The Economist

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Kim Jong Un tests the world

The parable of the hoverboard

Confrontation in Caracas

Saving Puerto Rico

Burgernomics: our Big Mac index

Saudi Arabia

The regime's blueprint for survival

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The world this week

Politics

Saudi Arabia executed 47 people on terrorism charges, including Sheikh Nimr al-Nimr, a prominent Shia Muslim cleric. Many Shias around the world reacted angrily. In Iran protesters stormed the Saudi embassy. The Saudi government, along with allies in Bahrain and Sudan, cut diplomatic ties with Iran, although it said talks this month on the Syrian civil war would not be affected. In **Yemen** Saudi fighter jets intensified their bombardment of Iranian-allied Houthi forces. Iran said they had bombed its embassy in Yemen.

Burundi's government refused to join peace talks with the opposition. Sporadic violence continued in the capital, Bujumbura. Around 400 people have been killed since April, when President Pierre Nkurunziza said he would seek a third term in office.

Two former prime ministers were set to face off in the second round of a presidential election in the **Central African Republic**. The first vote on December 30th was peaceful, but militias still control most of the country, which has suffered Christian-Muslim violence since 2012.

Another poke in the eye

North Korea claimed to have detonated a thermonuclear, or hydrogen, weapon underground. It was the rogue country's fourth nuclear test since 2006, though international experts questioned the claim, arguing that it may have been a smaller "boosted-fission" explosion instead. Reports that the North had fired a missile from a submarine for the first time also surfaced. China, North Korea's supposed ally, expressed anger at the test.

In **Bangladesh** the Supreme Court upheld the death sentence for Motiur Rahman Nizami, who heads Jamaat-e-Islami, the largest Islamic party. He was convicted last year for war crimes committed during the independence war against Pakistan in 1971, when he helped the Pakistani army identify and kill pro-independence activists. Critics claim he did not receive a fair trial.

A French journalist left **China** after the government refused to renew her press credentials. She was the first foreign journalist resident in China to be forced to leave the country since 2012. The government objected to her reporting on the suppression of ethnic Uighurs, a mostly Muslim minority in the west of China.

Hong Kong's chief executive, Leung Chun-ying, said his government was very concerned about the disappearance of Lee Bo, the owner of a shop selling books about Chinese politics. There are widespread suspicions that he was abducted from the territory by mainland Chinese agents. Four others connected with the shop disappeared last October while visiting Thailand and mainland China.

China announced it was building an **aircraft-carrier** entirely from domestic technology. It has only one such ship, which was built in the Soviet Union.

A terrible start to the year

Gisela Mota, the mayor of Temixco, a town south of **Mexico City**, was murdered less than a day after her inauguration. The killers are thought to have links to Los Rojos, a drugs gang.

Police in **Guatemala** arrested 18 former military and government officials on charges that they committed human-rights abuses during the country's civil war, which lasted from 1960 to 1996. Prosecutors said that the accused commanded forces that were responsible for massacring civilians.

Venezuela's newly elected parliament, the first to be controlled by the opposition to the country's populist regime in 16 years, was sworn in. Four MPs were barred from taking their seats pending the outcome of an investigation into electoral fraud. The opposition Democratic Unity alliance defiantly swore three of them in, restoring the two-thirds majority it won in December's election. The new head of the National Assembly called for the removal of President Nicolás Maduro within six months.

Bad tidings

Germany's chancellor, Angela Merkel, vowed to prosecute the men who formed mobs that molested women during new-year celebrations in Cologne. Over 100 women filed complaints claiming they had been groped, robbed and in one case raped. Police described the perpetrators as having "north African or Arab" appearances, further inflaming tensions over Germany's acceptance of over 1m Middle Eastern refugees.

Sweden introduced border controls on the Oresund bridge that links it to **Denmark** as part of an effort to slow down the influx of Middle Eastern asylum applicants. Denmark responded by bringing in checks at its border with Germany. Business leaders warned that the controls threaten to undo the region's economic integration.

Catalonia's president, Artur Mas, announced that he will schedule new elections, after failing to form a government to carry out his programme of declaring independence from **Spain**.

The far-right government in **Poland** passed a media law that dismisses the heads of the public broadcasters and puts them under the control of the treasury minister. It is the latest in a series of steps by the Law and Justice party to gain control over the country's courts, intelligence services and public media.

David Cameron, **Britain's** prime minister, confirmed that the government will take a clear position in a referendum, expected this year or next, on whether to leave the European Union, but that he would let ministers hold a "different personal position".

Jeremy Corbyn, the leftist leader of Britain's opposition Labour Party, tightened his grip on the party in a reshuffle of the shadow cabinet, promoting an opponent of Trident nuclear weapons to defence. The big surprise was that Hilary Benn, who gave a stirring speech in favour of air strikes in Syria, to the obvious displeasure of Mr Corbyn, kept his job in foreign affairs.

Tears, it seems, are not enough

Citing the long list of mass shootings in America Barack Obama said he would use his presidential powers to bypass Congress and ensure that most people who sell **guns** are registered. Even this very limited gun-control measure was met with stiff resistance from the National Rifle Association. Gun sales are expected to soar, as they have each time Mr Obama has spoken of gun restrictions.

Business

Global stockmarkets started the new year with a bad hangover, induced by more turbulence in China's markets. The Shanghai and Shenzhen Composite index fell heavily during the week, causing trading to be automatically suspended at least twice, after the release of more dismal data on manufacturing and other gloomy economic news. Investors were also unnerved by the looming end of a ban on share sales by big investors; the authorities quickly drafted permanent restrictions on such sales.

How low can it go?

Oil prices also weighed on market sentiment. Brent crude traded at under $35 a barrel, the lowest in more than a decade, after figures showed oil stockpiles increasing in America. Any lingering expectations that OPEC would agree to cut production in order to raise prices were dashed by the diplomatic row between Saudi Arabia and Iran.

Annual headline inflation in the **euro zone** remained unchanged at 0.2% in December. Markets had expected it to rise after months of stimulus policies that the European Central Bank had brought in to try to lift inflation to its 2% target.

In **Sweden**, which is also battling persistently low inflation, the board of the central bank gave the governor the power to intervene directly in currency markets if the krona continues to strengthen. The Riksbank has already lowered its benchmark interest rate to -0.35% and expanded its quantitative-easing programme.

Some MPs in Britain's Parliament called for a hearing into the decision, announced on New Year's Eve, by the Financial Conduct Authority to drop its inquiry into **banking pay and culture**. The regulator said that rather than pursue an industry-wide investigation, it would work with individual banks to promote "the delivery of cultural change". The FCA's critics claim it has bowed to pressure from the government.

Vroom! Vroom!

Carmakers sold 17.47m light vehicles in the United States in 2015, their best year ever, beating a record that had stood since 2000. This was driven mostly by surging sales of light trucks at the expense of mid-size and compact cars, in part because the lower price of petrol has reduced the cost of running larger vehicles. The car industry is confident that 2016 will be another record year, though with so many changes afoot in the business some wonder if sales will now hit a plateau.

Underlining how incumbent carmakers are having to adapt to the challenges posed by new technologies, **General Motors** said it was investing $500m in **Lyft**, a ridesharing firm and Uber's main rival. GM and Lyft will work together on projects to develop self-driving taxis and to create hubs across America where people who want to work for Lyft as drivers can rent a car from GM.

Tesla Motors had its best quarter in the last three months of 2015, delivering 17,400 cars to customers, some of whom had placed orders three years ago. However, the electric-car company's share price fell sharply, mainly over worries that it will not be able to ramp up production to meet the growing backlog of orders for its new Model X.

Volkswagen's troubles deepened in America, where the Justice Department filed a civil lawsuit seeking damages for its installation of software in cars designed to cheat emissions tests. The penalties from the various complaints lodged in the suit potentially amount to $48 billion.

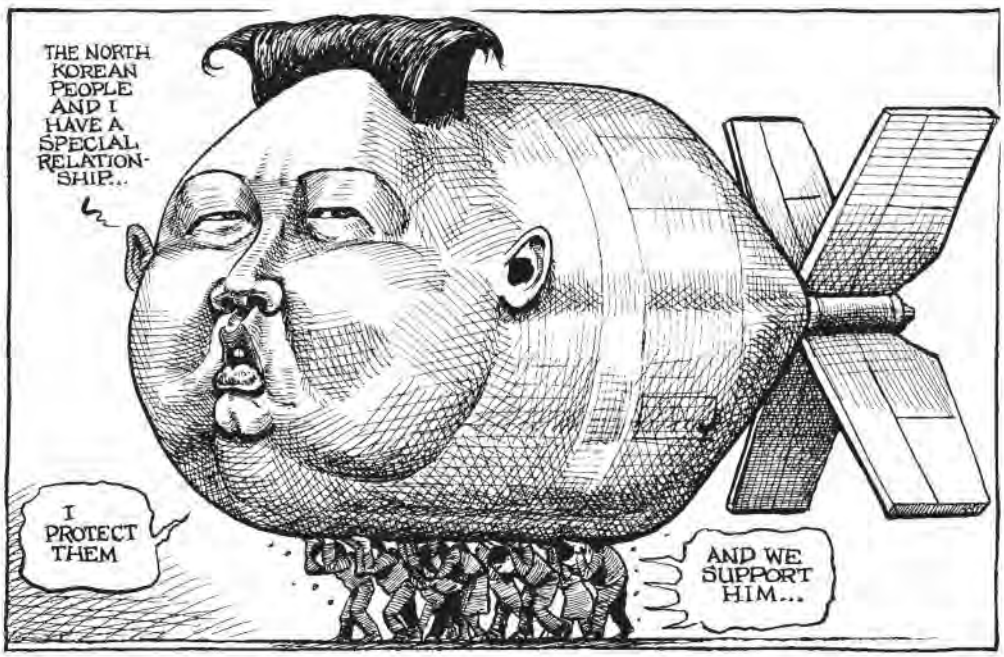
Sainsbury's, a British supermarket chain, revealed that it had made a takeover offer for Home Retail Group, but had been rejected. HRG owns **Argos**, which used to sell its wares primarily through a hefty shopping catalogue but has beefed up its online and same-day delivery business. Those operations would benefit Sainsbury's as it and others face increased competition from Amazon's entry into Britain's online groceries market. It is considering whether to pursue its bid.

Marc Bolland said he would step down as chief executive of **Marks & Spencer**. He has spent six years in the job trying to turn around the struggling British high-street retailer, which had a bleak Christmas trading period.

Twitbook

Twitter's share price dipped amid reports that it is contemplating extending the maximum limit of characters in tweets from 140 to 10,000. The Twittersphere lit up upon news of the possible change, with many tweeters griping that it would end the short, pithy comments for which Twitter is known and turn the service into something more akin to Facebook. That may be what Twitter's executives are hoping for as they look for ways to boost revenue.

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



The Saudi blueprint

The desert kingdom is striving to dominate its region and modernise its economy at the same time

FOR years Saudi Arabia seemed inert, relying on its vast oil wealth and the might of its American patron to buy quiet at home and impose stasis on its neighbours. But oil prices have tumbled, America has stood back from leadership in the Middle East, the region is on fire and power has shifted to a new generation—notably King Salman's 30-year-old favoured son, Muhammad bin Salman. A sandstorm of change is rousing the desert kingdom.

The visible result is the brutal treatment of dissent at home and assertiveness abroad that has just been on chilling display. On January 2nd Saudi Arabia executed 47 people. Most of them were terrorists linked to al-Qaeda but some, including a prominent Shia cleric, simply called for the fall of the ruling House of Saud. After Iranians set fire to the Saudi embassy in Tehran in protest, the kingdom cut diplomatic, trade and air links, a grave and foolish escalation in a febrile region.

Away from the headlines, however, a different assertiveness could prove equally consequential. Prince Muhammad has drawn up a blueprint designed to throw open Saudi Arabia's closed economy and government—including, he says, the possible sale of shares in the national oil firm, Saudi Aramco.

Coupling geopolitical swagger with sweeping economic change is a gamble. The outcome will determine the survival of the House of Saud and shape the future of the Arab world.

What is Arabic for Thatcherism?

The plunge in the price of oil, from \$110 a barrel in 2014 to less than \$35 today, was partly because Saudi Arabia seems determined to protect its share of the oil market. Nevertheless, low prices are a time-bomb for a country dominated by oil and a government that relies on it for up to 90% of its revenues. The budget deficit swelled last year to a staggering 15% of GDP. Although the country has \$650 billion of foreign reserves, they have already fallen by \$100 billion.

When oil prices fell in the 1990s, the Saudis simply borrowed heavily. They were saved when China's boom sent commodity prices soaring again in the 2000s. This time no one, including the Saudi rulers, expects a return to triple-digit oil prices. Instead, they acknowledge that the economy must change. Speaking to *The Economist* this week (see pages 16-18), Prince Muhammad laid out a blueprint for reform that amounts to a radical redesign of the Saudi state.

The first step is fiscal consolidation. The goal is to eliminate the budget deficit in the next five years, even if the oil price stays low. Though there is much flab to cut, that is still a perilous undertaking which means dismantling the system according to which petro-cash, not taxes, pay for free education and health care as well as highly subsidised electricity, water and housing. More than money is at stake: this largesse has disguised how far the economy is chronically unproductive and dependent on foreign labour. It has been too easy for Saudis to avoid working, or to snooze away in government offices.

The new leadership has made a start. Spending cuts in the last months of 2015 stopped the deficit from soaring to more than 20% of GDP. The 2016 budget includes steep rises in the prices of petrol, electricity and water (though they remain heavily subsidised). The prince pledges to move to market prices by the end of the five-year period. He is also committed to new taxes, including a value-added tax of 5%, sin taxes on sugary drinks and cigarettes, and levies on vacant land.

Recalibrating taxes and subsidies is only the first step. Roughly 70% of the 29m-plus Saudis are under 30. At the same time, two-thirds of Saudi workers are employed by the government. With the workforce projected to double by 2030, the country will prosper only if the sleepy statist economy is turned on its head, diversifying from oil, boosting private business and introducing market-driven efficiencies.

The government plans to do this by getting the state out of all but its essential functions. From health and education to state-owned companies, the new Saudi leadership is looking for privatisation and the private provision of public services. It has plans for charter schools and an insurance-based, privately provided health-care system. It is looking at the complete or partial privatisation of more than two dozen agencies and state-owned companies, including the national airline, telecoms firm and power generator. The biggest fish of all is Aramco, a national icon and almost certainly the world's most valuable firm. The prince favours floating a minority stake in Aramco and opening its books to the world. He is urging his team to come up with a plan within months (see page 18).

Could such a blueprint become reality? Words are cheap and the obstacles huge. Saudi Arabia has promised reform before, only for its efforts to fizzle into insignificance. Its capital markets are thin and the capacity of its bureaucracy thinner. The investment that it needs in its young people, its non-oil industries, its tourism infrastructure and much else will not come cheap. It will not happen unless investors believe in the country's future. That confidence will be hard to build.

The best-laid plans

One reason is that austerity on an almost Greek scale will be difficult and unpopular (though the examples of Syria and Libya are a deterrent against outright rebellion—see page 37). The state has provided generously partly to make up for the lack of political rights. Yet the royal family is reluctant to open the pressure valves that might make cuts more palatable. For all its economic urgency, the new regime shows no interest in political reform. Recent elections in which women were allowed to vote and to stand for (largely powerless) municipal councils were the idea of the late king. Nor is there a sign that the religious absolutism Saudi Arabia shares with its enemy, Islamic State, will soften. Even before the latest round, executions were at a 20-year high. Prince Muhammad waxes lyrical about the new generation. But he has little appetite to take on the conservative clergy over, say, the ban on women driving.

The other obstacle is geopolitics. As Iran has become more assertive, the Saudis have stepped in as the champion of Sunni Muslims. They have confronted Iranian-supported allies such ▸▸

as the Houthis in Yemen and Bashar al-Assad in Syria, as well as Shia malcontents at home and in neighbouring Sunni-ruled countries like Bahrain.

The new leadership argues that stability requires it to send a signal to terrorists (hence the executions). It feels obliged to defend its interests by resisting Iran which, it says, is bent on recreating a Persian empire. The argument is flawed: Saudi Arabia instead risks leading one side in a Muslim sectarian struggle it can neither win nor afford. The war in Yemen is a morass; support for Egypt and other Sunni allies is a drain. Defence and security already take over 25% of government spending and will eat up a growing share of a shrinking budget. Regional tensions will also deter private investment. Who would put trillions into an isolated economy in a region in turmoil?

The new regime seems to regard boldness at home and abroad as signs of a strong Saudi Arabia. Yet, though a muscular foreign policy plays well among Saudis, the economy will not thrive if the royal family ends up inflaming its region and blocking social reform at home. If Prince Muhammad is to remake his country, not wreck it, he needs to understand that. ■

North Korea's nuclear weapons

Another bombshell

After Pyongyang's fourth nuclear test, China must change its tune towards its outrageous ally

THE declaration on January 6th that North Korea had detonated its first hydrogen bomb was met with a show of joy on the streets of Pyongyang, its capital, and with despair in most others. America, Japan, South Korea and even China protested. Outsiders picked up the magnitude-5 earthquake caused by the blast, and put its epicentre at Punggye-ri, site of an underground complex in the north-east, near China, where three previous tests, in 2006, 2009 and 2013, took place.

A fourth nuclear test had been expected. But most experts dismiss the claim that this was a hydrogen bomb of the sort found in advanced nuclear arsenals. Thermonuclear weapons, far more powerful than the atomic kind, are almost certainly beyond the North's know-how. The explosion was roughly as big as the atom bomb detonated in 2013; even a failed detonation of an H-bomb would be more powerful. At a push, the North may have tested a "boosted-fission" weapon that uses a fusion additive to achieve a bigger bang. If so, it would mark a next step in the North's nuclear programme—and a serious one.

Come on, China, change North Korea

A second nuclear test only four years into the rule of Kim Jong Un, the odious young head of the mafia family that controls North Korea, is a sobering reminder of the progress that three generations of Kims have made in expanding their nuclear capability—despite outside efforts to curb it. This week South Korea suggested that the North had also tested a submarine-launched ballistic missile in December. Such developments pose little immediate threat to the outside world. Few think that North Korea has yet managed to miniaturise its nuclear weapons to fit them onto missiles. But the indications are that its capabilities are growing faster than outsiders expected.

The UN Security Council rushed to meet this week, condemning the test. Prodded by America, it is expected to pass a resolution calling for a fresh round of sanctions. Many will think this is just for show. After all, earlier sanctions following tests have hardly deterred a regime that seems set on possessing nuclear weapons. Indeed, they have allowed the Kim regime to claim that North Korea needs nukes to defend itself against enemies, led by America, that are bent on its destruction. The North's state news agency said this week that the test had "guaranteed the eternal future of the nation".

When dealing with North Korea, it is easy to despair. Dramatic remedies, such as trying to remove Mr Kim by force, are off the table because the risk is too great. Barely 50 kilometres from North Korea, 25m South Koreans live in greater Seoul, one of Asia's most dynamic megalopolises. On the other side of the border are 1m North Korean troops and countless artillery pieces, with which the North has threatened to turn the southern capital into a "sea of fire".

Even so, fresh sanctions should be just the start in confronting North Korea's nuclear-tipped threats. Not enough has been done to stem the flow of hard currency to a regime that even uses its diplomats to ferry illicit cash to Pyongyang. Financial sanctions can be made to bite deeper by more closely monitoring banking transactions. And the Vienna convention should not give cover to envoys engaged in criminality.

