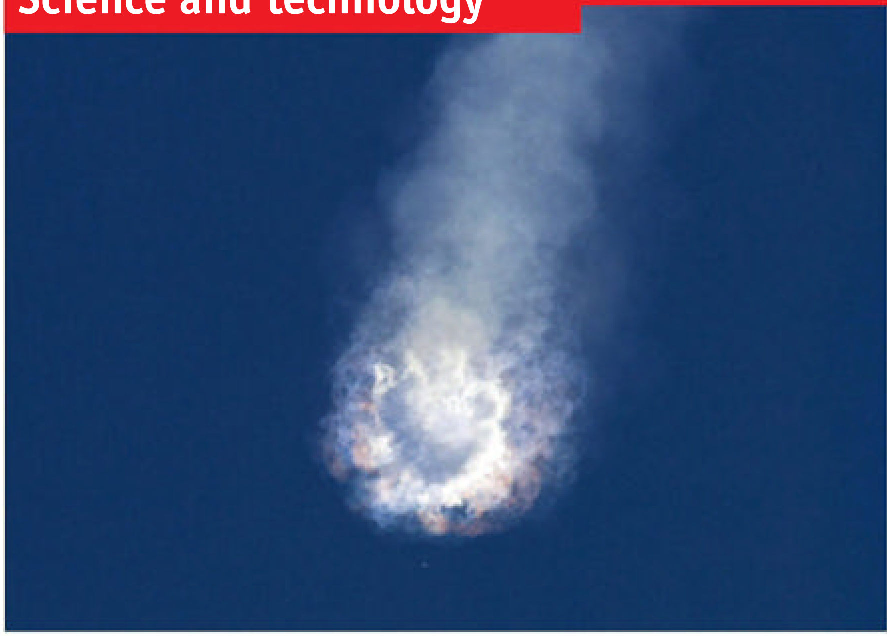

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Space flight

Rapid unplanned disassembly

A coincidental string of accidents is a reminder of how difficult space flight is

FEW things are as spectacular as a successful rocket launch, but a failed one comes close. On June 28th SpaceX, an upstart rocketry firm founded by Elon Musk, an adventurous technology billionaire (see page 72), began what was to be its seventh uncrewed cargo flight to the International Space Station (ISS). The success of the first such flight, in May 2012, was big news. It was a vindication of NASA's decision to rely on the ingenuity of the private sector and the discipline of fixed-price contracts to provide cheap access to orbit. As subsequent lift-offs passed without a hitch, press interest faded, and what had been extraordinary quickly became routine.

All again seemed well as the Falcon 9 rocket roared away from its launch pad this week. But two minutes and 19 seconds into the flight one of its oxygen tanks sprang a leak. The rocket powered on for a few more seconds before disintegrating into a shower of glowing debris (see picture). It is unclear, yet, exactly what went wrong. Mr Musk would say only, in the technical jargon beloved of rocket scientists everywhere, that there had been an "overpressure event" in the liquid oxygen tank of the rocket's upper stage, and that "[the] data suggests a counterintuitive cause".

Rocket failures are not unusual. Coaxing what is, in essence, a flimsily built flying bomb into orbit without mishap is a difficult task, and most types of rocket in use have suffered at least one accident. This, though, was the first to strike the Falcon 9, which has seen a total of 19 launches. And it adds to a string of rotten luck that has befallen the ISS of late. Of the past seven cargo launches to it (all uncrewed), three have failed.

The first failure was on October 28th last year, when a resupply rocket built by Orbital Sciences, another American space firm, blew up on the launch pad. The second was on April 28th, when a Russian Soyuz launch vehicle released a Progress capsule into a wildly spinning orbit. Ground controllers tried to make contact with the capsule, but on May 8th it and its 2.4 tonnes of cargo burned up in the atmosphere somewhere west of Chile. To add to the perception that all is not well in the private space-launch industry (even though the technology used on this occasion was completely different, and not intended to get into orbit), Virgin Galactic, an aspiring space-tourism company, suffered the fatal crash of a test flight last October.

The Dragon capsule that was supposed to be launched on June 28th was carrying food for the astronauts, equipment for the ISS and a number of scientific experiments. At a press conference following the accident, NASA was at pains to point out that the station's six-man crew is not in any immediate danger. A Russian resupply mission is scheduled to take off on July 3rd and a further one, courtesy of Japan, is planned for August 16th.

The accident is, nevertheless, the first serious setback in a long time for SpaceX, a firm with a string of successful missions under its belt and launch prices far below those of its rivals. Those facts have attracted many customers. The flight that has just failed was part of a $1.6 billion deal with NASA for a dozen such missions. SpaceX also has an order book bulging with commercial contracts, and in May it was certified fit to launch satellites for America's soldiers and spies.

Crews control

Jeff Foust, who edits the *Space Review*, an industry newsletter, points out that SpaceX will have to put future launches on hold while it investigates the problem. "There was nothing unusual about this flight," he says. "So it's not obvious what the problem was. If it was some kind of quality-control defect, for instance, it could take them a while to track it down." That, in turn, could make some customers restless. "Low launch prices are great," he says. "But ultimately, sticking to a schedule may matter more."

The accident may also make some American legislators nervous. With the retirement of the Space Shuttle in 2011, America has no way of getting its own astronauts into orbit. Instead it must rent berths on Russian craft. SpaceX is one of two firms (the other is Boeing, an aerospace giant) that NASA is relying on to remedy that defect, through what is known as the commercial-crew programme. Though restricted to hauling cargo at the moment, Dragon is designed with the intention that it will carry astronauts.

In theory, the first crewed flights to the space station will happen in 2017. But the idea of putting astronauts into low-cost, privately developed spacecraft (rather than reassuringly expensive ones developed in the cosier, old-fashioned way) is unpopular with some in Congress, who are flirting with cutting the $1.2 billion the likes of SpaceX are receiving to develop it. Gwynne Shotwell, SpaceX's president, has pointed out that a crewed Dragon capsule could have survived the break-up of the rocket, thanks to emergency rockets on board that are designed to blast it clear. But Sunday's failure is likely to give ammunition to these congressional critics.

There is, though, no obvious alternative. Abandoning the commercial-crew programme would mean continuing to rely on the Russians to fly American astronauts. That would be awkward, says Mr Foust, and not just for reasons of national pride. Co-operation between America's and Russia's space agencies is close. But relations between their parent governments have deteriorated in recent months. And Russia's reputation for reliability in space has taken a knock, too. A string of failures (including a probe to Mars, three global-positioning satellites and two cargo trips to the ISS) led to a reorganisation of its space industry in 2013. Engineers who joined during Soviet days are retiring without being replaced, leading to a loss of institutional memory. The discovery in May, by auditors, of $1.8 billion of "financial violations" in the Russian agency has done little to boost people's confidence.

Everyone's copybook has thus been blotted over the past few years. Given the complexity of rockets, and the potentially catastrophic consequences of even quite small glitches, such blots are to be expected, so the coincidence of these events is presumably just that—coincidence. Even coincidences, though, can be useful ammunition for hostile politicians. ■

Inspecting airliners

Strike out

Uncrewed aircraft may help crewed ones return to flight more rapidly

CHECKING an airliner's wings and fuselage for damage after it has been hit by lightning or suffered a bird strike is more than just a time-consuming nuisance. In the cut-throat world of commercial aviation, time is money, and a plane in a hangar is a plane not earning its keep. At the moment, conducting such an inspection means employing engineers to stand on elevated mobile platforms so that they can pore over an affected aeroplane's surface seeking out dents, holes or high-voltage skin burns which might be in need of repair. For an average plane, this takes about ten hours.

But that may soon change. In recent tests at Luton Airport, near London, a drone called Riser—the brainchild of Blue Bear Research Systems, a drone-builder based near the airport, and Createc, a sensing-and-imaging company in Cockermouth, in the north of England—completed equivalent surveys of an Airbus A320 belonging to EasyJet, a budget airline, in a mere 20 minutes.

Using a drone to look into a plane's nooks and crannies makes sense, but there is a wrinkle. For obvious reasons, the authorities do not like robot aircraft flying around airports. Drones can therefore operate only inside hangars, and only when the doors are shut. Most drones, though, rely on the satellites of the Global Positioning System to know where they are, and GPS does not work well indoors.

Riser gets around this by using lidar for navigation. Lidar is similar to radar. It fires off pulses of electromagnetic radiation, records when these pulses' reflections return, and calculates how far away the object they have bounced off is, based on how long each pulse took to come back. The difference is that lidar employs light waves in place of radio waves and thus, because light has a much shorter wavelength than radio, has a far finer resolution.

Seven small lasers on board a Riser beam 40,000 pulses of infra-red light a second into the craft's surroundings. Sensors on board record the reflections of these and pass the results to a computer. This uses them to map both the walls of the hangar and the shape of the aeroplane within. It then works out precisely where the drone is with respect to both.