Under Barack Obama, America has let its North Korea policy drift. But the country that can do most is North Korea's big neighbour and supposed friend, China. Its banks are the main conduit for North Korean money. More worryingly, China does next to nothing to stop the flow of nuclear technology between rogue states and North Korea. China's sway over its neighbour is sometimes exaggerated, yet it is an economic lifeline, providing the regime with aid and trade. China is unhappy at the prospect of a nuclear-armed North Korea; but it is even more worried that the regime might collapse, possibly leading to a takeover by South Korea and America and the flight of millions of desperate North Koreans across its border.

Ideally, China would abandon the murderous Mr Kim. But even if it is unwilling to go that far, it can use the billions in aid and subsidised trade that it gives North Korea to press change upon the young dictator. Some may argue that squeezing the subsidies could hurt the poor, many of whom go hungry; it would also undermine the country's budding class of private traders and entrepreneurs, who are its best hope for the future. But the aid and subsidised trade it has extracted have mainly enriched the Pyongyang elite and financed the nuclear programme. They would be the main victims of Chinese pressure—especially if the elite could no longer travel to China.

For decades North Korea has been adept at shaking down outsiders: first the Soviet Union, sometimes America and now China. Before it is too late, Beijing should stop subsidising a vile dynasty that gives nothing but headaches in return. ■

China's market meddling

The control quagmire

A desire to limit volatility is giving rise to even bigger risks

"LOVE is like war: easy to begin but very hard to stop," observed H.L. Mencken, an American writer. Less poetically, he might have added market meddling to the mix. China had planned this week to dismantle some of the rescue measures put in place when the stockmarket crashed last summer. That prospect helped to spook investors: stocks fell by 7% on January 4th, the first trading day of 2016, their worst-ever start to a new year. Chinese regulators are once again wading in, however haplessly—on January 7th, shares dropped by another 7%.

So what, you might ask. The unruliness of China's stockmarket is not news. And for all the headlines generated by its tumult, it is a poor indicator of the economy's health. Growth was already slowing early last year when share prices raced to vertiginous heights. Parts of the economy—the property market and consumer spending—have actually improved since stocks cratered by more than 40% during the summer (although manufacturing remains weak). Companies raise little financing from the market and savers store little wealth in it.

Yet the stockmarket is the clearest expression of the fragile state of financial reform in China. The government has declared that it will relax its grip on the economy and give more sway to market forces. Doing just that, first in agriculture and then in manufacturing, is an important reason for the remarkable growth of the past 35 years. But in finance, the desire for the more efficient allocation of capital clashes with the Communist Party's reflexive instinct for control.

It seems that a falling stockmarket sends too transparent a signal of negative sentiment for officials to bear. The fingerprints of the "national team"—a motley crew of state-owned financial institutions—were all over the buy orders that swooped in when the market tumbled. The regulator was supposed to end a ban this week on share sales by big investors. Now it has drafted permanent restrictions, in effect telling investors that they are welcome to buy shares, but not to sell. It would be hard to conceive of a better plan for scaring money away. The poor design of circuit-breakers, trading halts ostensibly designed to calm the market, has added fuel to the fire.

The tension between reform and control is also evident in the currency market. The central bank has started to back away from obsessive management of the yuan's exchange rate. But the more leeway that it creates for trading the currency, the bigger its headache. The central bank judges that the yuan is more or less at fair value; the market disagrees and has pushed it steadily lower. Selling dollars to prop up the yuan so as to make for an orderly depreciation, China has run down its foreign-exchange reserves by some $300 billion over the past half-year. The government still has a plump cushion, but its reserves are not limitless. Accepting more volatility, even if that means a sharper depreciation now, would be better.

Control peak

The government's hunger for control is now clouding the broad economic picture. Burdened by the mountain of debt that it has accumulated over the past decade, China needs to begin deleveraging. That in turn means tolerating slower growth, at least for a while. Instead, all indications are that the government will set its annual growth target at 6.5% for the next five years in a plan to be unveiled in March. That is above what most analysts think it can credibly achieve without piling on yet more debt and bringing closer a real economic crisis. China has reached a point in its development where it needs to move faster in ceding power to the market—over shares, its currency and the growth rate. Unless the government gives up more control now, it risks some day losing it altogether. ■

Puerto Rico

The bill will come due

Congress should allow Puerto Rico to declare bankruptcy

FEW words raise as many hackles in America as "bail-out". To left and right alike, it speaks of waste and corruption: the exploitation of hardworking taxpayers by the rich and the feckless. That is bad news for Puerto Rico, a small, broke American territory in the Caribbean which missed payments on some of its debt this week (see page 21).

Barack Obama wants Congress to amend its laws to let Puerto Rico declare bankruptcy and to stump up some money to help it through a transition that will inevitably be painful. Righteous lawmakers harrumph that this sort of bail-out would reward the island's profligacy. Its tattered accounts stem in part from a bloated public sector, unaffordable pension promises, unduly restrictive labour laws and a tax code that is full of holes. They fret, too, that it would set a bad precedent. Many of America's 50 states have big debts and even bigger unfunded pension liabilities. There is no bankruptcy procedure under American law either for states or for territories like Puerto Rico. If Congress throws Puerto Rico a lifeline, the theory goes, spendthrift places like Illinois will soon request one.

These arguments are unfair. Congress itself lumbered the island's economy with its biggest burdens. It is Congress, after all, that imposed America's minimum wage on Puerto Rico, ▸▸

even though local workers are less productive than those on the mainland. Congress has also set some welfare payments at relatively high levels. And, again, Congress imposed costs on Puerto Rico by banning foreign vessels from carrying goods between American ports, making it unnecessarily expensive to ship anything to or from the island.

The rights and wrongs of write-downs

Opponents' arguments are also impractical. One way or another, the federal government will end up on the hook for the disarray in Puerto Rico. In the past decade the territory's economy shrank by 14%. Employment is down by 12%. Workers have responded by moving to the mainland, where jobs are easier to find. Over the past decade the population has dwindled by 9%, and the exodus is accelerating. The big spending cuts and tax rises still needed to balance the books would lead even more Puerto Ricans to emigrate, shrinking the tax base yet further.

A write-down, accompanied by measured spending cuts and reforms, would right the island's finances. Yet unless Congress allows both the territory's government and its agencies to declare bankruptcy, that will almost certainly not happen. The island's constitution, which Congress can override, guarantees that certain categories of bonds will be paid in full. Meanwhile, the constitution also protects government pensions—a potential contradiction. Without Congress's help, a long and messy court battle, accompanied by worsening economic conditions, widespread hardship and mass emigration, seem inevitable. At some point, the federal government would surely have to step in.

As for the argument about precedent, it is not clear that Congress has the power to create a bankruptcy regime for states, which are sovereign entities. Puerto Rico's laws, by contrast, are more at Congress's disposal.

Changing them would not just spare the island's economy grievous harm. An orderly bankruptcy would allocate some losses to bondholders—as should happen when a jurisdiction cannot pay its bills—but might still enable them to recover more money than a protracted legal wrangle. And it would save Congress from shelling out more in federal aid later. ■

The EU's rotating presidency

Stop the music

Every six months the Council of the European Union gets a new president. This is a recipe for dysfunction

MOBUTU SESE SEKO, the late dictator of Zaire, used to reshuffle his cabinet every six months or so to show ministers who was boss. (To reinforce the point, he sometimes also slept with their wives.) Brussels is no Kinshasa. Yet it shares Mobutu's love of musical chairs. The presidency of the Council of the European Union, the forum where national governments discuss and negotiate EU laws, rotates every six months. On January 1st the Netherlands took the chair from Luxembourg (see page 47). Brussels creates a song and dance about each handover, but the system makes no more sense than Mobutu's.

Each country that assumes the presidency sends lots of civil servants to Brussels, plus various nationally flavoured goodies and trinkets. (The Cypriots gave away 650kg of halloumi cheese.) But the greater cost is to the quality of EU lawmaking. Some countries that take up the presidency lack the diplomatic experience and political clout to broker agreements. And the six-month term is typically too brief for the tortuous process of European consensus-building.

Worse, a recalcitrant president can slow down or derail talks. During its presidency Luxembourg, eager to protect its financial-services industry, shelved critical moves to implement regulations on Europe's shadow banking that had been drawn up by the G20 group of big economies. Spain delayed discussions on banking supervision to avoid exposing the flaws of its national supervisor; it was only after Belgium took over that a deal was quickly sealed. The Dutch, who want to grapple with the refugee crisis, will have precious little time to do so. After them come the Slovaks, whose prime minister, Robert Fico, opposes any Europe-wide deal on migrants.

Defenders of the status quo make a couple of arguments. National governments, they say, gain a greater sense of responsibility for EU affairs when they are periodically placed in charge of them. Their civil servants get a chance to become familiar with the machinery of Brussels. These points were valid when the EU had just six members. They no longer hold in a union of 28 where each country must wait 14 years to take the reins. Enlargement has made the old system unworkable.

The EU's Lisbon treaty, which came into force in 2009, recognises this. It has sensibly taken away some of the tasks that used to be handled by the rotating presidency. The European Council, the gathering of the EU's national leaders, now elects its own president (currently Donald Tusk). It also appoints the EU's foreign-policy chief. Still, from home affairs to finance, energy, telecommunications and the budget, plenty of areas are left to the rotating presidency's wheel of dysfunction.

Cure the hangover

The rotating presidency is one of several stubborn relics of the EU's past. Like the European Parliament's wasteful second chamber in Strasbourg, scrapping it would require a treaty change. Some new member states have yet to enjoy presidential status, but by 2020 only Croatia will remain, and it should get a turn soon enough. Europeans are sure to tweak the treaties again; they do so every five years, on average. Ending this self-defeating system will then be possible.

A better alternative would be for each council working group to elect its own chairman. The European Parliament's committees pick their heads this way, as does the Eurogroup of euro-zone finance ministers. Council bosses with mandates from their peers and direct lines to European capitals would have greater clout, and be more accountable. The inevitable horse-trading might mean that the best candidate would not always win. But, although Mobutu was no fan of elections, they work better than any plausible alternative. ■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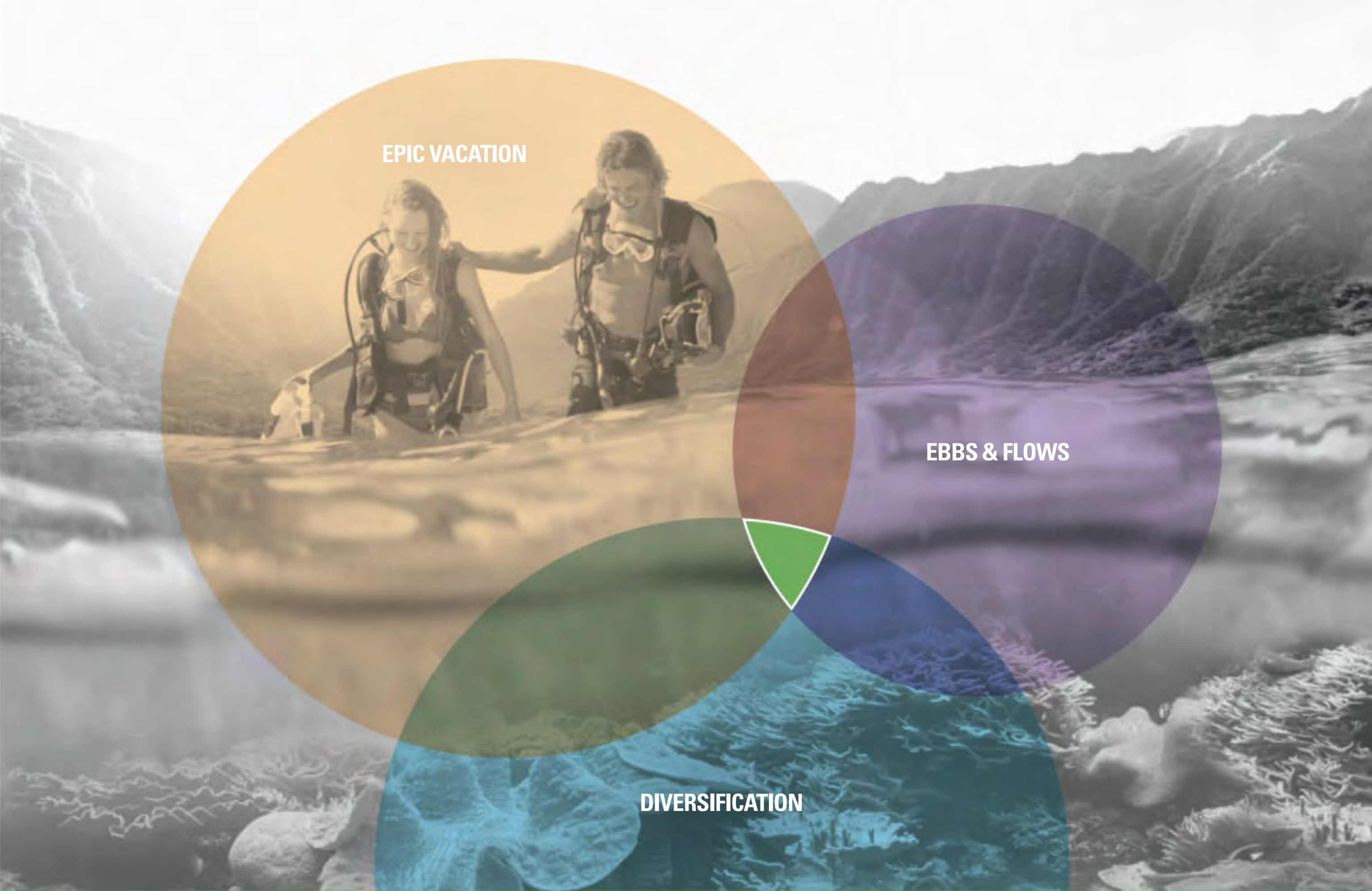
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Letters

Finish the sentence

As a former prosecutor, I found your story on the ongoing demise of the death penalty in America to be spot-on ("Who killed the death penalty?", December 19th). The practice is barbaric, and the United States should simply not be in the small club of countries that executes its citizens. You noted the traumatic effect that imposing the death penalty can have on jurors. I have had conversations with a Swedish friend who considers it unimaginable that he would be asked to sit in a room with other Swedes to determine if a fellow Swede lives or dies.

Indeed, the European Union could hasten the demise of death row by refusing to admit Americans who are involved with the death penalty. A travel ban would extend to judges who sentence convicts to death, as well as the prosecutors who sought the sentence and even the staff in prisons where executions are carried out.

A ban of this magnitude would affect those who feel they have no role, or a limited one, in the death penalty, but who are all either active participants or enablers in the process. It would cause them to think through their role in that process, perhaps for the first time. Is a person truly more morally pure if he, as a prosecutor, files legal papers to seek and obtain the death penalty because he has nothing to do with the ultimate application of the sentence?

MICHAEL BRAUTIGAM
Cincinnati, Ohio

Evading the question

Your article on a proposal to triple the limit on cash transactions in Italy was welcome ("Show me the money", December 5th). The current limit of €1,000 ($1,090) is meant to discourage tax evasion. Riparte il futuro, the largest non-political anti-corruption group in Italy, with over 1m users, has launched an online campaign to ask the government not to raise it. Our petition has gained 50,000 signatures and received the endorsement of many experts.

When he presented his proposal, Matteo Renzi, the prime minister, asked for contrary evidence. We published a detailed report with unequivocal data supporting our view. The government has not yet responded.

FEDERICO ANGHELÉ
Riparte il futuro
Rome

The problem with Myanmar

I am appalled that you chose Myanmar as your country of the year ("Most favoured nation", December 19th). You celebrated Myanmar holding an election at which people freely elected their leaders. Yet the Rohingya weren't allowed to vote or run for office. Putting a remark in parenthetical comment that the Rohingya are treated "disgracefully" is an insult to the thousands who have perished at the hands of government-sponsored violence. They are one of the most persecuted minorities anywhere in the world. Persecuted, by the way, by those who claim to be followers of Buddhism, a religion mostly associated with peace.

M.Y. DADANI
Plano, Texas

Antiques treasured

I disagree with your take on the antiques trade ("Out with the old", December 19th). It is not dying, merely changing, and its future is bright. The traditional definition of an "antique" being at least 100 years old is restrictive and outmoded. The New York Armory Winter Antique Show now allows items from as late as 1969.

You implied that the popularity of mid-century modernism explains why antiques are out of fashion. However, one may see in this a sign that the younger generation still appreciates old things, just different things from the ones that their parents appreciated. Thirty-somethings are expanding their tastes; the heavy hand of mid-century is lifting and early 20th-century modernism and Art Deco styles are creeping in.

A more eclectic use of styles in interiors is indeed returning. In the *Architectural Digest* 2016 forecast, several interior designers noted a trend away from mid-century period rooms towards more traditional styles mixed with the modern. Robert Stilin, a designer, even used the term "brown furniture" in a positive light. Not quite the definitive death that many old-guard dealers are predicting.

CHRISTA PIRL
Christa Pirl Interiors & Furniture
New York

Teaching language

Much of what you say about South Africa's Stellenbosch University is true and uncontroversial ("The ivory tower is too white", December 5th). There has been a campaign to replace Afrikaans as the main teaching language on campus with English. But this could disadvantage poor Afrikaans-speaking people in higher education, especially the coloured population.

The irony is that by wishing to move away from the European culture that pervades South Africa's ivory towers, having English as the lingua franca makes it more likely that European cultural and intellectual hegemony will remain.

PROFESSOR DAVID COLDWELL
Johannesburg

Is it a bird? Is it a plane?...

I enjoyed Schumpeter's musings on the rise of the SuperBoss (December 19th). Not only are senior executives hyperactive, but almost everybody that works for them has been infected by the SuperBoss virus. Underlings such as myself are constantly bombarded by "tips" from our bosses about how to be just like them. If I were to follow even a tenth of these suggestions, which always seem to have a passive-aggressive threat buried within them, I would get no work done. Even weeding through them and exploring one or two eats up 60% of my day. It is as though every executive in the 15 or so layers of management is competing to be the SuperBoss. A lot of people are to blame for this. Publications like *The Economist* play a role in promoting it. I applaud you for now taking a stand against it.

As an addendum to Peter Drucker's quote, I've discovered this to be true: in battles and unpredictable disasters we need heroes. In business a hero is a single point of failure.

MARK MARTINO
Kirkland, Washington

In "Elizabeth", a film from 1998 about Elizabeth I, Sir Francis Walsingham says that "All men need something greater than themselves to look up to and worship. They must be able to touch the divine here on Earth". The cult of overperforming is not a new fad, even if it has a new disguise.

ANNA PIETKA
Warsaw

Mencken on populism

The spate of fear-mongering from populist politicians in America and Europe is an old political strategy ("Enough said", December 19th). H.L. Mencken put it succinctly almost a century ago: "The whole aim of practical politics is to keep the populace alarmed (and hence clamorous to be led to safety), by menacing it with an endless series of hobgoblins, all of them imaginary."

GENE TINELLI
Janesville, New York ■

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Young prince in a hurry

DIRIYA

Muhammad bin Salman gambles on intervention abroad and radical economic change at home. But forget about democracy

THE Al Sauds once again hold court in Diriya, their ancestral capital that was laid waste by the Ottoman empire and is being lovingly restored as a national tourist attraction. This is where the Al Sauds forged their alliance in the 18th century with a Muslim revivalist preacher, Muhammad Ibn Abdel-Wahhab—a pact that to this day fuses the modern Saudi state with the puritanism of Wahhabi Islam. And this is where Muhammad bin Salman (pictured), the 30-year-old deputy crown prince who is the power behind the throne of his elderly father, King Salman, receives foreign guests in a walled complex.

One side of his reception room is decorated with the spears, swords and daggers of tradition. The other is dominated by a large television, showing the casual horrors of the Middle East and the repercussions of his own actions play out on rolling news: the execution of a prominent Shia cleric, Nimr al-Nimr, (and 46 others accused of terrorism and sedition, mostly linked to al-Qaeda jihadists) led to a mob ransacking the Saudi embassy in Tehran and, in retaliation, to the kingdom severing diplomatic relations with Iran.

Talking late into the night with the news left on throughout, Prince Muhammad discusses his country's interventionist foreign policy and its uncompromising response to terrorism and sedition. Asked whether the kingdom's actions were stoking regional tensions, he said that things were already so bad they could scarcely get any worse. "We try as hard as we can not to escalate anything further," he says; and he certainly does not expect war. But for his entourage, Saudi Arabia has no choice but to stop Iran from trying to carve out a new Persian empire.

If his defence of Saudi foreign policy was unrepentant, even more striking was his ambition to remake the entire Saudi state by harnessing the power of markets. No economic reform is taboo, say his officials: not the shedding of do-nothing public-sector workers, not the abolition of subsidies that Saudis have come to see as their birthright, not the privatisation of basic services such as education and health care. And not even the sale of shares in the crown jewel: Saudi Aramco, the secretive national oil and gas producer that is the world's biggest company (see next article).

At 80, the newish King Salman is part of the same gerontocracy that has run the country for decades. But he has entrusted much of his realm to Prince Muhammad, who is in a hurry to awaken it from its torpor. He knows that, for all its ostentatious luxury, the country faces huge problems. The oil price has plunged. Arab states all around have collapsed. In the vacuum, Iran, the Shia power that has long alarmed Sunni Arabs, has spread its influence across the region, particularly through the militias it grooms—in Lebanon, Iraq, Syria and most recently in Yemen, Saudi Arabia's underbelly. The Arab world is confronted not just by a Shia Crescent, "but by a Shia full moon", says one confidant of the prince. As well as Shia militants, Saudi Arabia also faces resurgent Sunni jihadists: a revived al-Qaeda in Yemen to the south, and Islamic State (IS) in Iraq and Syria to the north. Both seek to lure young Saudis raised on the same textbooks and homilies that the jihadists use.

Pillars of the House of Saud

The Al Sauds have survived by making three compacts: with the Wahhabis to burnish their Islamic credentials as the custodians of the holy places of Mecca and Medina; with the population by providing ▸▸

For a transcript of the formal interview with the prince, see Economist.com/saudi_interview munificence in exchange for acquiescence to absolutist rule; and with America to defend Saudi Arabia in exchange for stability in oil markets.

But all three of these covenants are fraying. America is semi-detached from the Middle East. The plummeting price of oil, which provides almost all of the government's revenues, means the old economic model can no longer sustain the swelling and unproductive population. And the alliance with obscurantists brings threats, because they provide intellectual sustenance to jihadists, and form an obstacle even to modest social reforms that must be part of any attempt to wean the country off oil and create a more productive economy.

Not surprisingly, Saudi Arabia's many critics have dusted off their obituaries of the House of Saud. But for Prince Muhammad the lesson of the Arab spring, and of history, is that regimes that lack deep roots are doomed to be swept away; by implication the Al Sauds are here to stay.

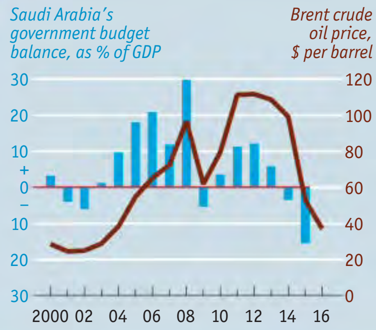
Yet he knows that change must come, and fast. He has injected new energy into government, and is taking huge gambles. What he lacks in experience and foreign travel, he compensates for with confidence, focus and a battery of consultants' reports. He reels off numbers and policies with ease, pausing only to take a call from John Kerry, America's secretary of state. He speaks in the first person, as if he were already king even though he is only second in line. Over five hours King Salman is mentioned once; his cousin, the crown prince, Muhammad bin Nayef, does not figure at all, though he is in charge of internal security and may be biding his time.

No crisis wasted

Such is Prince Muhammad's frenetic activity that officials reel and outsiders regard him as a bullock in a china shop. Just weeks after his father made him defence minister, fighter jets from Saudi Arabia, the Arab world's richest state, led a coalition into action against the Houthi militias of its poorest, Yemen. To critics who say he was rash to intervene in a land that has bloodied foreign armies before, Prince Muhammad says the action, if anything, came too late: the Shia Houthis, with Iran's help, had taken the country and sophisticated weapons, such as jets and Scud missiles. Scuds are occasionally fired at Saudi targets; thousands of Saudis living near Yemen have been evacuated to avoid rockets and artillery fire. In Syria he plans to send special forces against IS. (The crown prince is said to be more cautious, fearing blowback from jihadists).

Prince Muhammad's most dramatic moves may be at home. He seems determined to use the collapse in the price of oil, from $115 a barrel in 2014 to below $35, to enact radical economic reforms. This begins with fiscal retrenchment. Even after

Oily slope



Sources: IMF; Haver Analytics

initial budget cuts last year, Saudi Arabia recorded a whopping budget deficit of 15% of GDP. Its pile of foreign reserves has fallen by $100 billion, to $650 billion. Even with its minimal debt of 5% of GDP, Saudi Arabia's public finances are unsustainable for more than a few years (see chart).

His budget, unveiled in December, cuts subsidies on water, electricity and fuel. These were aimed mostly at big consumers, including the myriad royal princes. "I don't deserve these subsidies," he says. Even so, Saudis witnessed the rare sight of people queuing to buy petrol before the prices rose by 50% on January 1st. This month Saudis accustomed to leaving on the air-conditioner when going on holiday will receive dearer electricity and water bills. Within five years, the plan is that Saudis should be paying market prices, probably with compensation in the form of direct payments for poorer citizens.

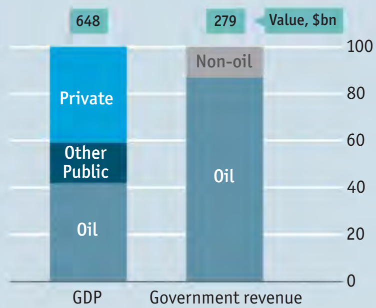
Ministries have halted expenditure on cars, furniture and showcase projects. The government is scrutinising allowances and overtime claims to save money. Soon Saudis will for the first time pay value-added tax of 5% on non-essentials, in a move coordinated with other members of the six-country Gulf Co-operation Council. Prince Muhammad is adamant that there will be no income or wealth taxes, but he plans to balance the budget in five years.

Under his "Transformation Plan 2020",

Scraping the barrel

Saudi Arabia, 2014

% of total, by sector



Sources: McKinsey Global Institute; IMF

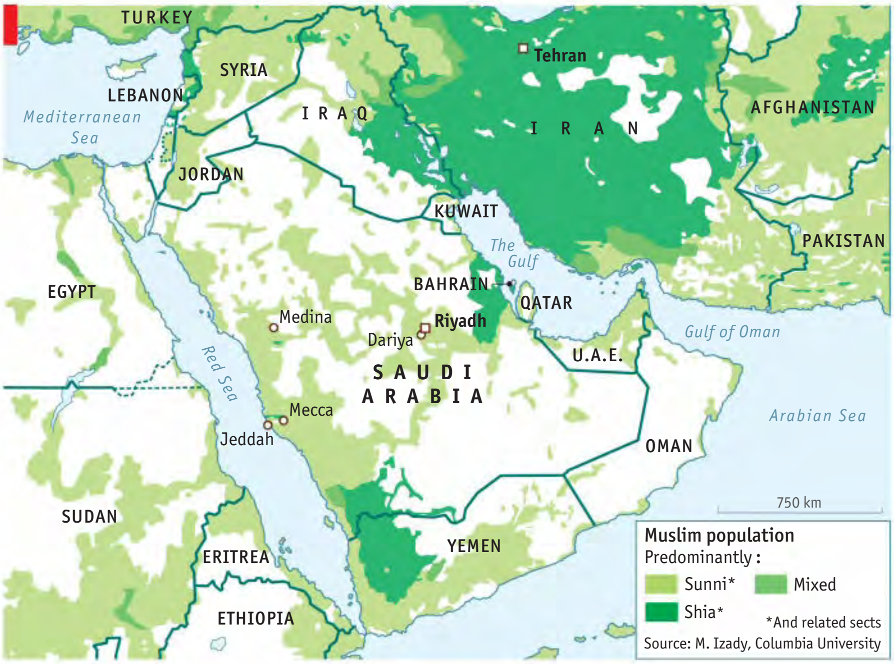
set for publication by the end of the month, the prince wants to develop alternatives to oil and drastically to cut the public payroll, which acts as a form of unemployment benefit. To do so he wants to create jobs for a workforce that will double by 2030. Ministers speak of doubling private education to cover 30% of students, establishing charter schools and transforming public health care into an insurance-based system with expanded private provision. In addition to Aramco, the prince wants to sell stakes in state assets from telecoms to power stations and the national airline. The government is to sell land to developers, such as the 4m square metres it owns around Mecca, the most expensive real estate in the world. The prince sees huge promise in developing Islamic tourism to the holy sites; he hopes to boost the 18m annual visitors to 35m-45m in five years.

Sceptics abound. Reform has long been talked about but never implemented. Prince Muhammad's ministers are astute, have PhDs from Western universities and speak the jargon of key performance indicators, but much of the government is deadweight. Even the unemployment figures are subject to doubt. "Few bits of the bureaucracy actually function at a high level," says a Western diplomat. Even senior advisers question the kingdom's capacity to find and absorb the trillions of dollars on which the plan is predicated.

In Jeddah, the commercial capital on the Red Sea, some businessmen remain sceptical, and speak more of exporting their wealth than investing it in the country. There is also suspicion of hidden motives. With each new elderly monarch, they say, favoured sons have indulged in self-aggrandisement, leaving courtiers to disguise their acquisitions as privatisations and economic reforms. Media reports of Prince Muhammad's lavish parties in the Maldives and the crown prince's house-hunting for a Sardinian villa worth half a billion euros are fodder for social media, of which Saudis are keen users.

As the man who ultimately controls the Public Investment Fund, the destination for many assets to be sold, and who has taken direct oversight of Aramco, the prince is already the subject of some muttering. What is true is that, for all his talk of transparency, his government continues to treat royal and state expenses as one and same; the royal component is a state secret.

A bigger challenge for the reformers is the fact that the prince's dizzying changes amount to, in effect, a rewriting of the Saudi social contract. Why, mutter some Saudis, should we tighten our belts when the princes continue to enjoy untold riches? And for all his boldness in economic matters, he remains obtuse when it comes to political liberalisation that might help secure consent for the economic revolution. A tiny number of women have recently



Source: M. Izady, Columbia University

campaigned for and won seats in municipal elections, under changes brought in by the late King Abdullah; who more than a decade ago had promised Saudis "true democracy" in 20 years. It is nowhere in sight.

Government repression has intensified. "It has never been this bad," says one campaigner for women's rights. Indeed, counter-terror legislation passed in 2014 makes virtually all dissent a terrorist offence. The evidence is all around: lawyers representing troublesome clients have found themselves behind bars; preachers who used to pronounce against corruption stick strictly to their anodyne scripts; and stand-up comedians have stopped poking fun at royals. Tellingly, more people have been executed in King Salman's first year in office than in any of the previous 20.

In a country where concerts, public movies and female performances are banned, the prince talks of the "entertainment crisis", and about his own children lacking things to do. Here and there, he seems ready to try to loosen the grip of the clerics. His latest education minister, Ahmed al-Eissa, is an academic whose book on the dreadful state of Saudi schools, which he blames in part on the restrictions placed by "religious culture", remains banned in the kingdom. Private schools, still barred from teaching evolution, would have a freer hand to set their curriculum and choose pedagogic materials beyond those designed by the clerics.

The prince says that he supports women working, not least to reduce the fertility rate: "A large portion of my productive factors are unutilised," he says. "I have population growth reaching very scary figures." These days Saudi Arabia has more women in the workplace, but female labour-force participation is still very low, at 18%. Prince Muhammad thinks women are not taking full advantage of the opportunities they already have: "A large percentage of Saudi women are used to the fact of staying at home. They're not used to being working women." Still, he is in no mood to challenge the ban on women driving—even though some might want to lay off their chauffeurs in such straitened times. "I do not want to get involved in this issue as it is Saudi society that will decide whether to accept it or not."

The country's regional assertiveness also presents a threat to the planned transformation. Spending on defence and security, has grown from 7% of GDP in 2012 to 10% in 2015, and is set to rise again in 2016.

Drumming up allies, including the 34-country counter-terrorism coalition that the prince announced in December (to the bemusement and surprise of some of its putative members) is proving costly. It has recently promised $8 billion for Egypt. Saudi Arabia is financing a proxy war in Syria and waging a full-scale one in Yemen, which has dragged on longer than initially flagged. Nevertheless for some, the sight of Saudi Arabia standing up forcefully for Sunnis against Iran is part of the antidote to the jihadists' poisonous ideology.

Uncle Sam, we need you

Surprisingly, perhaps, for a Saudi royal with no Western education, Prince Muhammad speaks about America passionately. "The United States has to realise that they are the Number One in the world, and they have to act like it," he says; the sooner America steps back into the region—even with boots on the ground—the better.

Prince Muhammad's schemes do not appear to be inspired by ideology. Many of the ideas he is pursuing have lurked in ministers' drawers for years. Others follow examples from elsewhere, be it charter schools in America, public-private partnerships in Britain or the abolition of fuel subsidies in Egypt (and Iran). Instead they are born of necessity. The conjunction of a fall in oil prices, a geopolitical crisis and a hyperactive prince afford a once-in-a-generation chance to modernise the country.

The Arab spring has shown time and again that post-colonial Arab states are singularly dysfunctional (see page 37). That raises serious doubts about Saudi Arabia's ability to reform. But the regime has little choice: its survival may depend on it. ■

Saudi Aramco

Sale of the century?

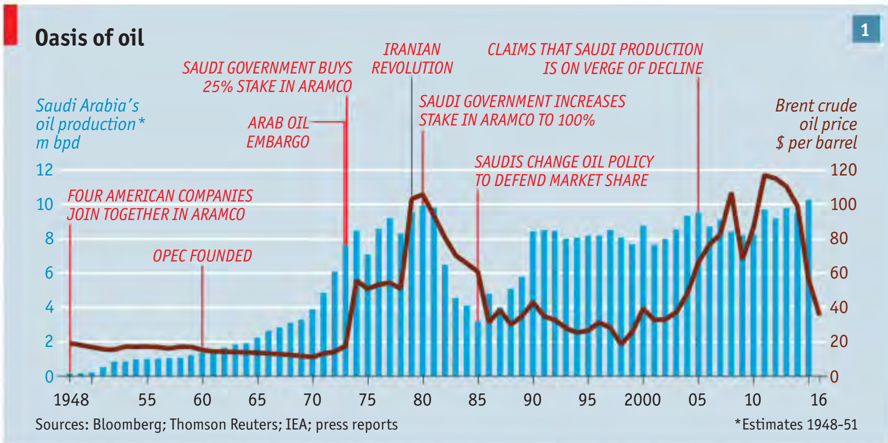
DIRIYA

A possible IPO of Saudi Aramco could mark the end of the post-war oil order

"THE amounts of oil are incredible, and I have to rub my eyes frequently and say like the farmer: 'There ain't no such beast.'" So wrote an American oilman in the Persian Gulf a few years after the discovery in 1938 of a gusher of oil from Saudi Arabia's Well Number Seven, 4,727 feet (1,440 metres) below the desert floor.

You could say the same today about Saudi Aramco, the state-owned firm that for decades has had exclusive control of Saudi Arabia's oil and is the world's biggest, most coveted and secretive oil company. On January 4th the kingdom's deputy crown prince, Muhammad bin Salman, told *The Economist* that Saudi Arabia was considering the possibility of floating shares in the company, adding that personally he was "enthusiastic" about the idea.

It was a stunning revelation. Officials say options under preliminary consideration range from listing some of Aramco's petrochemical and other "downstream" firms, to selling shares in the parent company, which includes the core business of producing crude. The staggered nationalisation of the Arabian American Oil Company (Aramco), made up of four big American firms, in the 1970s was emblematic of a wave of "resource nationalism" that has ▸▸



helped define the industry (see chart 1).

Aramco is worth, officials say, "trillions of dollars", making it easily the world's biggest company. It says it has hydrocarbon reserves of 261 billion barrels, more than ten times those of ExxonMobil, the largest private oil firm, which is worth $323 billion. It pumps more oil than the whole of America, about 10.2m barrels a day (b/d), giving it unparalleled sway over prices. If just a sliver of its shares were placed on the Saudi stock exchange, which currently has a total market value of about $400 billion, they could greatly increase its size.

Prince Muhammad says a listing would not only help the stockmarket, which opened to foreigners last year. It would also make Aramco more transparent and "counter corruption, if any". A final decision has yet to be taken. Yet the prince has held two recent meetings with senior Saudi officials to discuss a possible Aramco listing and diplomats say investors are being sounded out. The talk is of at first floating only a small portion of the company in Riyadh, perhaps 5%. In time that could rise—though not by enough to jeopardise the kingdom's control of decision-making.

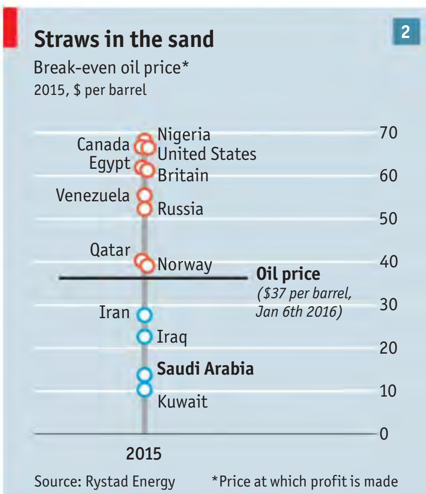
The aim would be to foster greater shareholder involvement in Saudi Arabia; a senior official said there was no intention of surrendering control of Aramco or its oil resources to foreign firms. But it is part of a frenzy of reforms proposed by the prince that his government is rushing to keep pace with. "Everything is on the table. We are willing to consider options we were not willing to get our heads around in the past," an official says.

For many investors, a listing of Aramco, however partial, would be a prize even at today's low oil prices. Its "upstream" business is mouth-watering. Rystad Energy, a Norwegian consultancy, says no other country except Kuwait can produce oil at a lower break even cost (see chart 2).

By the standards of national oil monopolies, analysts say that Aramco is well run. In the 1940s and 1950s, when the American consortium recruited young Saudis, it was an "unlikely union of Bedouin Arabs and Texas oil men, a traditional Islamic autocracy allied with modern American capitalism", writes Daniel Yergin in "The Prize". Under American ownership, it built towns with schools, wiped out malaria and cholera, and helped farmers become entrepreneurs, officials recall, explaining why it was popular with Saudis.