Using this information, a Riser drone can navigate its way around an aeroplane's surface, keeping a distance of about a metre away from it at all times, and recording as it flies a high-resolution video of what it sees. The video automatically tags any damage, permitting a human engineer to find it easily and thus decide whether to repair the plane or put it back into service.

All this could save airlines a lot of money. EasyJet itself is planning to install Riser at ten airports by the end of next year and Yoge Patel, Blue Bear's boss, says her drones have attracted the interest of several other airlines, and also an aircraftmaker. Nor are aircraft the only safety-critical systems that Riser might be deployed to examine. It was originally designed for, and remains intended for, the remote inspection of nuclear reactors. So if, in future, you see a drone buzzing around your local power plant, do not automatically assume it is up to no good. ■

A weird and wonderful worm

Modern lobopodians are rarely seen forest dwellers called velvet worms. Their ancient relatives, though, were pioneers of the Cambrian explosion, a time when Earth experienced an unprecedented surge in biodiversity. As they report in the *Proceedings of the National Academy of Sciences*, Zhang Xiguang of Yunnan University, in China, and his colleagues have found a previously unknown species (pictured), some 520m years old, in rocks from Yunnan province. *Collinsium ciliosum*, as they dub it, could grow to be more than 8cm long, was eyeless and had frontal appendages that were developed into sieving baskets, to filter food from the ocean floor. A tasty morsel, then, for the numerous predators which the Cambrian explosion generated. As a consequence the creature was, in Dr Zhang's phrase, "superarmoured", with five spines of varying length protecting each of the 14 rear segments of its hardened exterior.

Ancient tsunamis

Knowing the drill

Evidence of past tsunamis may indicate the likelihood of future ones

ANIMALS and plants are not the only things that form fossils. Tsunamis—the huge waves created by some submarine earthquakes—do so, too. A tsunami generated in January 1700, off the Pacific coast of North America, for example, has left abundant traces in local rocks, as well as in the art of Japan (it was the inspiration for Katsushika Hokusai's woodcut, "The Great Wave of Kanagawa"). That should give pause to coastal dwellers in what is now Oregon, Washington state and British Columbia. They might reasonably wonder when the next big wave will arrive—as might residents of other earthquake-prone coastlines around the world.

Harvey Kelsey, of Humboldt State University, in California, has done more than wonder. He and his team have been looking at the Indian Ocean coast of Aceh province, in northern Sumatra. This was the origin, in December 2004, of a powerful submarine earthquake and subsequent tsunami that killed around 230,000 people. The quake in question, as is commonly the case for quakes of this magnitude, was caused by one of the Earth's crustal plates sliding under another. Plate movement at such boundaries tends to be episodic, with strain that has built up over the years being released suddenly as a tremor, when it becomes too much for the rocks to sustain. The rate at which the quake-causing strain accumulates, however, is constant. This means earthquakes of this type can be expected at reasonably regular intervals.

As they report in *Geology*, Dr Kelsey and his team looked for evidence of past tsunami-causing earthquakes in Aceh, going back about 8,000 years. To do so they collected cores of sediment from the local sea bed—a dozen in all—from two places close to the modern shore line. As might be expected, given their provenance, a fair amount of each of these cores was composed of sand. Interspersed with the sand, though, were three layers of soil rich in mangrove pollen and in fossils of tiny animals (called foraminifera, or forams) of species that are commonly found in mangrove forests today. Each of the three mangrove layers was abruptly terminated by sand that had clearly been laid down in turbid conditions, rather than settling gently. This material was also loaded with forams, but these were species normally found only in the open ocean.

The implication is clear. Mangrove forests grew and flourished, and were then

A future fossil?

swept away by tsunamis. Radiocarbon dating of the top of the mangrove layers shows these tsunamis happened 7,000, 5,800 and 3,800 years ago. Moreover, close scrutiny of the cores revealed four other turbid layers that had not disrupted forests, because none was growing in the area at the time. From 8,000 years ago to 3,800 years ago, then, there seem to have been seven tsunami-generating earthquakes.

This older sediment was able to build up in an orderly, stratified fashion because rising sea levels after the last ice age meant it was never too close to the waves at the surface. By 3,800 years ago, though, sea-level rise was over, so in younger sediment wave action has mixed up the strata. Even so, Dr Kelsey was able to estimate what proportion of this sedimentary mix had arrived in tsunamis by looking at the proportion of forams in it that were oceanic. Knowing this, the thickness of the sediment in question, and the average thickness of a tsunami fossil, he estimated that between four and six tsunamis have struck the area in the past 3,800 years. All told therefore, the geology of the region suggests that between 11 and 13 tsunami-causing earthquakes have hit it in the past 8,000 years. This works out to one every 620 to 730 years.

For Aceh, to know this is to shut the stable door after the horse has bolted. There is no reason, though, why Dr Kelsey's method could not be put to useful work in places that have not suffered recent tsunamis, but might do so in the future. ■

Diagnosing depression

Sounds bad

Computers can spot symptoms of depression psychiatrists may miss

CLINICAL depression is, simply put, a dreadful disease. Diagnosing it is anything but simple, however. Its symptoms vary, can shift with the ups and downs of everyday life, and sometimes overlap with those of other diseases. For these reasons, it is common for depression to go unidentified for months, or even to be missed altogether.

Stefan Scherer of the University of Southern California and Louis-Philippe Morency of Carnegie Mellon University, in Pittsburgh, hope to change this. They are trying to develop a reliable way of diagnosing depression by using a computer to record and analyse aspects of a putative sufferer's behaviour. They are, they think, 85% of the way there.

Their latest research, just published in *IEEE Transactions on Affective Computing*, is an analysis of depressed people's speech. It follows up on analyses of facial expressions and eye movements carried out by tracking cameras while the subject of a diagnosis is having a conversation. These used things like the length (or, rather, shortness) of people's smiles and the frequency with which they looked at the ground in order to develop an algorithm that was 75% effective in diagnosing depression.

The extra 10% of reliability has come from quantifying what was previously a qualitative observation, which is that depressed people tend to run their vowels together when they speak. Dr Scherer and Dr Morency programmed their software to record patterns of vowel-spacing (known as vowel-space ratios) and then tested the system on more than 250 people, some of whom had been diagnosed independently as depressed and some of whom had not.

The software found that depressed participants' vowel-space ratio in normal speech was 0.49 (compared with 1.0 for a reference population reading a standard word list). That of healthy participants averaged 0.55. A small difference, certainly—and not enough by itself to be a reliable diagnostic tool. But combined with the researchers' previous work, this was a palpable advance.

Dr Scherer and Dr Morency are not yet proposing that their program replace psychiatrists. But doctors are busy people, and the new diagnostic system can spend time observing a patient that a doctor cannot. Working together, human and machine should bring faster, more reliable diagnosis of depression.

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Race in America

Letter of despair

A father tells his son what it is to be a black American

A MASSACRE at a black church in Charleston, the choking of a black man by a New York police officer for the crime of selling untaxed cigarettes, the shootings of unarmed black men by several other police forces, unrest in Baltimore and in Ferguson, Missouri, after the death of young black men at the hands of police: all these things have booked America in for an intensive session of racial self-analysis. Ta-Nehisi Coates's contribution last year, in an *Atlantic* essay called "The Case for Reparations", was to describe how northern cities, to which African-Americans escaped during the great migration from the south, dreamed up rules to disadvantage their new arrivals. He has followed it up with "Between the World and Me", a letter to his teenage son on what it is to be black in America in 2015.

The epistolary form is not the only archaic thing about Mr Coates's book. He writes with the torrential outrage of a campaigning Victorian. The prose is loquacious, repetitive, at times self-indulgent and just good enough to get away with it. The letter begins with the author's childhood in Baltimore at the height of the crack-cocaine epidemic, in streets that "transform every ordinary day into a series of trick questions, and every incorrect answer risks a beat down, a shooting, or a pregnancy." Everyone is afraid all the time. His father must reach for his belt to preserve his son from worse. Children risk assault on the way to school and study fearfully, knowing prison awaits if they do not pass exams. Even the young men with guns concealed in their ski jackets, who terrorise everyone else, are themselves afraid.

Between the World and Me. By Ta-Nehisi Coates. *Random House; 176 pages; $24. To be published in Britain by Text Publishing in November.*

This fear is the product of 250 years of whipping, burning, shooting and locking up black people. "In America," writes Mr Coates, "it is traditional to destroy the black body—it is heritage." This is all necessary, he says, to maintain "the Dream", which is capitalised throughout the book and, along with "the body" (usually Mr Coates's own), appears on every other page. The Dream is not defined so much as described: it smells of peppermint and tastes of strawberry shortcake; it lives in suburban streets with tree houses in the gardens. This all makes some poetic sense but, shorn of ornament, its implication is that in order to have dreamy Greenwich, Connecticut, Chicago's housing projects must also exist. Racial mixing in the suburbs over the past two decades suggests otherwise: real life is not so Manichean.

Mr Coates does not spare well-intentioned individuals for their part in maiming black bodies, however indirect that may be. In a passage that is sure to bring him some notoriety, he describes how he looked on the plumes of smoke over Manhattan on 9/11, shortly after an unarmed college acquaintance had been murdered by an undercover policeman. "I could see no difference between the officer who killed [him] and the police who died, or the firefighters who died. They were not human to me. Black, white, or whatever, they were the menaces of nature...which could—with no justification—shatter my body." The honesty deserves some praise, but what it reveals does not.

Mr Coates urges his son to remember that slavery was not an indefinable mass of flesh but "a particular, specific enslaved woman...who loves her mother in her own complicated way, thinks her sister talks too loud, has a favourite cousin." The same can be said of those who did the enslaving. By spreading blame so widely, Mr Coates eases the consciences of those who fastened the chains, tightened the noose, wielded the billy club and the people who told them to do it.

Nor does it leave much room for the possibility of change. When talking about race, Barack Obama often says that anyone who doubts that there has been progress in America should put the question to a black man who lived in the south under Jim Crow. Then he adds that, despite this, the country is still struggling with racial troubles that did not vanish with the passing of the Civil Rights Act. This is right. Mr Coates has written a powerful book that reveals how being the parent of a black teenage boy in America is to be visited by night terrors about his survival. He is also correct to point out that there are echoes of slavery in America today. But they are echoes, rather than the thing itself, and that means there is also hope that the recent violence that spurred the book's publication may one day be abolished too. ■

South Asian history

A searing split

Midnight's Furies: The Deadly Legacy of India's Partition. By Nisid Hajari. *Houghton Mifflin Harcourt; 328 pages; $28*

PARTITION, the bloody division of the Indian subcontinent into two countries in 1947, was a tragedy. The merits of the outcome—the creation of a Muslim-majority Pakistan separate from a secular but Hindu-majority India—have long been debated. But the botched and violent process of splitting up was undeniably catastrophic.

British colonial rulers who had long refused to discuss full independence, suddenly made for the exit with unseemly haste. The dividing line was drawn in weeks by an unqualified official, leaving a messy and dangerous legacy. Several rival leaders—Sikh, Muslim and Hindu—then scrambled for advantage, encouraging supporters to murder and rape as they sought to get control of land.

In "Midnight's Furies", Nisid Hajari, a journalist with Bloomberg, does a good job of recounting the horrors that unfolded, especially in Punjab. At least 14m people were displaced—"the biggest forced migration in history"—and hundreds of thousands were killed. With journalistic skill he retells moments of dramatic horror: the blowing up of a train by Sikh nationalists who then massacred its Muslim passengers; the Muslim thugs who bombed Hindu-occupied homes in Lahore and relished hearing the panicked screams of those burnt alive; the Hindu extremists in Hyderabad who massacred tens of thousands of Muslims after India's army defeated rebels there.

Rather than dwell on the long-term causes of the split, which would have required a more scholarly assessment of the disputes and clashes of the two prior decades, Mr Hajari offers a clear, accessible and compelling account of the events during partition. As a result, he is less interested in the actions of Mahatma Gandhi, whose influence was waning by the mid-1940s, than in those of Jawaharlal Nehru, a brilliant, mostly sympathetic, but also arrogant man who would rule India until 1964.

In particular he focuses, as do most histories of partition, on the troubling character of Muhammad Ali Jinnah, the founding leader of Pakistan. Mr Hajari has little sympathy for Jinnah, a bitter and uncompromising man, calling him the "most polarising figure in the Partition drama". Jinnah, more than anyone, was responsible for the creation of Pakistan, yet it remains unclear how much he really wanted it or whether he pursued the idea more as a tactic to increase Muslim clout within a larger India.

Mr Hajari judges him to have been "criminally negligent" in his thinking about the human consequences of his demand for Pakistan, calling him "vindictive" in his decision-making. Nehru deserves blame too, though, for example in his haughty dismissal of his rival. That fed Jinnah's fears that India would "strangle Pakistan at birth"—deny it the economic means to prosper or to defend itself militarily—hence his determination to "fight it out".

Jinnah's paranoia led to Pakistan's reckless first invasion of Kashmir, months after independence. The author concludes that it is the dispute over Kashmir, and that alone, which ensures a "violent, unbridgeable chasm" still divides India and Pakistan. He might have considered an alternative possibility: the idea that Pakistan's army, and its supporters, keeps alive the dispute in Kashmir as a means of preserving its outsized claim on public resources and policymaking.

The book succeeds because of gifted storytelling. It is through his vivid description of small moments that Mr Hajari transforms an overwhelming event into an intimate experience. At a press conference given by Jinnah, one man cheers so hard that his false teeth come flying out. Earlier, when Nehru receives a letter inviting him to lead India's government, he is too shaken to celebrate the moment because his car has just knocked down and a killed a child, whose blood is still on his sleeve.

Scholars might grumble that Mr Hajari pays too much attention to events in Punjab, in the west, and neglects the division of Bengal in the east of India, or that his summary of partition's consequences is too compressed. These are not serious faults. "Midnight's Furies" should be accepted as a gripping, skilfully crafted account of an awful period of South Asian history. It deserves a wide audience. ■

Bound for Pakistan

New fiction

Secrets and pies

The Improbability of Love. By Hannah Rothschild. *Bloomsbury; 404 pages; £14.99*

HANNAH ROTHSCHILD'S romp through the art world is peopled by some horrible characters: venal art dealers, self-important experts, political windbags, lonely Russian oligarchs exiled to London, greedy sheikhs wanting to make their mark on the world and auctioneers so oozing with unctuousness you want to wipe your hands on a clean handkerchief after being introduced.

But at the heart of the novel are two entrancing figures. One is Annie McDee, the middle-aged daughter of a crazy alcoholic mother, now on her own after the collapse of a long-term relationship, but blessed with a heart of gold and a gift for cooking that is so entrancing she recalls the heroine of Isak Dinesen's "Babette's Feast".

The other is the painting Annie discovers in a junk shop while seeking a gift for an unsuitable lover. Now marked down in condescending art-expert tones as "School of…", Annie's painting had, in fact, spent three centuries travelling across Europe from castle to chateau and back again, owned by queen and potentate. A fictional work by the French saviour of the Baroque, Antoine Watteau, after he was spurned by the love of his life, "The Improbability of Love" possesses the appeal of a great piece of art that is universal though never quite explicable. Watteau worked wholly by instinct. "He's never been equalled when it comes to piquancy of pencilling," Ms Rothschild writes. "He painted in gold and honey and every stroke was tuned to the mood of the moment."

It is Annie's talent for cooking that brings her into the orbit of the Winklemans, supposedly Jewish émigrés to London after the war and the greatest dealers of the modern day. Old Memling Winkleman, who bears a concentration-camp number tattooed on his arm, has made his name bringing lost artworks to market. At home he is a tyrant. His son has committed suicide and Rebecca, his only remaining child, lives completely under his thumb—until she discovers his secret, which involves the painting from the junk shop.

Next month Ms Rothschild takes over as chairman of the National Gallery: she understands how great art humanises. Her debut novel is told from the perspective of several different characters, among them the painting itself. In lesser hands such a move might have been twee. But Ms Rothschild's book works; her writing shows brain as well as a heart. ■

Sir Thomas Browne

Weird science

The Adventures of Sir Thomas Browne in the 21st Century: The Life and Afterlife of the Seventeenth Century's Most Inquiring Mind. By Hugh Aldersey-Williams. *W.W. Norton; 330 pages; $26.95. Granta; £20*

THOMAS BROWNE was a 17th-century Norwich doctor who wrote mysterious-sounding books such as "Religio Medici" and "Pseudodoxia Epidemica". Few read him now, but some will know of him from "The Rings of Saturn", a novel by W.G. Sebald, a German author who died in 2001. Browne has long been a writer's writer, and Sebald is one of a line to be stirred by the "ceremonial lavishness", as he put it, of Browne's "labyrinthine sentences".

Hugh Aldersey-Williams also admires Browne's labyrinths, but as a science writer himself he is particularly interested in Browne's understanding of science. Browne was a medical man, but he was also, in an age before specialisms, a naturalist, an archaeologist, an anthropologist, a linguist and an inventor of words—"medical" itself being among the 784 he coined.

"The Adventures of Sir Thomas Browne in the 21st Century" is not a conventional biography. It is more a conversation with an old friend. In one of the best chapters in this engaging and often funny book, the author imagines the statue of Browne climbing off its plinth in Norwich and walking with him through the city as they discuss the state of science and religion in their respective centuries.

The 17th century was at the threshold of an age of scientific experiment, and Browne was endlessly curious about the physical world. He questioned superstition and he tested received wisdom. Do flies buzz with their mouths, as some thought? He chopped the fly's head off and observed. Do kingfishers make good weathervanes? He killed two and found they pointed in different directions. He studied eggs and was a pioneer of chemical embryology. "Sense and ocular Observation" were his watchwords.