It was a different story in Iran and elsewhere, where citizens grew sick of the colonial-era concessions taken by British and French firms, and a wave of nationalisation began. The Saudis, having declared their first 25% stake in Aramco in 1973 "indissoluble, like a Catholic marriage", were unable to resist the tide. Full nationalisation of Aramco came in 1980. But an American business ethic survived. Just over a decade ago Matthew Simmons, an American banker, argued that Saudi wells were past their prime and that production would soon peak. Yet Aramco has increased output by more than 1m b/d in the past five years, reaching record highs. "They've proven their resilience," says Chris DeLucia of IHS, a consultancy.

Questions surround the company, though. Mr DeLucia says 87% of its output is oil; it needs to develop more gas to satisfy the country's needs for cleaner, cheaper power. Some argue that its reserves, which have barely budged since the late 1980s, are overstated. Internal documents about them are "phenomenally closely guarded secrets" says a local observer.



The company does not report its revenues. Its fleet of eight jets, including four Boeing 737s, and a string of football stadiums suggest that it is not run on purely commercial lines. It is the government's project manager of choice even for non-oil developments, and runs a hospital system for 360,000 people. A listing would require it to become more transparent.

But even with greater disclosure, minority shareholders may play second fiddle. The company is integral to the social fabric of Saudi Arabia and the survival of the ruling Al Saud dynasty, providing up to nine-tenths of government revenues. Cuts in its output have been a foreign-policy lever through which OPEC, the producers' cartel, has often sought to rescue oil prices.

Investors in Russia's Gazprom, another national champion, have watched in frustration as the company has been used as an arm of the Russian foreign ministry. Elsewhere, selling stakes in national oil companies has had mixed results.

Prince Muhammad's desire for reform fits a pattern that some consider reckless. Saudi Arabia has recently forced OPEC to maintain production despite oil falling from a peak of $120 a barrel to below $35. Its decision on January 3rd to suspend diplomatic relations with Iran, a fellow OPEC member, makes it harder for both to agree on production cuts, though Saudi officials are in any case adamant that they have no intention of rescuing prices.

Others believe Saudi Arabia's strategy makes sense. They think it wants to protect its share of the global oil market by driving high-cost producers to the wall at a time when unconventional forms of oil, such as American shale, have had gushing success.

Another threat is alternative forms of energy, such as wind and solar, which may well challenge fossil fuels. Selling shares in Saudi Aramco could thus be intended to cash in before the "decarbonisation" of the economy starts to gain credibility. It would also fit with a trend that has started to transform the oil industry for the first time in half a century—denationalisation.

Paul Stevens of Chatham House, a British think-tank, says a cadre of well-educated technocrats from oil-producing nations are wondering whether their national oil companies are "ripping us off", through corruption or inefficiency. Brazil's corruption-plagued Petrobras proves that public markets are no guarantee of probity. But as in Mexico, which is opening up its oil industry for the first time since 1938, many want to impose market-based checks and balances, so that no company can operate as a state within a state. If that happens to Saudi Aramco, the biggest of them all, it will have global repercussions. ■

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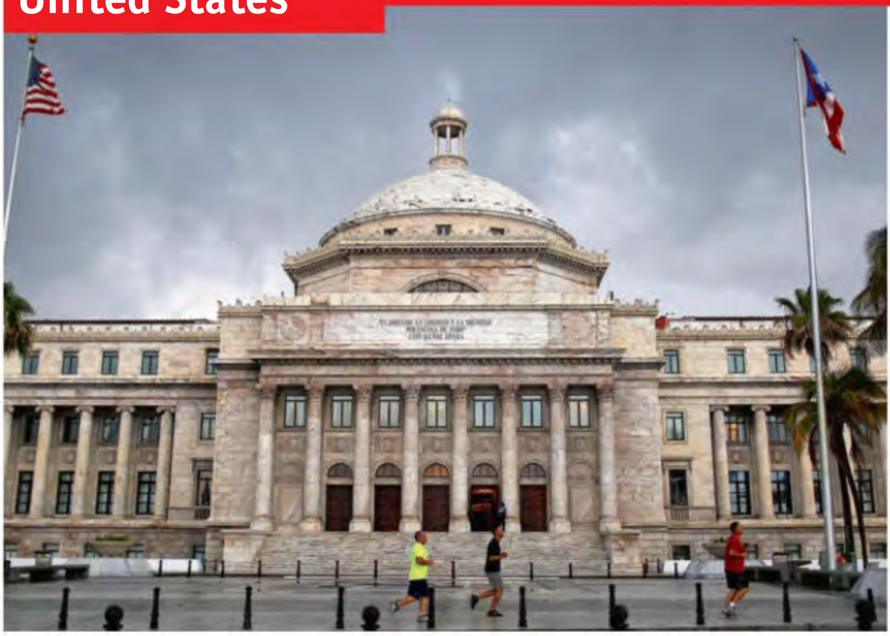

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Puerto Rico defaults

When the salsa stops

SAN JUAN

The commonwealth has run out of wealth. Will Washington save it?

PUERTO RICO'S creditors have plenty to complain about, but they can't claim they weren't warned. Last June Alejandro García Padilla, the governor of America's Caribbean outpost, announced that its $72 billion public debt was "unpayable", and that a "unilateral and unplanned non-payment of obligations" loomed. Half a year later, he has fulfilled that threat: on January 4th the government missed a $36m coupon on paper issued by its Infrastructure Financing Authority. "There were those who said I was bluffing," he says. "I told the truth. To avoid a new default, [bondholders] have to sit down and negotiate."

Unlike fiscal crises elsewhere, the decision did not set off pot-banging protests or queues at cashpoints. On the contrary, the governor was all smiles the next day as he welcomed children into La Fortaleza, his colonial-era palace in the capital of San Juan, for the eve of Three Kings' Day, which Puerto Ricans (*boricuas*, as they call themselves) celebrate as much as Christmas. Plaza las Américas, the city's mega-shopping mall, was packed as parents finished shopping for gifts to put under their children's beds overnight, and waiting times at popular restaurants were over an hour. The contrast between the island's dire public finances and its holiday spending binge was surreal, and impossible to sustain.

Only in a territory as unconventionally governed as Puerto Rico could this through-the-looking-glass economy persist. America conquered the island from Spain in 1898 and granted its residents citizenship in 1917, just in time to draft 20,000 of them for the first world war. In 1952 the island became a self-governing "commonwealth", subject to American law but excluded from federal income taxes and from voting representation in Washington.

Federal investment and tax breaks helped Puerto Rico develop from a sugar-based economy to a pharmaceutical-manufacturing hub. But once producers like Ireland and Singapore began to compete and the tax preferences expired, the island did not develop a new comparative advantage. As part of the United States, Puerto Rico could not devalue its currency, and the national minimum wage inflated its labour costs. But being American offered benefits as well. Residents could move to the States to find work, and were eligible for federal welfare payments if they stayed. Meanwhile, the government could issue tax-exempt municipal bonds, prized by mainland investors.

As a result, the economy slowly hollowed out. The population has fallen from 3.9m to 3.5m during the past decade, with young workers accounting for much of the exodus. Those who stayed tended either to depend on the state—as students, public employees, pensioners or recipients of federal largesse—or to fall into the sprawling underground economy and bustling drug trade. Candidates from across the political spectrum have won office by keeping the gravy train running: more than a third of Puerto Rican schoolchildren are classified as having special needs, inflating the teacher-to-pupil ratio, and the island's health plan for the poor would be the envy of any American state. A paltry 40% of working-age *boricuas* are in the labour force, and just 57% of personal income in Puerto Rico comes from formal private jobs, compared with 76% for the 50 states, according to José Villamil, an economist. Investment has collapsed, from 27% of GNP in 2001 to 13% today. Yet retail sales have held steady since 2008. The only way to maintain consumption was via massive borrowing: during the past 15 years, the government's nominal debt load has tripled.

This system worked as long as mainland investors retained their appetite for Puerto Rico's high-yielding bonds. But after Detroit went bust in 2013, municipal creditors fled to safety and the commonwealth lost market access. That forced Mr García Padilla to cut spending and raise taxes. The island's only children's hospital, whose budget has been cut by 14% in the past two years, lacks CT and MRI machines. Overall spending has dropped by 6.2% since 2013, while tax increases have raised revenues by 8%. This has exacerbated the island's decade-long recession. The government's audited 2014 financial statements are long overdue, but according to Mr Villamil GNP shrank 0.9% that year and a further 1.7% in 2015. The sharpest decline is forecast for 2017.

"The numbers don't add up in Puerto Rico's books," Mr García Padilla says. Only by reducing and delaying the government's liabilities, he argues, can the island resume growth and generate enough tax revenue to maximise repayment to creditors. However, the commonwealth's awkward status within the United States has ▸▸

stymied his efforts.

If Puerto Rico were either an independent country or the 51st state, it could abrogate its central-government debt, because states cannot be sued in federal court. As an "unincorporated territory", it may not enjoy this privilege. Similarly, in 1984 Congress excluded Puerto Rico from Chapter 9 of the federal bankruptcy code, which covers "instrumentalities" of states such as local governments and state-owned enterprises. In 2014 the territory passed its own version of Chapter 9, but it was struck down in federal court (though the Supreme Court is to hear its appeal). Mr García Padilla is desperate for Congress to change this. But the hedge and mutual funds that hold large swathes of its debt oppose the idea vigorously, and so far the legislature has failed to act. "The bottom line is our political status," says Juan Torruella, a Puerto Rican federal judge who voted to reject the territory's home-grown bankruptcy law. "Any way you put it, Puerto Rico is a colony. What happens in Puerto Rico is decided in Washington."

Unless and until the law changes, the government will keep juggling liabilities to stave off default. After 17 months of talks, the Puerto Rican power company recently struck a deal with its creditors. But with 18 different issuers and the treasury running dry, such an agreement will be hard to replicate at scale. To conserve cash, Mr García Padilla is taking his sweet time to pay tax refunds and public contractors. Guillermo Martínez of GM Group, which provides security guards, says $4.5m of his firm's bills to the commonwealth are over 90 days past due. Just like its bondholders, the government has these suppliers over a barrel. "If we stop providing services, will they pay me, or the people who will replace me?", he asks. "Puerto Rico has been good to us. We have to help the government—until we can't afford it any more."

After exhausting such gambits, Puerto Rico is now resorting to payment prioritisation. In August it failed to pay a legally unenforceable "moral obligation" bond. And last month it "clawed back" rum taxes originally destined to pay infrastructure bonds in order to make good on its constitutionally guaranteed "general-obligation" bonds. That left the lower-ranked securities to default. Mr García Padilla says that if he must pick between servicing debt and paying police, nurses or teachers, he will choose the latter, which would set off a constitutional crisis. Without a reprieve from the federal government, a cascade of lawsuits appears inevitable.

Fortunately, a solution could be forthcoming. The Treasury Department has proposed a mechanism that would allow a restructuring of the constitutionally guaranteed debt. Paul Ryan, the Republican Speaker of the House, has promised a "responsible solution" by March. What would be life-changing sums of money for the commonwealth are rounding errors in the federal budget. Rescuing Puerto Rico might prove a relatively cheap way to curry favour with Latino voters in this year's congressional and presidential elections. And the Supreme Court may yet rule that state-owned companies can enter Chapter 9. Three Kings' Day may have already passed. But Mr García Padilla has reason to hope that the camels will soon bring a belated gift. ■

Gun laws

Talking up arms

AUSTIN

Texans have a solution for gun violence: more guns

BARACK OBAMA began the new year, the last of his presidency, with a tearful plea for gun control. He explained that he was compelled to take action because Congress has failed to. Mr Obama announced executive actions that included a modest expansion of background checks and an exhortation to federal agencies to enforce existing laws. He was confident, he added, that Ronald Reagan would have supported the idea. Meanwhile, in Texas, some gun owners were exercising a newly acquired right: to carry firearms openly in public. The collision of these two events shows how the rival sides in the gun debate can see the same outrages—the shootings at San Bernardino being the most recent example—and draw opposing conclusions.

Texas is now the largest state where gun owners can carry firearms openly. Since the mid-1990s, Texans who wanted to carry guns in public places have had to acquire concealed-weapons permits and hide their guns under layers of clothing (which can be sticky in a Texas summer). Thanks to a law passed by the legislature in 2015, gun owners with permits can now carry them undisguised. This was a popular move: in Texas, as elsewhere in America, the number of people who think the best response to gun violence and fear of terrorism is for upstanding citizens to arm themselves has risen in the past eight years, just as the sales of guns have risen with each rumour of restrictions on sales.

While the president was addressing the nation (his speech causing the share prices of some notable arms manufacturers to spike), Texas was at the tail-end of a week of confusion and distemper. Many of those celebrating their new gun rights had found themselves at odds with those enjoying their long-standing property rights. One of the provisions of the law is that business owners can ban open carrying on their own property, and many had decided to do so. This caused confusion in some places: H-E-B, a grocery chain, already had a policy of allowing shoppers to carry concealed weapons, but decided to keep openly toted guns out of its stores.

There is little evidence that such laws have a discernible effect on gun-crime rates, or even gun-ownership rates. Based on the number of concealed-carry licences that have been issued in Texas in the past 20 years, the number of people who support the right to carry vastly exceeds the number who actually want to do so themselves. That has not deterred Dan Patrick, the lieutenant-governor of Texas, who told *Meet the Press* that: "Everywhere that we have more citizens carrying guns, crime is less." Several days later, Mr Patrick was among the Republicans attacking the president's efforts to tweak gun laws. He dismissed Mr Obama's announcement as "simply political posturing and more propaganda." The hard edge of the pro-gun movement considers Mr Patrick a bit soft. Having won, it has already moved on and is now agitating for open carry with no permits or other limitations or, as its backers poetically call it, constitutional carry. ■

A new year celebration


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The Oregon stand-off

They the people

The Western roots and meaning of an anti-government stunt

"UNCLE SAM is rich enough to give us all a farm." So runs the refrain of a popular song of the mid-19th century, when America's government began dispensing homesteads in the newly opening West. Sometimes, impatiently, the settlers took the land, or its resources, without permission: their families' sweat and guts entitled them to, and there was more than enough to go round. This outlook combined fierce individualism and egalitarianism; as Patty Limerick, of the University of Colorado, puts it, the pioneers were at once advancing civilisation and rejecting it.

That romanticised past is the backdrop of a seemingly eccentric stand-off that began on January 2nd when armed militiamen seized the Malheur National Wildlife Refuge near Burns, Oregon. The pretext was the plight of two local ranchers, Dwight and Steven Hammond. Convicted for setting fires that ignited federal land and endangered firefighters, the pair were harshly resentenced and returned to prison after the government appealed against their original punishments. But the real issue is the land itself: specifically the fact that the federal government still controls so much of it in the West, including most of Idaho, Nevada, Oregon and Utah.

For the occupiers, this territorial stranglehold unjustly restricts grazing, mining, logging and hunting; moreover, according to their quirky jurisprudence, it is unconstitutional (courts have tended to disagree). They want to force the feds out of the refuge—run by the US Fish & Wildlife Service—the county and ultimately the rest of the government's Western holdings. In milder form, this cause is espoused by others: some western politicians also want territory to be transferred to the control of states, costly as that might prove for them.

Before the mission, one of the crew, Jon Ritzheimer, released an almost-touching farewell video in which he vows to "die a free man". Only almost, because, after all, the plan was to seize a nesting habitat for migratory birds in a remote, frigid desert. The mystique is further undercut by Mr Ritzheimer's record of Muslim-baiting in his home state of Arizona. That points to another interpretation of such activism: less agrarian and romantic than a combustible form of anti-government extremism, fuelled by conspiracy theories and sharing ideological roots, and some personnel, with white supremacism.

Both of these spread dramatically after Barack Obama's election in 2008, says Ryan Lenz of the Southern Poverty Law Centre, an advocacy group. Antics such as those in Oregon may seem circus-like; but, says Tom Gorey of the Bureau of Land Management (BLM)—which, as the steward of much government land, is viewed by the zealots as an instrument of tyranny—they are "not funny by any stretch of the imagination" to the officials sometimes confronted by gun-toting fanatics.

To some, the identity of the putschists' leader, Ammon Bundy, suggests an even less grandiose motive: the desire to make a buck using public assets. Ammon is a son of Cliven Bundy, who in 2014 rallied militiamen to his ranch in Nevada after the BLM rounded up some of his cattle; he alienated some sympathisers by speculating that black people in America had been better off as slaves. The animals were grazing on public land; Mr Bundy had long refused to pay the (heavily subsidised) fees.

On that occasion, with rifles trained on its officials, the BLM backed down. Critics think that capitulation was mistaken, though when paranoia and conspiracy-theorists are involved, it is hard to find an approach that does not either embolden them or—as in the siege at Waco, Texas in 1993—make them martyrs. So far the police and FBI have been patient in Oregon, too.

Any private claim to personify the "We" in the constitution's "We the people" is ominous. In the case of the Bundys and their sort, it is also spurious, and not only because locals in Oregon want to be rid of them. Other citizens—including, in an increasingly urban region, hikers and tourists—have claims to the public domain; so, for all the ranchers' rage against environmentalists, do other species, such as, in Nevada, an imperilled tortoise. Clumsy as they can be, federal agencies can moderate these conflicts, and, indeed, save ranchers from themselves: part of their purpose has always been to prevent overgrazing. Gung-ho individualism is only compatible with egalitarianism, that old Western brew, when resources are infinite and the individuals are few.

How the West has won

Professions of divine guidance are similarly alarming: Ammon Bundy, whose family are Mormons, thinks he is doing "what the Lord asked me to". And the idea that disputed lands should be "returned" to the people, as he maintains, is absurd. As John Faragher of Yale University says, they were conquered or acquired by the federal government in the first place, often from native Americans. Yet though these agitators may be crackpots, criminals, terrorists or all three—and only a handful are holed up in Oregon—it would be wrong entirely to dismiss them as unrepresentative.

Through pulp novels, Buffalo Bill's spectacles and the cinema, the ideal of the dauntless, self-reliant westerner quickly trickled east to inform the whole country's self-perception. Likewise, these days, a conviction that America's economy is rigged, distrust of the government and faith in the redemptive power of guns are hardly fringe opinions. The frontier may have shrunk, but rhetorically it is spreading. This is how the West has won. ■

Floods in the Midwest

Disaster foretold

Two men in a boat

CHICAGO

Measures to make life near the Missouri flood plain safer have done the opposite

ROBERT CRISS does not relish his role as Cassandra of the Mississippi. For years the geologist at Washington University in St Louis has warned policymakers about building houses and businesses on flood plains, walling off rivers with dams, locks, dykes and levees, disregarding the consequences of global warming on weather patterns and the use of outdated statistics for calculating the risk of a major flood. "The devil could not have come up with a better plot," he says.

Torrential rain started on December 26th and lasted three days, during which 9-14 inches (23-35cm) of rain deluged much of Missouri and parts of Illinois, according to the National Weather Service. Thousands had to evacuate their houses; businesses abandoned shops and stock. Amtrak stopped its local train service for four days and long stretches of the I-44 and I-55 interstate highways, as well as 200 state highways, were shut off. Twenty-five people died, mostly because they drove onto a swamped road and their cars flipped over. It will take months to rebuild what has been lost. Yet the bigger question is whether enough was done before the rains came to mitigate the impact of flooding.

For Mr Criss the answer is no. He does not understand why the development of commercial and residential property was allowed on flood plains near St Louis, in particular as both the city and the county are losing population. The area should have been kept as farmland, which can absorb water, he argues, and should not be paved over: when the floods come, lost crops are far less costly than lost houses and businesses.

Nicholas Pinter at the University of California, Davis adds that the Missouri and the Mississippi are flooding so severely because the middle stretch of the Mississippi (which joins the Missouri at St Louis) has more navigational dykes than any other river reach he knows. It has become a largely man-made construct that bears little resemblance to the river of 200 years ago, which changed shape with the volume of water flowing through it. Yet the statistics used by the Army Corps of Engineers and the Federal Emergency Management Agency (FEMA) to define flood risk are based on the average weather patterns, flooding and the changing shape of the river during the past 100 years. Unless the corps and FEMA update their statistical methods, they will continue to underestimate the flood risk for the region.

Missouri policymakers have largely ignored the geologists' warnings about floods. After the Great Flood in 1993, which destroyed around 100,000 homes and caused nearly $20 billion in damage along the Missouri and upper Mississippi, the Galloway Report, written by a group of experts appointed by the White House, called for federal flood-insurance programmes to discourage development in flood plains. It said that taxpayers should stop bailing out areas that flood regularly. And it recommended that the basins of the Missouri and Mississippi should be managed as one watershed. Very little of this has happened. "This misery will repeat itself," predicts Mr Criss. ■

Police in schools

Arresting developments

HOUSTON

Too many American schools use police officers to enforce classroom discipline

OFFICER Craig Davis reckons 2015 was a fairly peaceful year at Furr High School, on the hardscrabble east side of Houston. True, five of its pupils died violently, including the school's first-pick quarterback, Michael Davis, who was murdered in a gang fight, and two schoolgirls who were killed in a bus crash. In the state that executes more people than any other, a recent old boy was also charged with three murders. Yet Mr Davis, one of the school's two police officers, with a revolver, canister of pepper foam and a truncheon hanging from his belt, says he has known worse over his eight years at Furr: "It's a tough place."

It was with violent schools like Furr in mind that Texas began stationing police officers in its schools in the early 1990s, which helped start a national trend. It proceeded to accelerate on the back of persistent concerns over law and order during the decade; in 1999, after 13 people were massacred at Columbine High School, in Colorado, the federal government launched a supportive funding programme, Cops in Schools. By 2007 an estimated 19,000 school policemen, known as School Resource Officers, were plodding the corridors of America's schools, in addition to many regular police and private security officers.

How many there are now is unclear; there has been little study of the phenomenon, a gap the Department of Education is struggling to fill. But there may be as many as ever, encouraged by yet more federal largesse in the form of a scheme launched under Barack Obama, in response to yet another school shooting, in Connecticut in 2012, in which 20 children were killed. Most American public high schools now have a permanent police presence.

It is not clear why. Over the same 25-year period juvenile violent crime rose through the early 1990s but, like the overall crime rate, has since collapsed. Juvenile arrests are also at their lowest level for three decades and juvenile murders at a 30-year low. Gone, too, are excited apprehensions of a feral underclass of pre-teenage "super-predators", a discredited phrase coined by John DiIulio, a Princeton political scientist.

When asked in a national survey, in 2005, why they had brought police onto their campus, only 4% of school principals ▸▸

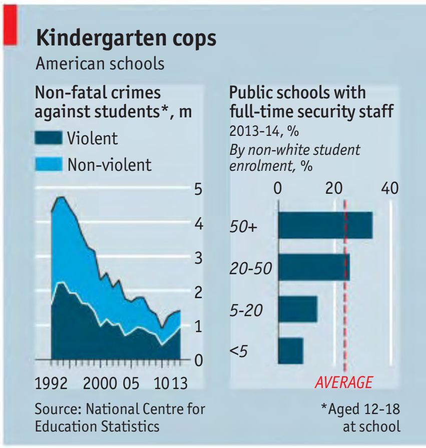
and the cops themselves cited violence as the main reason. About a quarter of the teachers instead cited media reports of violence elsewhere; a quarter of the cops said the school was unruly. The most popular response was "other", a category that included the availability of federal funds (what school would not take free money?) or a belief that the policy had something to do with community policing.

Preventing school shootings hardly registered; it is a rare sort of calamity, which, as it happens, the presence of armed officers does not prevent. There was a police officer at Columbine during its massacre. Moreover, such shootings tend to happen in schools dominated by middle-class whites, and according to researchers at the American Civil Liberties Union (ACLU), cops are far more likely to be placed in schools dominated by poor non-whites.

The result, because police like to keep themselves busy, has been a disproportionately high number of arrests in such schools, pitching black and Hispanic juveniles into the criminal-justice system. Of 260,000 pupils referred to the police in the 2011-12 school year, 27% were black, though blacks represented only 16% of the student population. And those who become entangled in the justice system are likely to remain so. The opening of a juvenile criminal record—which may not be scrubbed clean until the age of 21—is an augury of further arrests, further convictions and eventual imprisonment, a spiral known to researchers as the "school-to-prison-pipeline". "What started as an effort to keep guns out of schools has become a way of getting kids out of school," says Harold Jordan of the ACLU.

There are several reasons why the policy has gone bad, which vary from place to place. One is uncertainty about who is in charge, police or principals. Sometimes the cops answer to the school board, sometimes only to the police chief. Often the balance of power is contested in an ill-tempered battle between principals and police. The eagerness of weak, or ill-equipped, teachers to outsource classroom discipline to the cops is another part of the problem. This allegedly contributed to a recent much publicised case of police abuse in South Carolina, where a 16-year-old girl was thrown to the floor and dragged from the classroom by a police officer after she had refused to stop using her mobile phone. The internet has plenty more such horrors; including footage of a sobbing 5-year-old girl in Florida, handcuffed after she threw a tantrum.

Draconian laws, inflexibly applied, make matters worse. Until recently in Texas it was a criminal offence to cause a rumpus on a school bus; in South Carolina, it still is one to cause a disturbance in school. In Pennsylvania, among other states, it is a criminal offence to take a weapon, including an almost-harmless pair of nail-scissors, into school, for which even a ten-year-old would face arrest. "It's the stupidest, craziest thing I've ever seen, says Kevin Bethel, Philadelphia's newly retired deputy-commissioner of police.



After arrest—a fate until recently experienced by around 1,600 students in Philadelphia each year—the arrested child is taken to the district police headquarters for fingerprinting and processing, which takes about six hours, much of it spent in a prison cell. Minor offenders, including weeping ten-year-old scissors-carriers, are then let off with the sort of punishment a teacher might have demanded in the first place, such as lines or chores—though if they fail to carry these out, they may wind up in court, alongside more serious offenders. "What does it mean when we take a ten-year-old child into a cell block and we don't really know why?" asks Mr Bethel.

There are patches of progress, however, typically where police chiefs, such as Mr Bethel, have responded to pressure from activists. In 2014 he instructed his officers to stop making arrests over relatively minor infringements, such as schoolyard fights or small amounts of cannabis possession, which accounted for around 60% of the total. Instead he developed an alternative procedure, whereby officers report the miscreants to their parents and then force them to attend lessons in how to behave. This brought arrests in Philadelphia schools down by 54% in 2014 and by another 60% in 2015. Mr Bethel's aim was that there should be no more than 400 arrests each year. The biggest resistance to his changes comes from teachers. "I advised them I would no longer be their disciplinarian, and they were kind of shocked for a while," he says. "Some balked, but many are getting on board."

Similar progress is apparent in Houston. As in Philadelphia, this has involved the local police chief responding constructively after his district's juvenile-arrest record was highlighted by NGOs. When Bertie Simmons, Furr's octogenarian principal, took charge in 2000, the school's cops were running amok. "They were doing things with kids that you'd not believe," she says. "Like grabbing them, shoving them against walls, cuffing them. I was appalled. You shouldn't treat schoolkids like criminals." Despite efforts to improve matters, by 2009 Houston was still arresting over 4,000 school students, more than any other school district in Texas.

In 2013 Texas passed several laws to make that harder: it raised the qualifying age of some offences and, in effect, decriminalised relatively trifling ones, such as rowdy behaviour on buses. This, in turn, has helped the school district's police chief, Robert Mock, to make his officers more forbearing; though spitting on the pavement remains a criminal offence, it rarely leads to arrests. Mr Mock says that the 210 school cops under his direction will probably carry out no more than 500 arrests a year—and Houston's schools have grown no more violent as a result of this restraint. In a generally grim context, that is hopeful. ■

Corridor patrol

Lexington | Franklin Graham's promised land

The Christian right sees 2016 as a chance to elect one of its own to the White House

WITH its stone tower, Gothic arches and half-timbered walls, the Harvest Bible Chapel in Grimes, Iowa, would make a fine setting for an Agatha Christie murder. But on the religious right the church is notorious as the scene, in 2013, of a different crime. Back then the chapel was being used as a commercial wedding hall when its owners, Betty and Richard Odgaard, declined to host a gay marriage, citing their religious beliefs. Because the building was not legally a church at that point, the Odgaards fell foul of discrimination laws and—rather than celebrate gay unions—closed their wedding business.

Today the building is a church again after its sale to a group of Christians—members of the 60m-strong community of Americans who call themselves born-again or evangelical Protestants. Its young pastor, Ryan Jorgenson, calls the Odgaards "heroes". Like many evangelicals, he sees a pattern of bullying by secular foes and their allies in government. He worries about Christian employers having to fund health insurance that covers birth-control methods targeting fertilised eggs, and wonders if religious colleges will one day have to admit unrepentantly gay students.

Mr Jorgenson enters 2016 in a fighting mood. Iowa is a good place to make such a stand. The Midwestern state hosts the first nominating contests of each presidential election cycle. Evangelical Christians typically make up 60% of the activists who brave ice and snow to attend Iowa's Republican caucuses, which this year fall on February 1st. Most are also very conservative, and Iowa often hands victory to candidates who sound like fire-and-brimstone preachers. Yet their born-again champions seldom go on to win the nomination. A new book, "The Four Faces of the Republican Party" by Henry Olsen and Dante Scala, calculates that only about one in five Republican voters nationwide are "very conservative evangelicals". In the past the religious right has also struggled to unite around a single, plausible candidate.

This year, religious conservatives are determined to maximise their clout. Mr Jorgenson has done his bit. Like several other pastors he has endorsed Senator Ted Cruz of Texas, a hardliner who has wooed Iowans with Bible-infused oratory and promises to fight for religious Americans. On January 5th Mr Jorgenson urged church-members to attend "Decision America", a rally on the steps of the state capitol in Des Moines, launching a 50-state tour by the evangelist Franklin Graham, son of Billy.

Mr Graham is no stranger to temporal power. He has backed ballot initiatives opposing gay marriage. He led prayers at the first inauguration of President George W. Bush. But this is the first election in which he will spend months urging Christians to register to vote. The country is in "big-time trouble", he told a crowd of 2,600 hardy Iowans. The history of American Christianity is full of prayer meetings in which the faithful bewail a nation adrift, and vow—like the tribes of Israel before them—to stand fast in the face of tyrannical rulers. Mr Graham did not disappoint. As his audience murmured "Amens" and softly stamped feet against the cold, he recalled the prophet Nehemiah, who overcame exile and a wicked pagan king to return to Jerusalem and rebuild its walls. Mr Graham drew parallels with the present, telling Iowans: "The moral and political walls of our nation are crumbling."

Mr Graham will not be endorsing any politician or party. Other Christian bigwigs have held meetings with the aim of agreeing on a single candidate, to make best use of a primary calendar which sees early contests in a string of rural and southern states with lots of religious voters. A big Iowan evangelical organisation, the Family Leader, has endorsed Mr Cruz. So has James Dobson, the founder of Focus on the Family, a conservative pressure-group. Other candidates have not given up hope. Ben Carson, a retired neurosurgeon who has spent years on the Christian lecture circuit, has supporters—though fewer since his slight grasp of foreign policy was exposed. Senator Marco Rubio of Florida stresses his faith and stern views on abortion. Even Donald Trump, a much-married casino-builder, talks of his love for the Bible, and enjoys significant support from evangelicals.

Steve Deace, a conservative talk-radio host from Iowa, suggests that evangelical Trump-voters are "frustrated with wimpy politicians and want a bad-ass". Mr Deace describes listeners who want a president to stand up for religious liberty (or as he puts it, fight against the "rainbow *jihad*" of the gay-rights movement), and to prevent illegal immigration and terrorism. Mr Deace, a Cruz backer, asserts that religious conservatives in 2016 all want the same question answered: "Who is willing to fight?"

Et in Iowa

Yet even in Iowa, evangelicals are not monolithic. Jeff Dodge is a pastor at Cornerstone Church, a Southern Baptist mega-church in the college town of Ames. Mr Dodge is a conservative: he opposes abortion and would not conduct a gay marriage. But he is "frustrated" by pastors who endorse politicians and "froth" flocks up about issues like tax rates, about which the Bible has little to say. He puzzles over "Chicken Little" talk of persecution, noting that he preaches to 2,500 Christians each Sunday: "I don't feel my culture is trying to muzzle me." Most of all, church-members trust him as a guide to the Bible's truths, he says: it would be presumptuous to offer his views as a private citizen. "I cringe" when candidates claim God's support, he adds, noting that one of the ten commandments is: "Don't take the name of the Lord in vain".

Born-again voters in the general election will be still more diverse: millions of evangelicals are black or from fast-growing Hispanic churches, and worry about government safety nets, poverty or immigrants' rights as much as about abortion or gay weddings. Too many white evangelicals seem blind to that diversity, and sound like the chaplain corps of the Republican right. If they pick a champion who panders to that narrow identity, they will condemn themselves to irrelevance. ■

Venezuela

The coming confrontation

CARACAS

A dangerous stand-off looms between the government and the newly elected parliament

IT WAS rowdy and disorganised. At one point it nearly degenerated into a brawl. But the opening on January 5th of Venezuela's parliament, the first to be elected with an opposition majority in 17 years of autocratic rule, had the feel of a velvet revolution. The portraits of the late Hugo Chávez, the founder of the populist movement that still governs the country, and Simón Bolívar, the 19th-century liberator whom the *chavistas* claimed as inspiration, had been taken down. Speeches by opposition deputies, once routinely cut short by the bullying former president of the National Assembly, Diosdado Cabello, were heard in full. Dozens of police guards around the building leaned into their car radios to hear politicians rail against the authoritarian and incompetent rule of the current president, Nicolás Maduro. "This is a wake-up call," said a soldier as he listened raptly to the proceedings.

The *chavistas* did not put up with the harangues for long. After less than an hour they walked out—in protest at supposed procedural errors by the new president of the assembly, Henry Ramos. Even then they could not escape interrogation. Parliament's new masters had opened its doors to all journalists, not just pro-government ones as before. The normally cocky Mr Cabello, who led the walkout, looked distinctly uncomfortable when confronted by reporters who asked mildly testing questions on live television. Cilia Flores, Venezuela's first lady, who is one of 54 *chavistas* in parliament, icily refused to answer one about two nephews who are facing narcotics charges in the United States.

Chavismo has been wounded, but it is far from defeated. Parliament aside, all the main institutions of government remain under its control. The setback to the regime has made it more authoritarian. Before parliament's opening Venezuela's Supreme Court had ruled that four of the incoming MPs from the state of Amazonas, three of them from the opposition Democratic Unity alliance (MUD), could not be sworn in. They are the subjects of investigations into possible electoral fraud. This ruling threw into doubt the two-thirds majority the MUD appeared to win in the election on December 6th. Such a "supermajority" would allow the opposition to begin the process of appointing and dismissing Supreme Court judges and to convene a convention to rewrite the constitution. The day after its opening parliament defiantly swore in the three MUD deputies, restoring the opposition's two-thirds majority.

Supreme weapon

In the battle that now looms with parliament, the Supreme Court may become the regime's main weapon. One of the last acts of the outgoing assembly was to stuff the court with 13 new pro-government judges. Mr Maduro has already suggested that all legislation that he disagrees with, including a proposed amnesty to secure the release of scores of political prisoners, will be deemed unconstitutional by the Supreme Court. "It is difficult to imagine that congress can have an institutional conflict against the Supreme Court and win," says Luis Vicente León, a pollster.

The government may hope to provoke divisions within the MUD. Its representatives in the National Assembly are from a hotchpotch of 13 parties, united in their desire to defeat *chavismo* but often divided over the best means to do so. Mr Ramos, a cantankerous veteran from the Democratic Action party, which governed Venezuela before Chávez, was the choice of smaller parties within the MUD. They fear domination by the younger Justice First party, led by Henrique Capriles, who nearly won a presidential election in 2013.

Mr Ramos is himself a divisive figure. Ahead of parliament's opening session he confirmed that he would seek the constitutional removal of Mr Maduro from the presidency within six months, presumably by launching a referendum to recall him from office. Moderates in the coalition have resisted issuing such a clear challenge to the executive so soon.

Time is working against the regime. The price of Venezuela's heavy oil, virtually its only export, dipped to under $30 a barrel in December, its lowest since February 2004. Default on some of its $98 billion of foreign debt is "becoming hard to avoid," says Barclays Bank. Over 2015 and 2016 the economy is likely to shrink by nearly 15%. Shortages of basic consumer goods will get worse. In the absence of official figures, analysts reckon that inflation is nearly 200%, the highest rate in the world. A decree by Mr Maduro, enacted before the new parliament opened, shows that the regime has little intention of doing anything new about the dire state of the economy. It strips the assembly of its right to appoint directors of the Central Bank, or even to question them. ▸▸

As the confrontation between president and parliament worsens, Venezuelans wonder what role the army will play. On the night of the parliamentary election in December, the country's defence minister, Vladimir Padrino López, declared in an unscheduled appearance on state television that the army would "uphold the constitution". Some analysts saw that as a warning to government hardliners to accept the results. The night before parliament opened, General Padrino López went public again. "The Bolivarian Armed Forces is not a means to subvert the constitutional order," he tweeted, somewhat cryptically.

The government's eccentric claims about what is constitutional put the armed forces in an awkward position. "The military says it is going to defend the law, but what is the law?" wonders Mr León. Venezuela's looming struggle is largely about the answer to that question. ■

Crime in Mexico

Death and the mayor

MEXICO CITY

Governing is a dangerous job

POLITICS is a risky business in Mexico. Seven candidates in mid-term elections last June were murdered and 70 were attacked. In the past eight years, 40 mayors have been killed, says the National Federation of Municipalities. The latest murder is among the most shocking: on January 2nd Gisela Mota, mayor of Temixco, about 85km (53 miles) south of Mexico City, was killed in her home by several assassins just one day after her inauguration.

It is fairly clear who killed Ms Mota, but not why. The suspects are thought to have links to Los Rojos, a drug gang. Police killed two and captured three. Ms Mota, a former congresswoman from the left-wing Party of the Democratic Revolution, had vowed to fight drug trafficking. Temixco is an important way-station on one of the main routes for moving drugs to Mexico City. But after only a day in office she hardly had time to threaten the region's drug dealers.

Graco Ramírez, the governor of Morelos, the state to which Temixco belongs, offers a different theory. He thinks Ms Mota was killed because she supported the state's takeover of local policing, a policy known as *mando único* (single command). Mexico has 2,000 local police forces, in addition to state and federal constabularies. Many of them are short of funds and badly managed. Some, and the mayors who run them, are in league with the criminals.

The state takeover of local policing was the big crime-fighting idea that Mexico's president, Enrique Peña Nieto, came up with after the disappearance in 2014 of 43 students in Iguala in the southern state of Guerrero. That appears to have been the work of local police acting in concert with a drug gang. The town's ex-mayor has been charged with engaging in organised crime.