And yet he saw the limits of ocularity—a word he might have invented. One foot may have been over the threshold, but the other was still among griffins, unicorns and miracles. His mind was suspended between the empirical and the fabulous, always reluctant to arrive—like his clauses and subclauses—at a full-stop and a hard choice. As an expert witness in a witchcraft trial, Browne is ambivalent. Can elephants speak? "Not impossible," he says. And as for the protective power of amulets… "Steady, Tom," says Mr Aldersey-Williams.

"I am content to understand a mystery without a rigid definition," says Browne. That sentence is the nub of this book. Mr Aldersey-Williams is a rational man, but he takes care to distinguish between "knowable and unknowable truth". He is an atheist, but hates the absolutism of some modern atheists. He fears that as science reveals more, it becomes more impatient with what it cannot show. Browne knows less than the moderns and is often wrong-headed, but he is more generous and good-humoured. Mr Aldersey-Williams does not quote Keats, but the poet might have provided the epigraph to this book, when he writes to a friend about the kind of man he most admires—"capable of being in uncertainties, Mysteries, doubts, without any irritable reaching after fact and reason." ■

Chinese art

Documenting history

A look at contemporary China through the eyes of its artists

TWO thousand Neolithic axe-heads have been arranged with patient precision. An exploration of China's heritage by Ai Weiwei, the work is the dramatic centrepiece of an exhibition of Chinese art of the last four decades at the Whitworth museum in Manchester, which was named British Museum of the Year 2015 on July 1st. It is indicative of the show's appeal, though, that the axe-heads are less arresting than a small paintbox, shown next door, which an artist would have slipped into his satchel to avoid detection during the Cultural Revolution.

The works come from the collection of Uli Sigg, a Swiss businessman and later diplomat who began visiting China in 1979 and became involved in the nascent contemporary art scene. Having amassed what is now widely considered to be the world's most comprehensive collection of Chinese contemporary art, in 2012 Mr Sigg gave the greater part of it—donating almost 1,500 works and selling 47 more—to the M+ museum of visual culture, which is due to open in Hong Kong in 2019.

Mr Sigg cultivated friendships with artists, but felt no inclination to buy their experiments with European forms. The Cynical Realism and Political Pop of the 1990s were more to his taste, but what prompted him to act was the fact that China's big museums were ignoring contemporary art. With the mindset more of a historian than a collector, he set out to "document" art made in China after Mao Zedong's death.

There were few guidelines. As Melissa Chiu, director of the Hirshhorn Museum in Washington, DC, recalls, in 1995 there were only five scholarly works on Chinese contemporary art in English. And for many Western curators China was still a far-off country. "The view was that art and culture were enshrined in the past—that Chinese art was 'something ancient'," says Edmund Capon, then head of the Art Gallery of New South Wales.

Another high-profile Western collector, Guy Ullens, set up the Ullens Centre for Contemporary Art (UCCA) in Beijing's trendy 798 art district in 2007. "Sigg has recorded with almost philatelic precision the story of contemporary art in China over the past 40 years," says Philip Tinari, the UCCA's director. Young scholars are now, rightly, beginning to question the Sigg collection's narrative, he says, but it is in broad accord with the perceptions of the artists, curators and critics involved. By contrast, Chinese officialdom prefers to "elide the distinction" between the 1949-1979 period and the years after, and make them "pieces of one big story about the rise of China".

M+ is displaying its art around the world until its own premises are ready. This particular show brings to life the art-making of early radicals through film footage of the landmark 1979 exhibition by the Stars Group of Chinese artists. Zhang Xiaogang's "Bloodline Series" (1998) is a poignant reminder that family photo albums were destroyed during the Cultural Revolution, and Wang Xingwei's "New Beijing" (2001) lampoons China's successful Olympic bid with a reworking of Liu Heung-Shing's famous Tiananmen Square photo of wounded students.

Mr Sigg must now hope that in entrusting his collection to M+, he can avoid the kind of political interference he experienced at an exhibition in Shanghai in April, when officials removed works by Mr Ai. "The Sigg collection tells the story of what I would call 'art as a force for good—or openness'," says Mr Tinari. It is now up to M+ to continue to tell that story. Given the tensions between Hong Kong and the mainland, that will not be easy. ■

"The M+ Sigg Collection: Chinese Art from the 1970s to Now" is at the Whitworth until September 20th

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Elon Musk

Fortune favours the brave

How risk-taking and obsession have fuelled the rise of a Silicon Valley grandee

Elon Musk: Tesla, SpaceX, and the Quest for a Fantastic Future. By Ashlee Vance. *Ecco Press; 400 pages; $28.99. Virgin Books; £20*

IN MOST parts of the world, chief executives strive to be steady, straightforward and as uncontroversial as possible. Not in Silicon Valley. The titans of the technology business tend to be outspoken optimists whose quests to challenge entrenched industries and change the world make them seem like megalomaniac characters out of an Ayn Rand novel—albeit flecked with an engineer's social awkwardness.

Steve Jobs, the late head of Apple, took on music labels, redefined computing with the iPod and iPhone, and helped change the look of animated films through Pixar. Peter Thiel, a libertarian venture capitalist and a founder of PayPal, wants to set up a floating island that can incubate new social policies. Jeff Bezos, the founder of Amazon, is spending millions to commercialise human space travel and build a clock that can last for 10,000 years.

Whatever their pet projects, Silicon Valley's giants are disconcertingly focused. This is especially true of Elon Musk, the subject of a new biography by Ashlee Vance, a journalist with *Bloomberg Businessweek* magazine. More than perhaps anyone since Mr Jobs, Mr Musk has assumed legendary status in the Valley. He is only 44, but has already played a role in disrupting internet, finance, car, space and energy businesses. He is best known for making a fortune at PayPal, an online-payments company, and using the proceeds to fund two of this era's most interesting technology companies: Tesla, which makes electric cars and batteries, and SpaceX, a rocket company.

Mr Musk seems to be a unique melding of the brash and the brainy. He wants to wean the motor industry off fossil fuels, and help human beings become a "multi-planetary species" by eventually settling on Mars. He has a flair for self-promotion, although appears less motivated by profits than by purpose. Indeed his determination to change the world can, at times, make him appear slightly unhinged. "Do you think I'm insane?" he asks Mr Vance during a dinner.

South African-born, Mr Musk was brought up mostly by his curmudgeonly father after his parents divorced, and he was badly bullied at school. (He ended up needing a nose job to repair one injury.) Aged 17 he moved to Canada and lived with relatives before enrolling in university in Kingston, Ontario. He eventually headed to Stanford, but dropped out to start his first software company, Zip2, which made online maps. It was sold to Compaq for $307m in 1999. That same year he started X.com, an online-finance firm, which merged with PayPal.

Mr Musk is a compelling character in part because he embodies the booms and busts of his own industry. Before becoming a billionaire he risked nearly all his money to put some $100m into SpaceX and $70m into Tesla, and watched both flirt with bankruptcy. Even today their success is not guaranteed: on June 28th an unmanned SpaceX rocket bound for the International Space Station exploded.

Mr Vance's highly readable book offers some clues to those trying to understand Mr Musk's involvement in some of Silicon Valley's biggest fights. A grand vision must be combined with a relentless focus on detail. The only other renowned boss of recent times to obsess so much about the specifics of products was, again, Mr Jobs. Like him, Mr Musk has created a working environment characterised by brutally high expectations, where he sets unrealistic deadlines for rocket launches and car debuts and then dresses down employees who do not meet them.

Success in the technology world also requires both a stomach for failure and an enthusiasm for reinvention. Mr Musk was fired by the boards of Zip2 and PayPal, yet stayed involved in the firms. Such setbacks are reminiscent of Mr Jobs's experience. Fired from Apple, he later came back and turned the company around.

Another, more controversial quality that has helped Mr Musk and some of his peers to succeed is a certain lack of empathy. Mr Vance tries to play down Mr Musk's brittleness, but it is hard to obscure. While dancing with his first wife on their wedding day, he told her, "I am the alpha in this relationship." When Mary Beth Brown, his longtime assistant, asked for a pay rise, he said he wanted to see if he could do her job, and then fired her instead. Mr Vance concludes that Mr Musk is not on the Asperger's spectrum, as some have suggested, but is "profoundly gifted". Bent on saving humanity, he sometimes lacks the patience to deal with individual humans.