Advocates of *mando único* claim that states can modernise police forces, co-ordinate them better and give them more money. Mayors will face less risk if they are not directly involved in police work. And the corrupt ones will have less opportunity to subvert it. The day after Ms Mota's murder Mr Ramírez imposed *mando único* on 15 municipalities, saying the measure was necessary to keep order. If Ms Mota was killed by gangsters as punishment for supporting *mando único*, the murder triggered the action they sought to prevent.

Critics of the policy say there is no proof that it modernises policing. Forces under state command are not immune to corruption. Two ex-governors of the state of Tamaulipas are wanted by the United States Drug Enforcement Administration.

Before Ms Mota was slain, other mayors seemed to face greater risks. In the past decade more have been killed in the poor southern states of Michoacán and Oaxaca than anywhere else. Several mayors in northern Mexico, where drugs are dispatched to the United States, are afraid to work in the towns that elected them, says Bernardo Gómez of Misiones Regionales de Seguridad, a security consultancy. *Mando único* may offer them less protection than more and better bodyguards would. When a mayor is murdered, police should pursue not just the killers but their bosses, says Alejandro Hope, a security analyst. "If you kill a mayor and nothing happens, the next mayor will just give in." ■

Mayor, and martyr

Millennials in Canada

First, the good news

OTTAWA

Why young adults are better off north of the border

CANADIANS obsessively compare their country with a certain neighbouring superpower. Often, the contrast is reassuring. Few Canadians would want the United States' lax gun laws or its ridiculously expensive health care. Economic comparisons are usually more sobering. Canadians are less rich than Americans and have fewer globally famous brands. Silicon Valley exports high-tech disruption; Alberta's tar sands produce pollution.

For Canadians who feel economically inferior, a recent report comparing millennials on both sides of the border had cheering news. Canadians born in the 1980s are better off than their American peers. The study by TD Bank, called "Canadian and US Millennials: One of These Is Not Like the Other", was headline news when it was published in December.

Canadians aged 25 to 34 are more likely to have jobs than Americans of the same age (nearly 80% are employed, compared with less than 75% of Americans). American millennials are worse off than their compatriots from Generation X (the cohort that came just before them). In Canada millennials' household incomes are 16% higher. Just over half are homeowners, compared with 36% in the United States.

Much of the millennial advantage can be traced to Canadian paternalism—that of the state and that of the youngsters' indulgent parents. Canada's public universities charge much lower tuition fees than their largely private American rivals, so students graduate with less debt. More important is the contribution of millennial women, whose employment rate is seven percentage points higher than that of their American sisters. Their greater willingness to work has a lot to do with laws that oblige employers to give new parents paid leave of up to 50 weeks. The United States, by contrast, is one of the few countries that do not mandate paid maternity leave.

Canada avoided the housing-market crash that struck the United States in the late 2000s, thanks to prudent banking regulation. That enabled parents to help their children buy their first homes. But this points to another factor, which is less cause for self-congratulation: a big part of Canadian millennials' wealth is explained by the barely interrupted rise in house prices. Although banks are still prudent, low interest rates have encouraged house-buying and prices are reaching scary levels. If they drop, so will millennials' spirits. ■

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Politics in Taiwan

A Tsai is just a Tsai

TAIPEI

The election of an independence-leaning president would put Taiwan back in the international spotlight

UNDETERRED by the rain, the crowd leaps to its feet shouting "We're going to win" in Taiwanese as their presidential candidate, Tsai Ing-wen, begins her stump speech. Some rattle piggy banks to show that their party, the Democratic Progressive Party (DPP), relies on, and serves, the little guy—as opposed to the ruling Kuomintang (KMT), backed by businesses and fat cats and one of the world's richest political institutions. Taiwan's voters go to the polls on January 16th in what is likely to prove a momentous election both for the domestic politics on the island and for its relations with the Communist government in China that claims sovereignty over it. Eight years of uneasy truce across the Taiwan Strait are coming to an end.

Since taking office in 2008, the outgoing president, Ma Ying-jeou, has engineered the deepest rapprochement between Taiwan and China ever seen, signing an unprecedented 23 pacts with the mainland, including a partial free-trade agreement. It culminated in an unprecedented meeting in November between Mr Ma and Xi Jinping, China's president, in Singapore. But if the rapprochement under Mr Ma was a test of whether closer ties would help China's long-term goal of peaceful unification, it failed. For the past six months Ms Tsai, whose party leans towards formal independence for Taiwan, has been miles ahead in the polls, with the support of 40-45% of voters. The KMT's Eric Chu has 20-25% and another candidate, James Soong, a former KMT heavyweight, about 15%. Taiwanese polls can be unreliable, and many voters are undecided. But if Mr Chu were to win, it would be a shock.

Taiwan elects its parliament, the Legislative Yuan, on the same day. That race is closer. But the DPP's secretary-general, Joseph Wu, thinks his party can win it too, either outright or in coalition with two smaller parties—and the polls suggest he may be right. If so, it would be the first time any party other than the KMT has controlled the country's legislature since the KMT fled to the island at the end of the Chinese civil war in 1949.

The election result will have regional consequences, but the campaign itself is being fought on livelihood issues. The economy appears to have grown by only 1% in 2015, less than in 2014. Taiwan is doing worse than other export-oriented Asian economies such as South Korea. Salaries are stagnant, youth unemployment is up and home ownership is beyond the reach of many. One study found that the capital, Taipei, has become one of the world's costliest cities relative to income, with the ratio of median house prices to median household income rising from 8.9 in 2005 to 15.7 in 2014—nearly twice the level of London. Concerns like these have dented the KMT's reputation for economic competence.

Self-inflicted wounds have not helped either. Most of the KMT's bigwigs refused to run for president, fearing defeat. So its chairman, Eric Chu, put forward Hung Hsiu-chu, whose pro-China views proved so extreme that they nearly split the party. Mr Chu ditched her just months before the poll and ran for president himself. Ms Hung's backers, many of them old-guard KMT voters, may abstain in protest. The party which for decades has dominated politics faces humiliation.

That would have profound implications for China. For years, the Chinese Communist Party's policy towards Taiwan has been based on patience and economic integration. But the election campaign suggests that integration is a liability and that time may not be on China's side. In 1992, according to the Election Studies Centre at National Chengchi University in Taipei, 18% of respondents identified themselves as Taiwanese only. A further 46% thought of themselves as both Taiwanese and Chinese. Today 59% call themselves Taiwanese, while 34% identify as both—ie, very few consider themselves Chinese first and foremost.

Patience doesn't pay

Among 20- to 29-year-olds, three-quarters think of themselves as Taiwanese. For them China is a foreign country, and the political ripples of this change are now being felt. In early 2014 students occupied parliament for three weeks in a protest against a proposed services deal with China. This proved to be a turning point: the KMT went on to be thrashed in municipal elections in late 2014. Some of the student leaders have formed their own party to contest the legislative election, joining 17 other groups and 556 candidates, who range from a heavy-metal front man to a former triad crime boss.

The last time Taiwan chose a DPP president, Chen Shui-bian, in 2000, cross-strait tensions escalated. Given China's increasing assertiveness in the region under Mr Xi, things could be even more dangerous now. ▸▸

China has been piling pressure on Ms Tsai. Mr Xi says he wants a "final resolution" of differences over Taiwan, adding that this is not something to leave for the next generation. China is demanding that Ms Tsai approve the "1992 consensus", a formula by which China and the KMT agreed there was only one China—but disagreed about what that meant in practice. Ms Tsai has long said no such consensus exists, though when asked about it in a presidential debate, she called it "one option".

Ms Tsai is a very different figure from Mr Chen, who delighted in provoking China (and was later jailed for corruption). She is a low-key, English-educated lawyer schooled in international trade rather than in the rhetoric of Taiwanese nationalism. She has gone out of her way to assure China and America, Taiwan's guarantor, that she backs the status quo and will be cautious. Many of her proposals, such as that Taiwan should expand its soft power through non-governmental organisations, seem designed to be uncontroversial. If her party takes control of the legislature, that would remove a source of instability: conflict with lawmakers made Mr Chen's presidency even more unpredictable than it otherwise would have been.

Yet whatever Ms Tsai's intentions, a lot could go wrong. Taiwanese politics is famously raucous, and the DPP's radicals seeking formal independence might yet cause problems. Mr Xi, in turn, could come under pressure from military diehards arguing that China has been too patient. In one of the last foreign-policy vestiges of the "one China" idea, China and Taiwan have similar claims in the South China Sea, a nerve-racking part of the globe. If a new government in Taiwan starts tinkering with its stance on the sea, China might easily take offence. The election of an independence-leaning president comes at a dangerous moment. ■

Tsukiji, the world's biggest fish market

So long, and thanks for all the fish

TOKYO

An 80-year-old landmark prepares its farewells

ON JANUARY 5th, in a pre-dawn ritual going back decades, a handbell rang to mark the year's first auction at Tsukiji, Tokyo's sprawling fish market. The star attraction was a glistening 200kg tuna, sold to a sushi restaurant chain for ¥14m ($118,000). But the sale was tinged with nostalgia and even bitterness. This time next year the wholesale market, the world's busiest, will be gone.

Squeezed between the Sumida river and the Ginza shopping district, Tsukiji is creaking at the seams. Some 60,000 people work under its leaky roof, and hundreds of forklifts, carrying everything from sea urchins to whale meat, careen across bumpy floors. The site's owner, the city government, wants it moved.

That is unpopular. Traders resent being yanked to a sterile new site to the south. The new market is being built on a wharf whose soil is contaminated by the toxic effluent from a former gasworks. The clean-up and negotiations delayed the move for over a decade.

The final blow was Tokyo's successful bid to host the 2020 Olympics. A new traffic artery will cut through Tsukiji, transporting visitors to the games' venues. Part of the site will become a temporary press centre, says Yutaka Maeyasui, the executive in charge of shifting the market. Our time is up, he says, glancing around his decrepit office. The site has become too small, old and crowded. An earthquake could bring the roof down.

Many traders below Mr Maeyasui's office belong to families that have been here since the market opened in the 1930s, after the Great Kanto earthquake of 1923 levelled its predecessor. "You won't find anyone here who supports the relocation," says Chieko Oyoshi, who runs the tuna business her grandfather founded. Big supermarket chains and wholesalers already eat into her business by dealing directly with the ports and fish farms that supply Tsukiji. The move will kill whatever trade is left, she laments.

One of the last links to the city's mercantile past, Tsukiji has changed little in decades. Men lick pencil stubs before writing on scraps of paper. A new computer would die of loneliness. One of the few modern devices is a digital clock counting down the days till November, when most of the activity will fall silent, along with Tsukiji's beautiful bedlam.

Next for the chopping block: Tsukiji itself

The war in Afghanistan

A bloody year of transition

KABUL AND ISLAMABAD

A resurgent Taliban is winning territory, but all is not lost

IT IS just over a year since NATO formally ended its combat mission in Afghanistan. It left behind 13,000-odd soldiers to "train, advise and assist" Afghan security forces taking the lead in the fight against the Taliban. Of the foreign troops, America has provided about half (with a further 3,000 deployed on counter-terrorism operations against what remains of al-Qaeda). Twelve months on, the results of the so-called "transition" look grim. Both Afghanistan's political condition and its security have sharply deteriorated.

Determined to exploit the departure of Western forces, in 2015 the Taliban maintained their usual spring offensive much longer into the winter than in the past. The insurgents now control more territory than at any time since American forces kicked the Taliban out of power in 2001. Among recent blows were the short-lived but still shocking fall of the northern city of Kunduz to the Taliban in September; a raid last month on the south's Kandahar airport, one of the most heavily defended bases in the country, that killed at least 50 people; and the deaths of six Americans near Bagram air base on December 21st.

Worst of all has been the steady erosion of government control in Helmand province in the south. It had been recaptured ▸▸

from the Taliban in 2009-11, at considerable cost, including American and British casualties. Recently the Taliban have closed in from the south and north towards the provincial capital, Lashkar Gah. Of 13 districts in Helmand, five, including the key districts of Musa Qala and Sangin, are now controlled by the Taliban, with another five or more being contested. This week American special forces in the Nad Ali district came under heavy fire; one man was killed. Retaking Helmand, the heart of Afghanistan's opium country, is a priority for the Taliban, who desperately want the money that drug-peddling generates. Out of nearly 400 districts across Afghanistan, the Taliban controls a tenth and contests another tenth.

The growing intensity of the fighting is taking its toll on the 352,000-strong Afghan army and police. Last year they sustained 28% more losses than in 2014: 16,000 casualties, about 7,000 of them fatal. Some 6,500 civilians are also thought to have died. Insurgent casualties have shot up, too. The current Taliban fighting strength is believed to be between 40,000 and 60,000.

The backdrop to the escalating violence is a largely dysfunctional government in Kabul, the failure of diplomatic attempts last year to start a peace process, splits within the Taliban and America's lack of a long-term strategy for Afghanistan.

The national-unity government that emerged 15 months ago has in many ways been an improvement on its predecessor, led by the erratic Hamid Karzai. President Ashraf Ghani and the "chief executive", Abdullah Abdullah, the runner-up in a disputed election, get on reasonably well. In security matters, they welcome Western support. At home they have taken useful steps to curb corruption. But the fight for key government posts among rival supporters and ethnic groups has meant rudderless ministries and provinces without governors. Not least, the post of permanent defence minister still remains vacant.

In government, a division appears to be opening up over Mr Ghani's attempts to engage Pakistan. Many Afghans have long

The Taliban in Afghanistan

Source: The Long War Journal


Police patrol, Helmand-style

considered their southern neighbour to be a destabilising force. Even today it plays host to Taliban leaders. Mr Ghani wants Pakistan to help push the Taliban to the negotiating table, thus paving the way for peace and economic reconstruction. But after he received red-carpet treatment in Islamabad, the Pakistani capital, in early December, his chief of the national security directorate resigned in disgust (though possibly before he was pushed out for a string of security failures). A new "Protection and Stability Council", headed by a former warlord, Abdul Rasoul Sayyaf, has been set up as a rallying point against Mr Ghani's emollience towards Pakistan.

After Mullah Omar

Yet despite promises from the Pakistani prime minister, Nawaz Sharif, and the powerful head of the army, General Raheel Sharif, that they will urge the Taliban to kill less and negotiate more, there is scant sign of progress. That may be because the spymasters of Pakistan's "deep state" still prefer a weak, chaotic Afghanistan, or because Pakistan, itself locked in an existential fight with the Taliban's sister outfit, the Tehreek-e-Taliban Pakistan, may not have the control it once had.

Meanwhile, a power struggle has been under way within the Afghan Taliban. When Mr Ghani's government declared last July that the Taliban's leader, Mullah Omar, had died in a Karachi hospital over two years earlier, it triggered a challenge to the authority of Mullah Omar's deputy and de facto successor, Mullah Akhtar Mansour. While Omar was believed to be still alive, Mullah Mansour was able to crush dissent, while reportedly earning a fortune from the opium trade. But his part in the cover-up of the leader's death, his perceived closeness to Pakistan and his interest in opening up a dialogue with the Afghan government before the news about Omar broke have all undermined his legitimacy. Others have challenged his leadership, while in some pockets Islamic State (IS) has been able to poach Taliban fighters and take root. To show that he is neither going soft on the government in Kabul nor a tool of Pakistan's military spy agency, Mullah Mansour has had to redouble the ferocity of the insurgency. And so long as the Taliban think they are winning, they have no incentive to talk peace.

Yet even after the departure in the past year of what Michael O'Hanlon of the Brookings Institution in Washington calls 100,000 of "the world's best soldiers", the Taliban have not made the breakthrough they were hoping for. Their recent victories in Helmand have been small. They rule over a mere 5% more of the country's population than before. They threaten few cities of any size. And despite heavy losses, Afghan forces are mostly holding their own. It is, says Mr O'Hanlon, a "stalemate with a slight edge to the insurgency".

Meanwhile, President Barack Obama has been forced to break his ill-considered promise to remove all American troops from Afghanistan by the end of the year. Yet, to the dismay of his military advisers, he is still talking about cutting the force there to 5,500 before he leaves office in January 2017. That decision too is quite likely to be reversed.

Mr Obama needs to consider how to help the Afghan government get through what is certain to be another tough year. He should give Afghan forces air support of the kind which, in Iraq, government forces are getting in the fight against IS. And, Mr O'Hanlon says, he should expand the training mission by providing another 3,000 mentors to work with the army. One reason for the setbacks in Helmand province is that there are too few trainers.

What America cannot do is to improve the atrocious local governance that creates the grievances the Taliban exploit. At best, stabilising the security situation will allow more time for the well-intentioned Mr Ghani and Mr Abdullah to get their act together. That may seem a faint hope, but it is much better than the alternatives. ■

Banyan | Modi-fied but not transformed

Yet again, terrorist attacks jeopardise reconciliation between India and Pakistan

IN THE recent history of relations between India and Pakistan, it has seemed an immutable law: that any apparent political breakthrough will be followed by a terrorist atrocity in India blamed on agents of the Pakistani state. The bloodiest of these—a murderous assault on Mumbai in 2008—brought a chill that has yet to thaw. And just last July, after India's prime minister, Narendra Modi, had met his Pakistani counterpart, Nawaz Sharif, at a regional summit in Russia and agreed that their national-security advisers should hold talks, terrorists attacked a police station in the Indian state of Punjab.

The latest turn in this cycle is remarkable both for the drama of the breakthrough and for the daring of the terrorist response. On December 25th Mr Modi, en route from Kabul to Delhi, made an impromptu stopover in Lahore in Pakistan. He dropped in on Mr Sharif, who was celebrating both his own birthday and his granddaughter's wedding. No Indian prime minister had set foot in Pakistan since 2004, and much hugging, hand-holding and bonhomie ensued. It formed part of a series of diplomatic contacts intended to be followed by the launch of a "comprehensive bilateral dialogue", with the details to be discussed at a meeting on January 15th in Islamabad, the Pakistani capital, between the two countries' most senior diplomats.

That meeting is now in jeopardy. On January 2nd six gunmen in Indian army uniforms infiltrated a big Indian air base at Pathankot, near the Pakistani border, again in Punjab. Killing them all took over three days and cost seven Indian soldiers their lives. Indian analysts saw the hands of Pakistan-based Islamist groups with ties to the Inter-Services Intelligence, the ISI, Pakistan's military spy agency. On January 3rd India suffered another attack, on its consulate in the city of Mazar-e-Sharif in Afghanistan. Again, many Indians blamed groups friendly with the ISI.

The talks this month would in effect resurrect a "composite dialogue" pursued fitfully under Mr Modi's predecessor, Manmohan Singh. Mr Modi presents himself as a very different sort of statesman from Mr Singh, who was cerebral, bureaucratic and mild-mannered to the point of diffidence. Mr Modi is both a chest-thumping nationalist and a compulsive hugger and handholder, whose diplomacy emphasises, quite literally, the personal touch. When in opposition, Mr Modi and his colleagues were fierce critics of Mr Singh's alleged softness towards Pakistan. But in office he gives the impression of having inherited one of Mr Singh's foreign-policy ambitions: to go down in history as the leader who made lasting peace with India's neighbour. Mr Modi has boasted of "engaging Pakistan to try and turn the course of history". Like Mr Singh, however, he now has to deal with the propensity of parts of the Pakistani state to dabble in terrorism as a way of disrupting talks or of furthering their own agenda.