The most fascinating and at times frustrating relationship revealed by the book is in fact the one between biographer and subject. Several times Mr Vance compares Mr Musk to Tony Stark, the businessman who becomes "Iron Man" (of Marvel Comics fame). Mr Vance comes across as a "Musketeer", someone who believes in Mr Musk's power to reshape the world. Having waited 18 months for an interview he may have felt indebted for the access that was eventually granted. The reverential tone grates, but it also reflects this moment in the technology business, when celebrity entrepreneurs are riding high, and their big personalities and ambitions are seen as virtues. They will inevitably stumble, and some of their companies will suffer declines, but many will make a comeback, as heroes often do. ■

The new economy

Still the land of opportunity

America's Moment: Creating Opportunity in the Connected Age. By Rework America. *W.W. Norton & Company; 368 pages; $28.95 and £19.99*

SOMETHING about the new economy drives prognosticators to extremes. Optimists argue that the world is entering an age of abundance, with productivity surging, diseases like polio being wiped out, and tourists flying to Mars. Pessimists retort that abundance for the few will mean impoverishment for the many. Smart machines will destroy jobs and depress wages. Knowledge workers will be proletarianised. And rising insecurity will promote tribalism and protectionism.

One of the many virtues of "America's Moment: Creating Opportunity in the Connected Age" is that it avoids such extremes. The authors part with the cyber-utopians in acknowledging that disruption has a dark side. But at the same time they part with the cyber-pessimists in embracing radical change. The new economy is not only generating new opportunities. It is providing people with the tools that they need to cope with disruption.

The authors make their case with surprising panache. It is surprising because the book is the product of a committee of the great and good called Rework America: corporate leaders such as Starbucks's Howard Schultz and Microsoft's Craig Mundie; political leaders such as Madeleine Albright and Cory Booker; academic stars such as Erik Brynjolfsson and Andrew McAfee. This ought to have been a formula for producing long-winded platitudes and mealy-mouthed circumlocutions. But Philip Zelikow, an academic and one of the committee, should be praised for whipping the members into line and generating a readable and well-reasoned text.

The authors note that America is already making progress in harnessing the new economy. The Carolinas are once again making furniture thanks to investment from overseas companies such as China's Keer. American teachers are becoming exporters thanks to ventures such as Khan Academy and private companies such as Berlitz.

But the authors argue that America needs to go much further in using the virtues of the connected age to address its vices. Policymakers need to familiarise themselves with Silicon Valley thinking about "platforms": that is virtual forums that allow people to come together to solve collective problems. The private sector is already helping small companies become exporters. EBay ships things abroad and PayPal deals with payments. Export Now assists Americans in dealing with the "soft" barriers to doing business in Asia. The authors commend the Inter-American Development Bank for adopting a similar approach to helping exporters and for partnering with Google, Visa and DHL rather than trying to do everything itself.

The authors also urge America to pay more attention to middle-skilled workers. The global glamour of the Ivy League is perverting the rest of the education system: universities are so obsessed with rising up the academic rankings, and parents are so preoccupied with making sure that

their children get a college education, that the country is devoting too few resources to vocational and technical education. America is crying out for plumbers and technicians while English-literature PhDs cannot get a job. The authors laud attempts to use new technology to improve the teaching of technical subjects: for example by using videos to make technical education more exciting or by making it easier for people to juggle training and jobs.

A century ago Walter Lippmann, a journalist who was then just 24 years old, wrote a surprise best-seller called "Drift and Mastery". He noted that "our schools, churches, courts, governments were not built for the kind of civilisation they are expected to serve". Americans needed to "adjust their thinking to a new world situation", otherwise they would be condemned to "drift along at the mercy of economic forces that we are unable to master". These words ring just as true today as they did then. "America's Moment" provides as useful a guide as any available to turning drift into mastery once again. ■

Government auditors

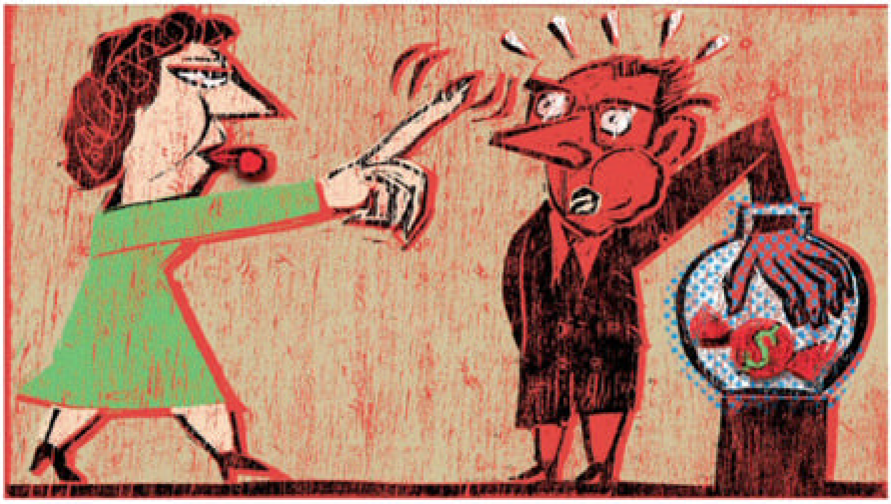
The wisdom of watchdogs

The Art of Audit: Eight Remarkable Government Auditors on Stage. By Roel Janssen. *Amsterdam University Press; 104 pages; $24.99 and £15.99*

WHEN offices handle public money, said Aristotle, "there must of necessity be another office that examines and audits them." Today's equivalent is the "Supreme Audit Institution", and 192 countries have one. These beancounters-cum-watchdogs check on behalf of legislatures and the public that their governments spend money cleanly and sensibly—and hold them to account when they do not. Though public, they are (or at least are supposed to be) independent of government.

In "The Art of Audit", Roel Janssen, a veteran Dutch journalist, tells their story through conversations with former top auditors from eight countries. Number-crunching may be number-crunching, but their experiences, and the outfits they run, differ enormously.

America's 94-year-old Government Accountability Office (GAO) is a bulky, sophisticated machine employing 3,000 people that holds the government's feet to the fire on behalf of Congress. David Walker's main achievement, as its head from 1998 to 2008, was to raise the alarm about America's exploding federal debt. Running Iraq's audit board from 2004 to 2014, Abdulbasit Turki Saeed worried more about ▸▸



being blown up himself. His predecessor was killed in the job, as were some people on Mr Turki's team; he had a lucky escape when he discovered a bomb under his car.

The bravery of Iraq's public auditors in perilous circumstances is inspiring. The board has fought corruption fearlessly, even producing a damning report on graft at the defence ministry that led to the minister and several members of staff receiving prison sentences. (Its authors were duly sent abroad for their own safety when it was published.) Mr Turki shrewdly convinced the finance minister to cut off funding to state institutions that were not following the board's accounting rules. Overall, he helped turn it into a rare role model for good governance while, as he describes it, "everything else around us was collapsing".

Other stirring stories of public service include Tunisia's then auditor-in-chief, Faiza Kefi, posting all previously censored reports online during the Jasmine Revolution, and the corruption-fighting muscle of Heidi Mendoza, the head of the Philippine court of audit, who needs a permanent security detail because of her past work on fraud cases. Ms Mendoza provided fresh thinking, too: she pioneered "citizen audits", in which ordinary workers are encouraged to contribute to local audits in education, health care, housing projects and the like, for instance by conducting interviews to check if experience on the ground matches investment on paper.

Not all audit bodies are such paragons of good governance, however. Dozens lack full independence, and as a result are docile and rarely heard in public. Auditors can be "drowsy" even in "exemplary democracies", says Saskia Stuiveling, former head of the Dutch court of audit. Frustratingly, the book has almost nothing to say about these laggards.

The auditors' work has evolved, from plain book-keeping to "regularity audits" (checking whether money has been spent correctly), "performance audits" (whether it has delivered the desired results) and complex fraud investigations. Mr Walker changed the GAO's name from General Accounting Office to reflect this broader focus. Modern audit bodies are increasingly promoting the somewhat fuzzy concept of "organisational learning": encouraging government institutions to identify and learn from past mistakes.

Another challenge comes from the "open data" revolution, which preaches unrestricted electronic access to information. NGOs are demanding real-time access to government budgets and programmes, with some striking results. Spending linked to America's Recovery and Reinvestment Act of 2009, for instance, is published online as soon as it is disbursed, down to the postcode level. But, as Mr Walker points out, spewing numbers out is not all that is needed to foster transparency: they have to be correctly interpreted as well.

The book shows that, at their best, the watchdogs play a vital role in bolstering public trust in government, particularly in countries that are in political chaos, emerging from dictatorship. Ms Kefi sees Tunisia's auditor, the Cour des Comptes, as "the guardian of the political process". Mr Janssen makes the same point a different way: by institutionalising mistrust of public finances, government auditing creates trust in public administration. ■

Fitting in

In praise of misfits

The Misfit Economy: Lessons in Creativity from Pirates, Hackers, Gangsters and Other Informal Entrepreneurs. By Alexa Clay and Kyra Maya Phillips. *Simon & Schuster; 286 pages; $26*

WELL-RUN organisations prize discipline, moderation and obedience. But that legacy of the industrial revolution provides thin soil for innovation. So this lively and insightful book by Alexa Clay and Kyra Maya Phillips praises the sort of immoderate behaviour that usually blights career prospects, rather than boosting them.

Their central message is that misfits make the best innovators because frustration with the status quo spurs their desire to change it. Rather than money, the real motivators are personality quirks: idealism, ambition, curiosity and stubbornness. The authors illustrate their point with a series of mostly successful vignettes, ranging from a consultant at Accenture who persuaded his employer to set up a non-profit development business inside the company, to rather more startling examples involving Somali pirates, French feminists in fake beards and a man trying to make camel milk a mass-market product in America (parents of autistic children are keen customers).

At the risk of gimmickry, they try to label the features of productive misfittery. The first is hustling—the restless energy that creates something out of nothing through tenacity and resourcefulness. Making your own luck, in other words. The authors give it a rather grandiloquent name: the desire "to force destiny, to create serendipity".

Self-help books have praised that for decades. But the next item on the list, copying, is more controversial. Though the authors studiously (and repetitively) say they do not endorse the theft of intellectual property, their sympathies are clearly with those who mix counterfeiting with innovation. Owners tend to have overly fixed ideas about how their property should be used, they argue. Outsiders, on the other hand, may have more innovative ones.

Hackers and pranksters get a good write-up too. Obsessive interest in a system, coupled with disrespect for its rules, can be the wellspring of ideas about how to improve it. Provoke rule-makers and others may be inspired about the things that matter more. Vitally, misfits need to be able to pivot. If one thing does not work, start something else. Reinvent yourself, and you will be able to invent other things too. Finally, create a supportive entourage. With only the right kind of misfits, of course.

Tenders

Business & Personal

Economic and financial indicators

Economic data

% change on year ago

	Gross domestic product			Industrial production	Consumer prices		Unemployment rate, %	Current-account balance		Budget balance	Interest rates, %	Currency units, per $	
	latest	qtr*	2015†	latest	latest	2015†		latest 12 months, $bn	% of GDP 2015†	% of GDP 2015†	10-year gov't bonds, latest	Jul 1st	year ago
United States	+2.9 Q1	-0.2	+2.3	+1.4 May	nil May	+0.4	5.5 May	-406.4 Q1	-2.4	-2.5	2.32	-	-
China	+7.0 Q1	+5.3	+6.9	+6.1 May	+1.2 May	+1.4	4.1 Q1§	+288.2 Q1	+2.8	-2.7	3.24§§	6.20	6.20
Japan	-0.9 Q1	+3.9	+0.8	-4.0 May	+0.5 May	+0.6	3.3 May	+77.4 Apr	+1.9	-6.9	0.45	123	102
Britain	+2.9 Q1	+1.5	+2.4	+1.2 Apr	+0.1 May	+0.3	5.5 Mar††	-180.5 Q1	-4.7	-4.4	2.55	0.64	0.58
Canada	+2.1 Q1	-0.6	+1.8	-2.1 Apr	+0.9 May	+1.1	6.8 May	-42.2 Q1	-2.8	-1.8	1.68	1.26	1.06
Euro area	+1.0 Q1	+1.5	+1.5	+0.8 Apr	+0.2 Jun	+0.2	11.1 May	+302.8 Apr	+2.3	-2.1	0.83	0.90	0.73
Austria	+0.3 Q1	+0.7	+0.9	+0.8 Apr	+1.0 May	+1.1	6.0 May	+6.5 Q1	+1.6	-2.1	1.15	0.90	0.73
Belgium	+0.9 Q1	+1.3	+1.2	-1.1 Apr	+0.6 Jun	+0.3	8.6 May	+12.1 Mar	+0.6	-2.6	1.27	0.90	0.73
France	+0.8 Q1	+2.5	+1.2	-0.1 Apr	+0.3 May	+0.2	10.3 May	-17.1 Apr‡	-1.0	-4.1	1.20	0.90	0.73
Germany	+1.0 Q1	+1.1	+1.8	+1.4 Apr	+0.3 Jun	+0.5	6.4 Jun	+287.0 Apr	+6.7	+0.7	0.83	0.90	0.73
Greece	+0.2 Q1	-0.7	+1.4	+0.3 Apr	-2.1 May	-0.9	25.6 Mar	+1.9 Apr	+2.7	-3.7	15.12	0.90	0.73
Italy	+0.1 Q1	+1.2	+0.6	+0.1 Apr	+0.1 Jun	+0.2	12.4 May	+43.3 Apr	+1.9	-2.9	2.25	0.90	0.73
Netherlands	+2.5 Q1	+2.3	+1.8	+0.8 Apr	+1.1 May	+0.3	8.9 May	+91.4 Q1	+9.0	-1.8	1.05	0.90	0.73
Spain	+2.6 Q1	+3.8	+2.7	+2.7 Apr	+0.1 Jun	-0.4	22.5 May	+14.1 Apr	+0.5	-4.4	2.35	0.90	0.73
Czech Republic	+4.0 Q1	+10.5	+3.1	+4.3 Apr	+0.7 May	+0.3	6.4 May§	+0.8 Q1	-0.4	-1.8	1.28	24.7	20.1
Denmark	+1.5 Q1	+2.0	+1.6	+4.4 Apr	+0.6 May	+0.6	4.8 Apr	+21.6 Apr	+5.9	-2.9	1.05	6.75	5.45
Norway	+1.5 Q1	+1.0	+0.8	-3.1 Apr	+2.1 May	+1.5	4.2 Apr‡‡	+39.3 Q1	+10.4	+6.5	1.84	7.93	6.16
Poland	+3.7 Q1	+4.1	+3.4	+2.8 May	-0.9 May	+0.2	10.8 May§	-2.7 Apr	-1.5	-1.5	3.31	3.79	3.04
Russia	-2.2 Q1	na	-3.6	-5.4 May	+15.8 May	+15.3	5.6 May§	+61.6 Q1	+4.3	-2.6	10.85	55.9	34.4
Sweden	+2.6 Q1	+1.5	+2.7	+1.5 Apr	+0.1 May	+0.2	8.0 May§	+38.1 Q1	+5.8	-1.3	0.99	8.38	6.69
Switzerland	+1.1 Q1	-0.8	+1.0	-0.5 Q1	-1.2 May	-0.9	3.3 May	+53.7 Q1	+8.0	+0.2	0.11	0.95	0.89
Turkey	+2.3 Q1	na	+3.0	+3.7 Apr	+8.1 May	+7.0	10.6 Mar§	-44.3 Apr	-4.6	-1.6	9.43	2.69	2.13
Australia	+2.3 Q1	+3.8	+2.5	+2.8 Q1	+1.3 Q1	+1.7	6.0 May	-41.9 Q1	-3.1	-2.3	3.01	1.31	1.05
Hong Kong	+2.1 Q1	+1.5	+2.4	-1.6 Q1	+3.1 May	+3.2	3.2 May‡‡	+6.1 Q1	+2.7	-0.1	1.81	7.75	7.75
India	+7.5 Q1	+11.0	+7.6	+4.1 Apr	+5.0 May	+5.4	4.9 2013	-27.5 Q1	-0.9	-4.1	7.82	63.5	59.9
Indonesia	+4.7 Q1	na	+5.0	+5.8 Apr	+7.3 Jun	+6.0	5.8 Q1§	-25.2 Q1	-3.0	-1.9	8.17	13,337	11,875
Malaysia	+5.6 Q1	na	+5.5	+4.1 Apr	+2.1 May	+2.6	3.0 Apr§	+11.3 Q1	+3.4	-4.2	3.94	3.77	3.21
Pakistan	+5.5 2015**	na	+5.7	+5.2 Apr	+3.2 Jun	+4.2	6.0 2014	-2.0 Q1	-0.6	-5.1	9.85†††	102	98.6
Philippines	+5.2 Q1	+1.2	+6.6	+1.4 Apr	+1.6 May	+2.6	6.4 Q2§	+14.5 Mar	+3.9	-1.9	4.34	45.1	43.6
Singapore	+2.6 Q1	+3.2	+3.1	-2.4 May	-0.4 May	+0.4	1.8 Q1	+66.3 Q1	+21.5	-0.7	2.66	1.35	1.25
South Korea	+2.4 Q1	+3.3	+3.1	-2.8 May	+0.7 Jun	+1.1	3.8 May§	+98.0 May	+6.6	+0.4	2.47	1,125	1,011
Taiwan	+3.4 Q1	+2.7	+3.8	-3.2 May	-0.7 May	+0.4	3.8 May	+72.4 Q1	+12.7	-1.2	1.52	31.0	29.9
Thailand	+2.2 Q4	+7.1	+3.8	-7.6 May	-1.1 Jun	+1.1	0.9 May§	+16.1 Q1	+2.3	-2.0	2.62	33.8	32.4
Argentina	+1.1 Q1	+0.8	-0.6	-0.9 May	— ***	—	7.1 Q1§	-6.0 Q1	-1.5	-3.1	na	9.10	8.13
Brazil	-1.6 Q1	-0.6	-1.1	-7.6 Apr	+8.5 May	+7.9	6.7 May§	-95.7 May	-4.1	-5.5	12.68	3.15	2.20
Chile	+2.4 Q1	+4.2	+2.9	-1.3 May	+4.0 May	+3.8	6.6 May§‡‡	-1.3 Q1	-1.3	-1.9	4.69	639	552
Colombia	+2.8 Q1	+3.3	+3.4	-3.6 Apr	+4.4 May	+4.1	8.9 May§	-20.7 Q1	-6.5	-2.1	7.26	2,638	1,861
Mexico	+2.5 Q1	+1.6	+2.8	+1.1 Apr	+2.9 May	+3.1	4.4 May	-25.5 Q1	-2.3	-3.4	6.04	15.8	12.9
Venezuela	-2.3 Q3	+10.0	-4.2	na	+68.5 Dec	+76.4	7.9 Jan§	+10.3 Q3	-1.8	-16.5	11.00	6.30	6.35
Egypt	+4.3 Q4	na	+4.2	-0.2 Apr	+13.1 May	+9.8	12.8 Q1§	-10.2 Q1	-1.2	-10.9	na	7.62	7.15
Israel	+2.3 Q1	+2.1	+3.4	+3.9 Apr	-0.4 May	-0.2	5.0 May	+11.7 Q1	+4.9	-3.0	2.39	3.78	3.42
Saudi Arabia	+3.5 2014	na	+2.7	na	+2.1 May	+2.7	5.7 2014	+81.2 Q4	-2.4	-12.1	na	3.75	3.75
South Africa	+2.1 Q1	+1.3	+2.1	-2.6 Apr	+4.6 May	+4.8	26.4 Q1§	-18.7 Q1	-5.3	-3.8	8.29	12.3	10.7