The United Jihad Council, an umbrella for militant groups fighting Indian rule of part of the divided and disputed state of Kashmir, said that it had organised the Pathankot attack. Many commentators were sceptical, blaming instead Jaish-e-Muhammad, a notionally banned Pakistan-based outfit nurtured by the ISI to harass India. It has a history of spectacular attacks, including one on Parliament in Delhi in 2001 that brought India and Pakistan to the brink of war. It was also guilty of the kidnapping and murder in 2002 of Daniel Pearl, an American journalist, and in 2003 even tried to blow up Pervez Musharraf, Pakistan's military dictator. Yet its leader, Masood Azhar, is a free man. The fact that he and other leaders of terrorist groups are not in detention is proof, to India, of official Pakistani connivance in terrorism against it.

It is Pakistan's army, not Mr Sharif, that sets the country's foreign and security policy. Yet under its present chief, General Raheel Sharif (no relation to the prime minister), it seems to have realised that it is not India that poses an existential threat to Pakistan; rather the greatest danger stems from the militant groups it has fostered itself to wage proxy wars in Kashmir and Afghanistan. To focus on quelling the Pakistani Taliban, in its strongholds in Pakistan's western, Afghan borderlands, the army, too, has an interest in peace with India and a stable eastern front. Yet it is hard to imagine that extremists can cook up and execute elaborate plans such as the Pathankot attack without some level of official help. This suggests either that General Sharif is playing a double game, and that the army still wants to prevent rapprochement with India; or, perhaps, that the army and the ISI are internally divided.

Now Mr Modi faces a dilemma familiar to Mr Singh and his predecessors. To proceed with talks in the face of such provocations looks weak and may encourage others. Yet conventional military options are limited, and nuclear ones unthinkable. And to call off dialogue gives the terrorists what they want.

Not much to talk about

In fact, initial reactions by Mr Modi and his colleagues to Pathankot were restrained. Mr Modi blamed not Pakistan but "enemies of humanity". The foreign-secretary talks were not called off at once. Maybe Mr Modi calculated that India had more to gain internationally from appearing accommodating than from acting the victim, and that the domestic political cost would be small—after all, he is known as a "Hindu nationalist" who will not yield to Muslim-majority Pakistan. His political allies still talk about the eventual "unification" of India, Pakistan and Bangladesh. Yet all that is at stake at the moment is, in effect, talks about talks. Mr Modi, with his impeccable patriotic credentials, can make the concessions needed to hold them. But nobody expects issues festering since India's partition in 1947—notably the status of Indian-administered, Muslim-majority Kashmir, which at times seemed tantalisingly close to resolution under Mr Singh—to be solved soon. Hard as it is, getting back to the table is the easy part. ■

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Hong Kong-mainland relations

Publish and be abducted?

HONG KONG

The disappearance of booksellers raises questions about Hong Kong's autonomy

DISCRETION is not a trait often associated with the glitzy shopfronts of Hong Kong's Causeway Bay, but the low-key entrance to a small bookshop belies the store's recent notoriety. Tucked between a chemist and a clothes shop, Causeway Bay Books (pictured) has become the centre of a mystery involving alleged kidnappings by Chinese secret agents, and of a fierce debate in Hong Kong about the former British colony's autonomy under Chinese rule.

The door to the shop, up two flights of stairs, is now locked. The trickle of people going up are journalists and passers-by curious for news about five men connected with the shop who have disappeared in recent months. Many Hong Kongers fear that agents from China's mainland may have been involved, and that the men were targeted because of the shop's gossipy books. Titles recently on sale include "The Collapse of [President] Xi Jinping in 2017" and "Xi Jinping and the Elders: War at the Top".

When China took Hong Kong back from Britain in 1997, it agreed to give the territory a "high degree of autonomy". Outspoken critics of the Communist Party remained free to air their views without fear of being "disappeared" by police, as commonly happens to their counterparts on the mainland. Hence huge public interest in this case. "The midnight knock on the door is not something we have had to worry about in Hong Kong," wrote a columnist in the territory's leading English-language newspaper, the *South China Morning Post* (recently bought by a mainland businessman). "But if we do now, that would be the end of our way of life."

Worries about skulduggery by the mainland's agents have been growing since October, when four of the men disappeared. One of them was Gui Minhai, the owner of Mighty Current, a publishing house which controls the shop. Mr Gui, a Swedish citizen of Chinese birth, went missing while staying in Thailand. Three members of the shop's staff—Lam Wing-kei, Lui Bo and Cheung Jiping—disappeared during visits to China's mainland.

Ominous clues

But it was the disappearance of Lee Bo, a shareholder in the shop, that aroused the biggest concern because it occurred in Hong Kong itself. Mr Lee, who is a British citizen, failed to return home after visiting his warehouse on December 30th. His wife told a television news channel that Mr Lee had later telephoned her to say that he was "assisting in investigations" relating to the other disappearances. She said he had sounded harried, and, unusually for him, had spoken in Mandarin—the official language of mainland China—rather than in Hong Kong's Cantonese tongue. Mrs Lee said her husband had called from Shenzhen, a mainland city adjoining Hong Kong. Yet police in Hong Kong said they had found no record of him having crossed the border. Mr Lee did not take his mainland travel permit, his wife said.

The authorities in Beijing have done little to dampen speculation. Wang Yi, the foreign minister, told journalists that Mr Lee was "first and foremost a Chinese citizen"—implying that Mr Wang's British counterpart, Philip Hammond, who happened to be visiting China this week, had no right to poke his nose in (Mr Hammond said British diplomats had "urgently inquired" about Mr Lee's whereabouts). A newspaper published in Beijing, *Global Times*, accused the bookshop of selling works that "viciously attacked" the mainland's politics and said Mr Lee was "well aware" of the "harm" these books were causing across the border. "Hong Kong cannot be a special base for hostile forces to carry out activities [aimed at] subverting the country's political system," it said.

Officials in Beijing have long worried about Hong Kong's role as a safe haven for outspoken critics of the Communist Party, and those who try to expose its secretive inner workings. There is speculation that the mainland authorities may have finally lost patience having got wind of reported plans by Mighty Current to publish a book about President Xi's private life.

Even the Hong Kong authorities—usually reluctant to hint at any disagreement with the mainland—are sounding a bit anxious. On January 4th the chief executive, Leung Chun-ying, told a hastily arranged press conference that any unauthorised encroachment by mainland agents would be an "unacceptable" breach of the Basic Law, the territory's mini-constitution. But he said there was "no indication" of outside involvement in the case.

On January 5th a Taiwanese news agency published a faxed letter purportedly from Mr Lee saying everything was "normal" and that he had gone to the mainland "using his own method". His wife said the letter appeared genuine, and that she had withdrawn her request for police help in finding her husband. Many commentators believe that the letter was written under duress, however, and that it hinted at the abnormality of his crossing into the mainland. Mr Leung said investigations would continue into Mr Lee's case.

Mr Leung's popularity has already badly suffered as a result of his endorsement of the mainland government's refusal to grant full democracy in Hong Kong. He would risk even greater opprobrium if it became evident that he was turning a blind eye to mainland snatch-squads. Despite his efforts, he will find it hard to dispel the territory's fears. ■

Liberal economists

Three wise men

SHANGHAI

Ageing reformists diagnose the economy's ills

WHATEVER image you may have of the reformists hoping to shake up China's creaking economic system, it is probably not one of octogenarians who fiddle with their hearing aids and take afternoon naps. But that is a fair description of three of the country's loudest voices for change: Mr Market, Mr Shareholding and the most radical of all, the liberal. With growth slowing, the stockmarket once again in trouble and financial risks looking more ominous, their diagnoses of the economy, born of decades of experience, are sobering.

Wu Jinglian, Li Yining and Mao Yushi—their real names—were born within two years of each other in 1929 and 1930 in Nanjing, then China's capital. Whether it was that or pure coincidence, all three grew up to demand an end to Soviet-style central planning and to propose, to varying degrees, capitalism in its place. Their influence has waned with age, but their powers of analysis remain sharp. And they do not much like what they see.

Mr Wu is in some ways the most important of the group. He advised the government from the earliest years of China's "reform and opening" in the 1980s, through the 1990s when the great China boom got under way (see timeline). He proposed that the Communist Party should declare China a "socialist market economy", a twist of words (and a hugely controversial one—conservatives abhorred any positive mention of markets) that opened the door to private enterprise.

But Mr Market, as he came to be called, thinks this kind of linguistic ruse has outlived its usefulness. Imprecise concepts have led to flawed actions, he warns. Though the private sector has flourished over the past couple of decades, the state still looms large, controlling financial flows and acting as gatekeeper for virtually all important decisions, from land deals to

The take-off of reform

1978	Economic reforms begin
1980	Special economic zones are created to attract foreign investment
1981	**Mao Yushi** writes a widely circulated mathematical defence of market pricing
1984-1989	**Wu Jinglian** is executive director of the government's economic research centre
1988	China suffers severe inflation, a precursor to the Tiananmen protests of 1989
1988-2002	**Li Yining** is deputy director of the finance and economic committee of China's legislature
1990	Stockmarkets are launched
1991	**Mr Li** writes 'Strategic Choices For Prosperity' with Li Keqiang, who was then his student at Peking University and is now prime minister
1992	The Communist Party declares a "socialist market economy" as its goal
1993	**Mr Mao** co-founds the Unirule Institute of Economics, a pro-market think-tank
1997	China begins large-scale consolidation and privatisation of state-owned enterprises
1998-2003	**Mr Wu** is vice-chairman of the economics subcommittee of the main advisory body to the legislature
2001	China joins the World Trade Organisation

Source: *The Economist*

mergers. "Even a low-level bureaucrat can decide the life or death of a company. You need to listen to the party," says Mr Wu, who now teaches at the China Europe International Business School in Beijing.

Mr Wu notes contradictions in the official blueprint for reforming state-owned firms. The party promises to empower their boards, but still wants to retain authority over the appointment of top executives. "If you can't solve this problem, it will be very difficult to develop effective corporate governance," he says. Mr Wu argues that political change is now needed to shore up the economy: the government must stop meddling in markets and instead focus on developing the rule of law. Holding up a copy of his recent book, he chuckles softly. "All my ideas are in here. No one pays them much attention."

Getting heard is less of a problem these days for Li Yining, who has spent his entire academic career at Peking University. His former pupils include Li Keqiang, China's prime minister. His big idea in the 1980s was that selling partial stakes in state-owned companies to the public would improve their performance—hence his nickname, Mr Shareholding. The party eventually took his advice, though the companies remain hugely inefficient.

In diagnosing the problems of today, Li Yining is blunt: the previous few years of ultra-high-speed growth "did not accord with economic laws". China wasted natural resources, damaged its environment, piled up excess capacity and missed opportunities to fix its economic model. Yet perhaps because of his connections to those in power, Mr Li is by far the most sanguine of the old guard of reformers. "The new normal"—President Xi Jinping's favourite economic slogan—is shifting the economy in the right direction, by aiming for lower growth and structural changes.

Mao Yushi disagrees. And unlike many economists cowed by a frostier political climate, he is unafraid to say so. Mr Mao started his career in the railway system, including a spell driving trains, before retraining as an economist in the 1970s. Always on the margins of Chinese academia, he founded the Beijing-based Unirule Institute of Economics in 1993, an independent think-tank (a rarity in China). He champions deregulation and courts controversy in his criticism of Mao Zedong's disastrous rule. Some diehard Maoists call the softly spoken economist "Mao Yu-shit" online, playing on a homonym of his name.

In Mr Mao's view it is already too late for the economy. China has too many empty homes and its banks have too much bad debt. "A crisis cannot be averted," he says. Mr Mao allows himself some optimism, however. The young generation is educated and open-minded. The waste of capital and resources of recent years implies that China still has good potential for growth, if it can operate more efficiently. But he believes that Mr Xi, while espousing reform, is strengthening the state's economic grip. "He has the power and the determination to fix problems, but in many cases he does not properly understand the problems," says Mr Mao.

Such unvarnished, open criticism of Mr Xi is rare in China these days. Speaking in the living room of his apartment, its walls stacked high with books and yellowing newspapers, Mr Mao says that his age and experience give him, and the other elderly reformists, a bit of leeway. "If it was someone else speaking, they would probably be arrested. But to me, the government is polite." If only it would pay more heed to the elders' advice, too. ■

Politics in the Middle East

The Arab winter

Also in this section

CAIRO

Five years after a wave of uprisings, the Arab world is worse off than ever. But its people understand their predicament better

"I AM the free and fearless. I am secrets that never die. I am the voice of those who will not bow…" The voice in question, raised in song amid the crowds packing Avenue Bourguiba, a promenade in Tunis, at the beginning of 2011, was that of Emel Mathlouthi. For a moment of calm in a month of clamour, she gave voice to the aspirations of hundreds of thousands of her compatriots.

On January 14th those protesters forced Zein al Abidine Ben Ali, Tunisia's dictator for the previous quarter-century, from office. What followed was not easy. Terrorism hindered both economic progress and deeper political reform. But in 2015 the country became the first Arab state ever to be judged fully "free" by Freedom House, an American monitor of civil liberties, and it moved up a record 32 places among countries vetted by the Vienna-based Democracy Ranking Association. In December Ms Mathlouthi sang before another spellbound audience—this time in Oslo, as part of celebrations surrounding the award of the Nobel peace prize to four civil-society groups that shepherded in the new constitution of 2014.

Sadly, that outcome remains a stark anomaly. There were six Arab countries in which massive peaceful protests called for hated rulers to go in the spring of 2011. None of the other uprisings came to a happy end. Libya and Yemen have imploded, their central states replaced in whole or part by warring militias, some backed by foreign powers, some flying the flags of al-Qaeda or Islamic State. Egypt and the island kingdom of Bahrain are now yet more autocratic, in some ways, than when the protests began. And Syria has descended into an abyss. Half its cities lie in ruins, much of its fertile land has been abandoned; millions have been displaced within the country, millions more have fled beyond it; hundreds of thousands have died; there is no end in sight.

With the exception of its far east and west—the oil-rich Gulf and quietly prospering Morocco, aloof behind a border with Algeria that has been sealed for 21 years—the rest of the Arab world does not look much better. Iraq's Shia south and Kurdish north and north-east are, in effect, separate countries, while in the war zone of its Sunni-dominated west the fearsomely brutal rule of the so-called Islamic State has taken root. The Algerians and Sudanese have emerged from civil wars to find themselves still beholden to opaque and predatory army-backed cliques. Palestinians, divided into rival cantons, are weaker and more isolated than ever. Jordan remains an island of calm preserved through fear: both the kingdom's own people and the donor countries that prop it up are too spooked by the chaos buffeting its borders and flooding it with refugees to talk much of political reform.

Change it had to come

In short, Arabs have rarely lived in bleaker times. The hopes raised by the Arab spring—for more inclusive politics and more responsive government, for more jobs and fewer presidential cronies carving up the economy—have been dashed. The wells of despair are overflowing.

The wealthy Gulf states have seen their incomes slashed by collapsing oil prices. The tighter immigration rules they have set up to replace expatriate labour from other Arab states with natives, or Asians, have hit the remittance flows through which they subsidised their poorer brethren. Demographic pressures are unyielding. Some 60% of the region's population is under 25. Figures from the International Labour Organisation show that youth unemployment in the Middle East and north Africa, already a terrible 25% in 2011, has risen to nearly 30%, more than double the average around the world. Rent-seeking remains ▸▸

rampant, and standards in both public education and the administration of justice are still dismal. Economic growth is slow or stagnant; the hand of the security forces weighs heavier than ever, more or less everywhere. Sectarian divisions and class rivalries have deepened, providing fertile ground for radicals who posit their own brutal vision of Islamic Utopia as the only solution.

The Arab spring seems therefore to have brought nothing but woe. It has become fashionable in some circles to ape Russia and Iran in blaming this failure on supposedly "naive" Western policymakers. Had Western powers not abandoned old allies such as Egypt's Hosni Mubarak; had they not intervened in support of Libyan rebels; had they not presumed that the Syrian dictator Bashar al-Assad was just another domino waiting to topple; had they not turned a blind eye to the danger of Islamist fanatics: then all would be well.

This is tosh. To frame the uprisings of 2011 as a sequence of isolated events, each of which had a unique and optimal policy response, is to deny the historical reality of what happened. Such hindsight belies the actual experience of seeing an entire region—and the world's most politically torpid region, at that—whirl into sudden, synchronised motion. It also denies agency to the actors themselves: to the crowds whose cries of "Enough!" reached critical mass; to the paranoid rulers whose responses exacerbated the protests.

This is not to say that the events of 2011 had no precursors. Algeria's Islamist uprising in 1991, two *intifadas* in Palestine, the "Independence revolution" that ousted Lebanon's government in 2005, even the short-lived "Green revolution" in non-Arab but nearby Iran, all signalled the region's desire for change. But the world's democracies were, by and large, correct in judging that what they were seeing in 2011 was something broader, more potent and more difficult to steer than a set of national crises that happened to coincide. Nor were they naive to think that an empowered "Arab street" would seek to move its countries closer to global norms of good governance. That was the demand the demonstrators made in protest after protest, from the Gulf to the Atlantic.

In judgment of all wrong

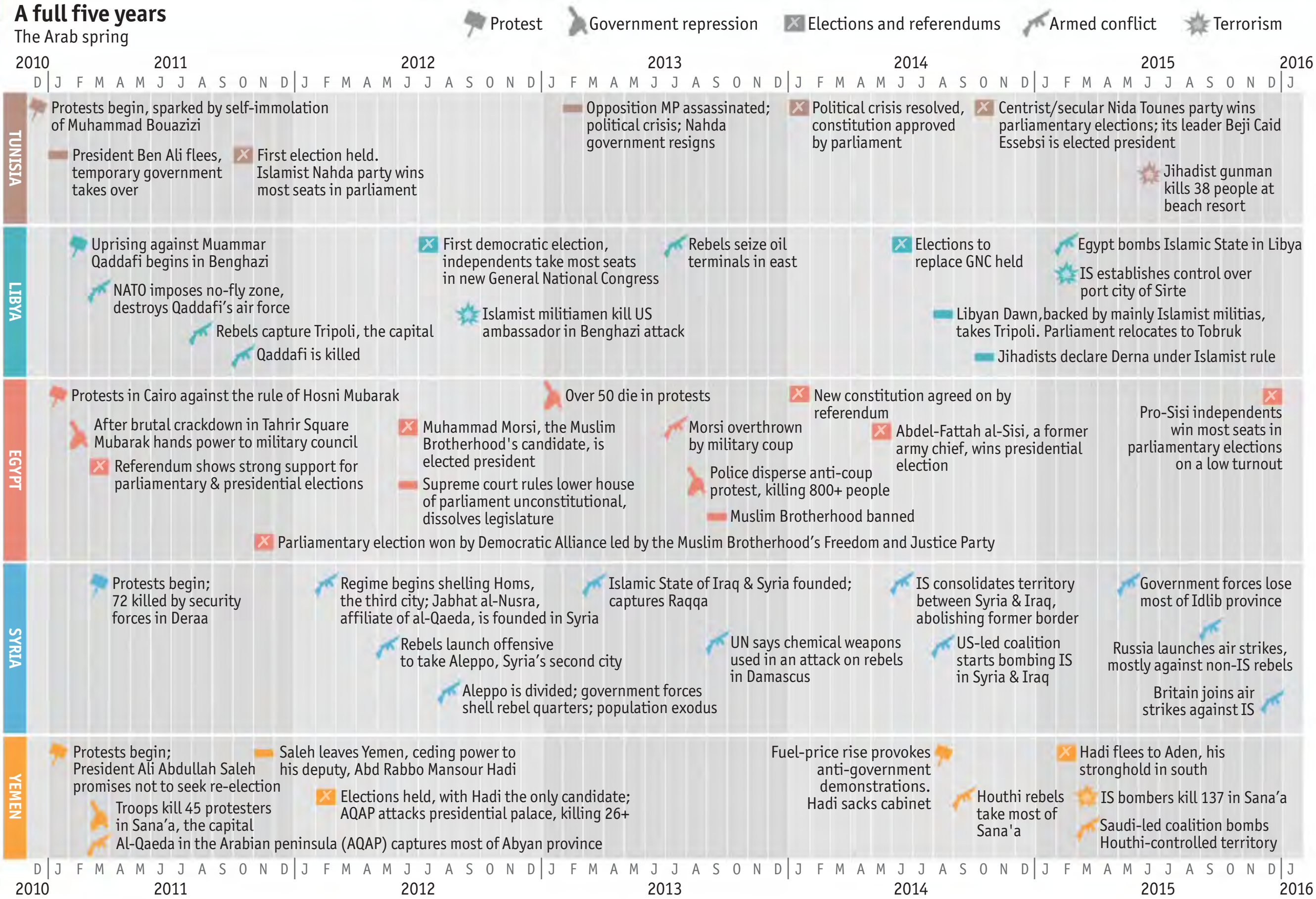
The West's naivety, which was shared—and paid for—by those hopeful demonstrators, lay in underestimating two things. One was the fragility of many Arab states, too weak in their institutions to withstand such ructions in the way that, say, South Africa did when apartheid fell. The other was the vicious determination with which established regimes would seek to retain or recapture control. Who could believe that a soft-spoken leader such as Mr Assad would prefer to destroy his country rather than leave his palace? Those were the truths that brought hope to the ground.