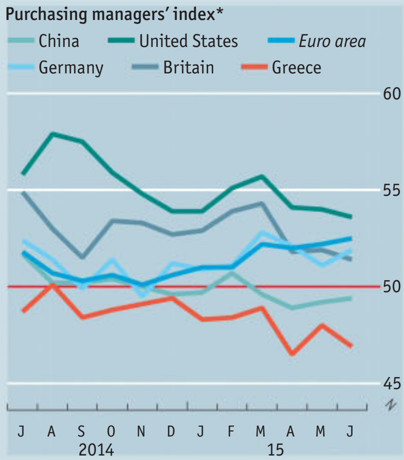
Source: Haver Analytics. *% change on previous quarter, annual rate. †*The Economist* poll or Economist Intelligence Unit estimate/forecast. §Not seasonally adjusted. ‡New series. **Year ending June. ††Latest 3 months. ‡‡3-month moving average. §§5-year yield. ***Official number not yet proven to be reliable; The State Street PriceStats Inflation Index, May 26.74%; year ago 41.74% †††Dollar-denominated bonds.

Markets

	Index Jul 1st	% change on one week	Dec 31st 2014 in local currency	Dec 31st 2014 in $ terms
United States (DJIA)	17,757.9	-1.2	-0.4	-0.4
China (SSEA)	4,245.7	-13.6	+25.3	+25.3
Japan (Nikkei 225)	20,329.3	-2.6	+16.5	+13.6
Britain (FTSE 100)	6,608.6	-3.5	+0.6	+0.9
Canada (S&P TSX)	14,553.3	-2.6	-0.5	-8.2
Euro area (FTSE Euro 100)	1,161.3	-3.0	+12.0	+2.7
Euro area (EURO STOXX 50)	3,496.3	-3.2	+11.1	+1.9
Austria (ATX)	2,461.2	-2.1	+13.9	+4.5
Belgium (Bel 20)	3,641.1	-2.1	+10.8	+1.7
France (CAC 40)	4,883.2	-3.2	+14.3	+4.9
Germany (DAX)*	11,180.5	-2.5	+14.0	+4.6
Greece (Athex Comp)	797.5	+2.1	-3.5	-11.4
Italy (FTSE/MIB)	22,956.7	-2.1	+20.7	+10.8
Netherlands (AEX)	482.8	-2.0	+13.7	+4.4
Spain (Madrid SE)	1,108.6	-3.5	+6.3	-2.4
Czech Republic (PX)	986.6	+0.4	+4.2	-2.8
Denmark (OMXCB)	855.9	-0.7	+26.7	+16.1
Hungary (BUX)	21,875.9	+0.1	+31.5	+21.4
Norway (OSEAX)	675.7	-2.7	+9.0	+3.5
Poland (WIG)	52,993.4	-2.1	+3.1	-3.0
Russia (RTS, $ terms)	930.7	-2.2	+9.0	+17.7
Sweden (OMXS30)	1,575.5	-2.2	+7.6	+1.1
Switzerland (SMI)	8,909.0	-1.9	-0.8	+4.3
Turkey (BIST)	81,681.7	-2.9	-4.7	-17.2
Australia (All Ord.)	5,506.0	-2.9	+2.2	-3.6
Hong Kong (Hang Seng)	26,250.0	-4.2	+11.2	+11.2
India (BSE)	28,020.9	+1.1	+1.9	+1.1
Indonesia (JSX)	4,904.1	-1.0	-6.2	-12.8
Malaysia (KLSE)	1,728.0	-0.2	-1.9	-8.5
Pakistan (KSE)	34,843.6	+1.5	+8.4	+7.1
Singapore (STI)	3,331.1	-0.6	-1.0	-2.9
South Korea (KOSPI)	2,097.9	+0.6	+9.5	+7.7
Taiwan (TWI)	9,375.2	-0.2	+0.7	+3.0
Thailand (SET)	1,504.6	-0.9	+0.5	-2.1
Argentina (MERV)	11,670.9	+1.0	+36.0	+26.7
Brazil (BVSP)	52,757.5	-2.0	+5.5	-10.0
Chile (IGPA)	18,705.5	-1.7	-0.9	-5.8
Colombia (IGBC)	10,120.2	-1.9	-13.0	-21.2
Mexico (IPC)	44,928.5	-1.1	+4.1	-2.7
Venezuela (IBC)	12,900.0	+3.6	+234	na
Egypt (Case 30)	8,371.5	-1.0	-6.2	-12.1
Israel (TA-100)	1,440.0	-0.4	+11.7	+14.9
Saudi Arabia (Tadawul)	9,086.9	-2.4	+9.0	+9.1
South Africa (JSE AS)	51,888.0	-1.7	+4.3	-1.5

Manufacturing activity

Few countries will find succour in the latest round of manufacturing data released by Markit, a data firm. In China, the Purchasing Managers' Index (PMI) rose slightly to 49.4 but for the fourth month in succession remained below the 50.0 mark that indicates a growing manufacturing sector. The PMI readings also slipped in America and Britain, two of the strongest-performing countries this time last year. The euro area's PMI gauge provided a rare, if not incandescent, bright spot, but performance was mixed among its component countries. Greece fared particularly badly—its PMI fell to 46.9—meaning Greek manufacturers have now been contracting for nearly a year. Worse may well be to come.



*Based on a survey of purchasing executives
Sources: Markit; HSBC; CIPS; BME; Nikkei

Other markets

	Index Jul 1st	% change on one week	Dec 31st 2014 in local currency	Dec 31st 2014 in $ terms
United States (S&P 500)	2,077.4	-1.5	+0.9	+0.9
United States (NAScomp)	5,013.1	-2.1	+5.9	+5.9
China (SSEB, $ terms)	412.5	-13.7	+41.8	+41.9
Japan (Topix)	1,636.4	-2.6	+16.3	+13.4
Europe (FTSEurofirst 300)	1,533.9	-2.7	+12.1	+2.8
World, dev'd (MSCI)	1,735.6	-2.8	+1.5	+1.5
Emerging markets (MSCI)	972.3	-2.1	+1.7	+1.7
World, all (MSCI)	423.5	-2.7	+1.5	+1.5
World bonds (Citigroup)	866.0	+0.4	-4.0	-4.0
EMBI+ (JPMorgan)	698.6	-0.7	+1.0	+1.0
Hedge funds (HFRX)	1,233.2§	-1.2	+1.2	+1.2
Volatility, US (VIX)	16.9	+13.3	+19.2	(levels)
CDSs, Eur (iTRAXX)†	73.5	+8.2	+7.9	-1.0
CDSs, N Am (CDX)†	69.1	+3.0	+1.5	+1.5
Carbon trading (EU ETS) €	7.5	-0.7	+2.3	-6.1

Sources: Markit; Thomson Reuters. *Total return index.
†Credit-default-swap spreads, basis points. §Jun 29th.

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

The Economist commodity-price index

2005=100

	Jun 23rd	Jun 30th*	% change on one month	% change on one year
Dollar Index				
All Items	142.1	146.1	+2.8	-13.9
Food	160.9	170.5	+8.3	-11.1
Industrials				
All	122.6	120.6	-4.4	-17.8
Nfa†	125.6	124.3	-2.2	-15.7
Metals	121.3	119.1	-5.4	-18.7
Sterling Index				
All items	164.4	168.9	+0.2	-6.2
Euro Index				
All items	158.0	163.0	+2.7	+5.7
Gold				
$ per oz	1,178.2	1,169.4	-1.9	-12.0
West Texas Intermediate				
$ per barrel	60.9	59.4	-3.2	-43.6

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

The cat's miaow

Tama, stationmaster of Kishi station and vice-president of the Wakayama Electric Railway, died on June 22nd, aged 16

AS SOON as she was born, Tama-chan ("Little Treasure") knew she was divine. Most cats presume it; she was sure of it. Her immediate situation—whelped by a stray in the workers' waiting room at Kishi station, on a rural railway line in western Japan—did not augur brightly. But as soon as her eyes opened, she saw what she was. Rolling languorously on her back, she admired her white underside; delicately twisting her neck to wash, she noted the black and brown bars on her back. She was a tortoiseshell, or a calico cat to Americans. They had been four in the litter; only she carried the propitious marks.

Tortoiseshells had long been prized in Japan. In another age she would probably have been a temple cat, leading a contemplative life among maple and ginkgo trees, killing mice and, in exchange, earning the regard of monks and pilgrims. Tales were legion of poor priests or shopkeepers who had shared their few scraps with the likes of her and had, in return, found riches. Or she might have been a ship's cat, since tortoiseshells had the power to keep away the ghosts of the drowned, whose invisible bodies filled the sea and whose flailing, imploring hands were the white crests of the waves. But Tama, being modern, preferred trains.

In 21st-century Japan the mystic power of her breed was still invoked everywhere. Children wore tortoiseshell charms as amulets to keep them well. Nervous students cramming for exams put pictures of cats much like her on their bedroom walls. Most ubiquitous of all, the *Maneki-neko*, or beckoning cat (almost always a tortoiseshell), waved outside shops, restaurants and gambling parlours to draw customers in. These plastic cats stared rudely at one and all, where she appraised people with a green-eyed and sleepy gaze; their paws sawed up and down, where she made a virtue of curled immobility. In betting places they held up big gold coins to show they could bring good fortune. With a combination of punctuality, divinity and good manners, she achieved the same.

She was trained young by her mother, Miiko, outside the grocer's shop by Kishi station. They would laze there in the sun to bewitch passers-by into suddenly needing a bag of rice or a bottle of *mirin*, and in exchange the grocer, Toshiko Koyama, gave them food. The bargain seemed a good one; the grocer prospered. Tama, too, grew sleeker as she improved her powers.

From there, it was only natural that she should save Kishi station. The little halt sat on a line, nine miles long and with 12 somnolent stops, between Wakayama City and Kishigawa. By 2006 it was losing 500m yen ($4m) a year. It should have been closed, but the customers said no; so it was sold to the Wakayama Electric Railway, which laid off the last man at Kishi to try to save some money. Mr Koyama became informal station-keeper, and the next year Tama was appointed stationmaster.

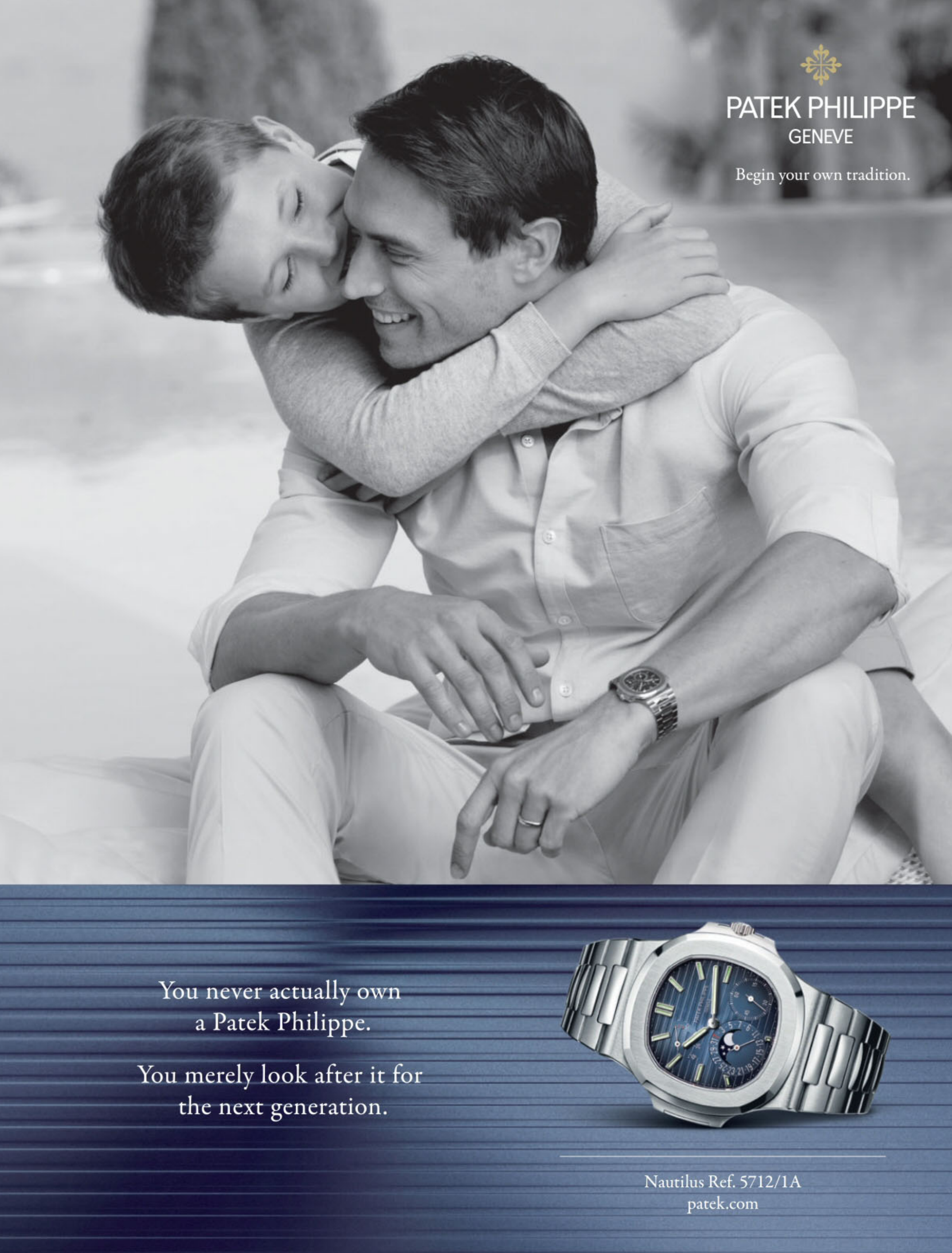
A train with whiskers

She kept strict hours: 9am to 5pm on weekdays, with only Sundays off. In exchange she was given a stationmaster's cap in her own size, always worn at a jaunty starlet angle; a stationmaster's badge; as much tinned tuna as she could nibble at; and eventually her own office, with basket and litter-tray, in an old ticket booth. The work was not demanding; if it had been, she would have disdained to take the job. But by snoozing most of the day on the ticket barrier, or rubbing against the legs of passengers as they arrived, she increased traffic on the branch line by 10% in her first year. People would travel just to be greeted by her smooth and lucky purr.

As the years passed more and more people came to the station, and rode on the train, because of her. Tourists flocked from all over Japan. The president of the WER thought she had probably injected more than a billion yen into the local economy. In 2009 a special bewhiskered cat-train, the Tama-*densha*, began to run on the line, covered with cartoons of her and with her image all over the seats. The next year the station was rebuilt in the shape of her head, with dormer windows for her eyes, and a café opened up with her portrait iced on cupcakes. A shop offered Tama bags, notebooks, key-fobs and figurines.

She took all this with equanimity. According to the Japanese principle of promotion by seniority, she rose effortlessly to super-stationmaster and honorary division chief. She was made an operating officer of the WER in recognition of her contribution to profits, the first female to be so honoured, and then became company vice-president. Each step was accompanied by gatherings of her devotees, presentations of certificates and extra stripes on her cap. Coolly tolerant, she allowed herself to be dressed in a velvet cloak with lace and white plumes, and to be hoisted in the air by jubilant WER executives.

At her funeral, attended by thousands at the station, the president of the railway company announced that she would be honoured as a goddess and buried in a Shinto shrine. Honour where honour was due. Meanwhile, her deputy Nitama ("Tama the Second") assumed her duties at the station; and the Tama-*densha* ambled on down the line, joined now by the Toy Train and the Strawberry Train, as her worshippers in suits continued to follow the moneymaking path pointed out by the beckoning cat of Kishi, Tama the Divine. ■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