Just as the spring itself was more than just a set of national events, so the current period of counter-revolution is an international matter. Conservatives across the region have received powerful backing from the Gulf. One early and stark example of this was Bahrain, where the ruling family called on fellow Sunni monarchs to help it crush a pro-democracy movement championed by its Shia majority. Last year's intervention in Yemen by a Saudi-sponsored coalition can be seen in the same light. The Saudis are seeking not only to thwart Houthi rebels, whose Iranian backing they revile. They are trying to force a return to the status quo.

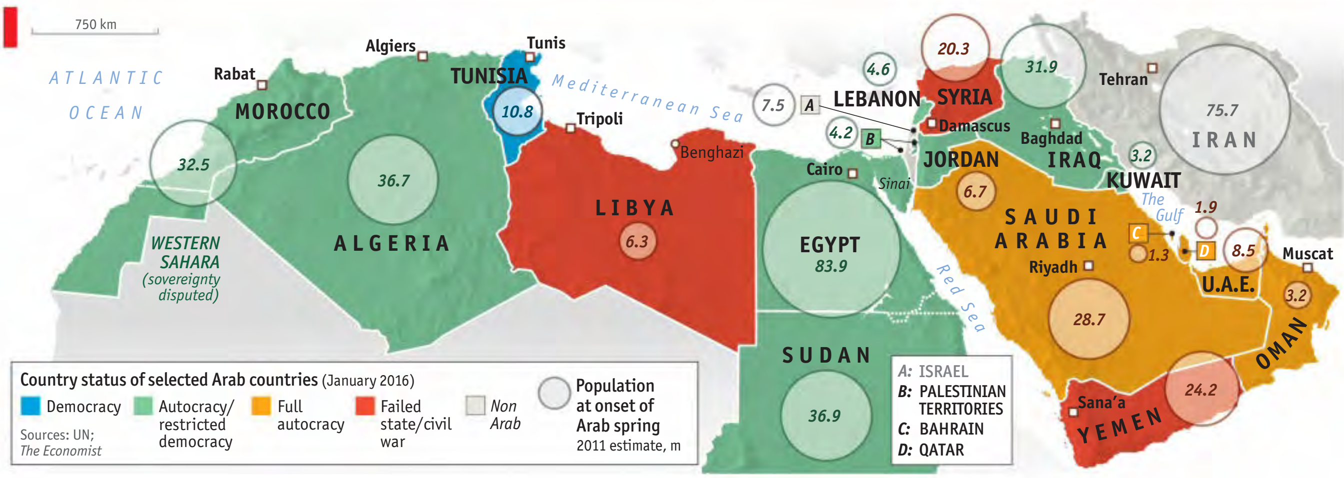
The most internationalised conflict is the bitter civil war in Syria, where powers from the region and beyond contend through proxies. The war has long since metastasised into a monumental free-for-all involving dozens of belligerents. But it remains at its core a fight between aggrieved citizens and a narrowly based—and in Syria's case largely sectarian—elite

A full five years

The Arab spring



Source: *The Economist*



intent on keeping its hold on power.

In Egypt, a nation-state of longer standing and greater stability, the *ancien régime*'s fight has—again with help from the Gulf—been won, for now. Egypt has long been seen as the region's bellwether, and for good reason. Over the past five years it has provided the Arab spring's most revealing story of failure; today it highlights the degree to which the tensions persist that brought about the uprisings.

The world looks just the same

In 2010, six months before the protests in Tahrir Square turned into the uprising (even Egyptian enthusiasts are now shy of calling it a revolution) that ousted Mr Mubarak, this newspaper warned of looming change in Egypt and suggested that there were three ways in which it might play out. The country might, like Iran in 1979, experience a popular revolution which would then be hijacked by Islamists. Like Turkey in the 2000s, it might become a genuine, if shaky and flawed, democracy, one with the power needed to tame the military-backed "deep state". Or, like Russia, it might suffer a Putinist putsch, with the deep state reasserting control under a new strongman.

We were too parsimonious. Egypt has, in a jumbled fashion, experienced not just one but all three of these outcomes. Its revolutionaries did overcome, if briefly, the security forces that underpinned Mr Mubarak's rule. Egyptians then voted in a government headed by the Muslim Brotherhood—a government which, rather than shrinking the deep state, tried instead to insert party loyalists into its depths. (As it happens, this is also what Turkey's Islamist-leaning government has been doing since 2011, with rather more success.) Popular anger against the Islamists, stoked and nurtured by the deep state, then brought Egypt to the Russian option in a soft coup that saw Abdel-Fattah al-Sisi, a general and the minister of defence, installed as president in June 2013.

Two and a half years later, Mr Sisi's counter-revolution appears all but complete. Mr Mubarak and his cronies, not to mention the police responsible for killing and maiming hundreds in the clashes of 2011, are out of jail. Tens of thousands of Muslim Brothers, along with hundreds of secular revolutionaries, are imprisoned, in exile, or dead. Nearly 1,000 Islamists were killed when anti-coup protests were crushed in 2013. The police have killed scores more since then; others have died from torture or neglect in prison.

Mr Sisi's men have taken particular care to harass the technically adept young people whose social-media skills made the revolutionary experiment possible. And the state has made an unprecedented effort to control the courts, universities and media. A tailor-made constitution that grants sweeping powers to the president and the army, and electoral rules designed to produce a fragmented parliament, furnish it with the trappings of democracy. But it is a sham. The *Mukhabarat* (secret police) intervened in 2015's elections to ensure supine legislative loyalty to the president. Not surprisingly, turnout was dismal, particularly among the young. Their disdain proved further justified when the government abruptly cancelled the results of December's student-council elections in the country's universities. Pro-revolution candidates had won across the board.

Many Egyptians praise Mr Sisi for delivering the country from both Islamists and revolutionary hotheads. Many more now shun politics altogether, which from the autocrats' point of view is almost as happy a result. The Muslim Brotherhood remains in shattered abeyance and more radical Islamists, who have mounted terror attacks and grabbed a chunk of territory in north-east Sinai, have not made broader inroads among the general public. Another uprising on the scale of 2011 is unlikely in the near future.

But the effort to build a bigger, stronger "wall of fear" has further alienated Egypt's people from a state that is not just cruel, arbitrary and unaccountable, but also both too incompetent and too broke to buy their acquiescence. Investors are put off by erratic policymaking, the overweening power of the army and *Mukhabarat*, and unpredictable, often vindictive courts. Egypt's government debt remains colossal. The budget deficit has topped 10% every year since 2011; in mid-2015 Egypt's combined domestic and foreign liabilities pushed past 100% of GDP. The currency is in decline—and so is tourism. Incidents such as the killing of a group of Mexican tourists mistaken for terrorists by the air force, or the government's farcical handling of what appears to have been the bombing of a Russian civilian airliner on Egyptian territory in October, show the state to be inept. Mr Sisi's benefactors in the Gulf, who have propped up his regime with perhaps $30 billion in cheap loans, central-bank deposits and fuel, are reputedly running out of patience and risk running out of money. Repeatedly bailed out in the past, Egypt has no more saviours-in-waiting.

Tip my hat to the new constitution

A recent tweet—"Has anyone tried switching Egypt off and turning it on again?"—sums up the despairing mood of this broken country's people. For lack of an alternative, or an on-off switch, most have adopted a wait-and-see attitude, praying that Mr Sisi will lighten his grip or hoping for a palace coup to install a less military-minded ruler. "The cheapest option is internal change inside the regime," says Abd-el Moneim Abul Fotoh, a former Muslim Brother whose centrist platform captured 4m votes in the 2012 presidential election. "Revolutions are cumulative, and it will take time for pressure to accumulate."

But if the uprising changed little in the way things work, it changed much in how they are perceived. Hani Shukrallah, an Egyptian commentator, likens memories of Tahrir Square to King Hamlet's ghost, a presence that may be intangible yet remains the driving force of the drama, and which mutely insists that something is rotten in the state of Egypt.

What underlies the rot, in Egypt and ▸▸

elsewhere, is the failure of generations of Arab elites to create accountable and effective models of governance, and to promote education. After some 60 years of essentially fascistic rule—the forced rallying behind a bemedalled patriarch, pomp and parades and propaganda disguising the reality that the people have no voice—it was perhaps not surprising that the backlash, when it came, was inarticulate and lacked direction. The Arab revolutions produced few leaders, few credible programmes for action, and few ideas. But they did produce much-needed clarity about such things as what political Islam actually means in practice, where the Arabs stand in the world and with each other, and what the weaknesses and strengths of Arab states and societies are.

Before it came to brief and inglorious power in Egypt, the Muslim Brotherhood attracted believers with the simple but vague slogan "Islam is the solution". Experience now prompts many more Arabs to ask, which Islam? If it is the arm-twisting, head-lopping version proclaimed by Islamic State (IS), which dismisses all Muslims but its own ardent followers as shirkers and sinners, there are few takers. If it means giving political power to more mainstream religious figures who cannot agree on points of doctrine, this does not look appetising either. Nor do the Muslim Brothers, who revealed themselves to be conservatives bent on capturing rather than reforming the state, hold much more of an appeal.

For decades Arab opinion-makers have ascribed a host of regional ills to Western—and particularly American—meddling, even as its leaders turned habitually to the West for aid or military protection. And the West is hardly innocent; the biggest regional debacle until recent years was America's spectacularly inept occupation of Iraq. But the morass left by that unforced error, along with the West's ineffectual response to the Arab spring, have convinced all but a conspiracy-addled fringe that there is not much substance to talk of Western omnipotence, American hegemony or even a Zionist conspiracy. The West's capacities have been revealed as limited and seldom effectively exercised. It is the region's own weakness, rather than malign Western intent, that keeps sucking in outside powers.

At the same time many Arabs have also seen, not for the first time but perhaps now more clearly than ever, how weak the links between Arab states actually are, despite decades of slogans proclaiming Arab unity. And they have seen how weak the states themselves are, and more sadly how weak many of their own societies are. Iraqis and Syrians are fond of saying that before the American invasion or the 2011 uprising there were no tensions between Sunnis and Shias. If this is true, though, such solidarity was very easily shattered.

History ain't changed

If states' weaknesses stand exposed, so do their workings. In Egypt and Tunisia, and even more so in Mr Assad's Syria, no one used to know who in which of the many competing security agencies really controlled what, or how. They could not put their finger on the way that, say, a compliant judiciary fitted in to the overall shape of things. Now they can. In Egypt the current crop of thoughtful young revolutionaries shuns the street in favour of drawing up quiet plans for overhauling the police or reforming the judiciary. If another uprising starts, its demands will go beyond the removal of a figurehead and the election of a legislature kept well away from the levers of real power.

And what else may be on the agenda for change? One place to look is to IS—which, in ghastly irony, is the only truly new model of government that the wave of revolutions has thrown up. The group is monstrous. Its "state" is in many ways a far nastier reproduction of previous autocratic regimes, overlaid with a brutal "Islamic" veneer that most Muslims find repulsive. Yet the fact that this ugly experiment survives at all, despite the world's semi-united efforts to abort it, holds lessons for the region.

Although IS's laws are grotesque, other Arab states should take note that its emphasis on quick and firm justice appeals not only to Syrians and Iraqis desperate for order amid chaos. It responds to a burning public need to right decades of perceived wrongs. So does IS's intolerance of corruption within its own ranks and its focus, even with limited means, on providing services such as health, education and social welfare. Unlike other Arab states, which tend to be hyper-centralised, IS grants broad powers to local administrators. These officials seek to regulate and tax commerce rather than to control it. Instead of assuming ownership of the oil industry, as nearly all other Arab states do, it sells the crude oil in its territory at the wellhead, subsequently exacting taxes from the people who go on to refine and transport it.

The missing ingredients in this formula are obvious: a basic respect for human rights and for diversity, systems of accountability, a method of lawmaking that pays heed to the will and interest of the public and not simply religious texts or the whims of a so-called caliph. Such essential components of good governance are often lazily bundled together as part of a grab-bag labelled democracy. The Arab spring showed that it may be these constituent elements, more than such theatrics as toppling tyrants or holding noisy elections, that are the key to success.

In the tense calm that has settled over countries such as Tunisia and Egypt, in the brittle peace that will no doubt eventually prevail across Iraq, Syria and Yemen, and during the continuing, ever-expectant pause endured by other Arabs as they wait for change, it is these kinds of institutional building blocks that need attending to. Arabs may take heart from the fact that in Europe, the supposedly revolutionary years of 1848 and 1968 produced little forward motion; indeed their immediate effect was to prompt a conservative backlash. A.J.P. Taylor, a historian, described 1848, a year of continent-wide insurrection against autocracy, as a moment when "history reached a turning point but failed to turn."

But in both cases revolutionary change did come, in protracted form, in the next generation. It was brought about less by street action than by quiet evolutions in culture, society and the economy, and by the building of new and stronger institutions. It is not as intoxicating as mass action in Tahrir Square. But if some future season of rebirth is to lead to a lasting summer, there needs to be some thoroughgoing climate change first. ■

Mr Sisi and Mr Mubarak: meet the new boss...

South Africa's next president

After Zuma, another Zuma?

JOHANNESBURG

Jacob Zuma wants to start a dynasty

DIVORCING couples usually squabble over custody of the children. Jacob Zuma seems to be wondering how to share custody of the country with his ex-wife. Mr Zuma must retire as South Africa's president in 2019. He appears to favour Nkosazana Dlamini-Zuma, to whom he was married until 1998, as his successor. The couple often appear on stage together at political events, as they did during the African Union (AU) summit in Johannesburg in June.

A quiet race is under way to pick the next president of the ruling party, the African National Congress (ANC). The winner will inevitably become president of the country, too. For Mr Zuma, there is much to commend his ex-wife. For a start, she has not been accused of trying to poison him (unlike one of the current crop of first ladies, whose lawyers issued a statement in which she denied being part of a plot to do so). Furthermore, Ms Dlamini-Zuma has plenty of political experience. She currently chairs the AU. She has served as South Africa's health minister (under Nelson Mandela), foreign minister (under Thabo Mbeki) and home affairs minister (in her ex-husband's cabinet).

She is also loyal. Mr Zuma faced 783 charges of corruption, fraud, money-laundering and tax evasion before he became president. (He denies them all.) These charges were dropped, but the opposition Democratic Alliance is doggedly trying to reinstate them. Mr Zuma's critics speculate that he wants his ex-wife at the helm as an ally to argue that the charges—which he claims are politically motivated—should never see the light of day.

The odds of another Zuma running South Africa are hard to gauge. There is no open, formal campaigning within the ANC. Candidates maintain the fiction that they are "deployed" by the party.

The other strong contender is Cyril Ramaphosa, a union-leader-turned-tycoon who is now deputy president. He has the tacit support of the Congress of South African Trade Unions (COSATU), a part of the ruling alliance. At the COSATU national congress in late November several unions openly backed Mr Ramaphosa, saying that the deputy president of the ANC should succeed as party president, as in the past.

Mr Ramaphosa stands to benefit from the mess Mr Zuma has made of the country's credit rating. In December the president replaced a respected finance minister with an unknown backbencher, spooking the markets. He soon relented and appointed a third finance minister, whom investors trust, but the episode solidified his reputation for capricious decision-making. Even so Mr Ramaphosa, who has a sober, Mr Fix-It reputation, will have to build support softly-softly, in the ANC style.

Who has custody of the country this weekend?

Ms Dlamini-Zuma received a boost in November when Sihle Zikalala beat a candidate who supported Mr Ramaphosa to be elected as ANC chairman in KwaZulu-Natal province, the party's biggest support base. Three provincial premiers, known as the "Premier League," are drumming up support for her. Ms Dlamini-Zuma's fans often say that "South Africa is ready for a woman president."

Would she be any good? Her record in government is not exactly impressive. As health minister, she extended health services to black South Africans but also promoted a quack "cure" for AIDS based on a toxic industrial solvent, and purged South Africa's drug-safety authority when it objected. As foreign minister she failed miserably to address the implosion of next-door Zimbabwe. Some argue that, as home minister, she cleaned up a dysfunctional ministry; others say the reforms were under way before she took over.

On January 8th the ANC will celebrate the anniversary of its founding. It is customary for the president to set out the party's agenda on such occasions, but all eyes will be on the succession struggle behind the scenes. Not long afterwards, probably in May, South Africa will hold municipal elections. If the ANC does poorly, the Zumas will be weakened.

Ms Dlamini-Zuma has said nothing publicly about what she might do if she becomes president. Susan Booysen, author of the book "Dominance and Decline: The ANC in the Time of Zuma", predicts that she would be much like her ex-husband. That worries liberals, who fret that Mr Zuma has undermined institutions that check presidential power and tolerated widespread corruption. "I think Zuma is going to be with us long after he has actually left office," says Ms Booysen.

Mr Zuma may not be able to name his own successor, however. He is unpopular, even among ANC supporters. A recent Afrobarometer survey found that public distrust of him had increased from 37% in 2011 to 66% in 2015. "A majority of citizens believe that he routinely ignores both the legislature and the judiciary," the pollster said. Public approval of his performance dropped from 64% in 2011 to 36% this year.

Mr Zuma giggled throughout his last day of questions in Parliament for the year, despite the serious issues before him: a severe drought, an economy close to recession and reports that taxpayers are to fork out for a brand-new, 4 billion-rand ($251m) presidential jet. After a younger opposition MP scolded him Mr Zuma responded: "I don't know how to stop my laughter." ■

Nigeria's federation

A house divided

LAGOS

How a toxic blend of identity politics and cheap oil hurts Nigeria's states

NIGERIA'S 37 governors cannot have expected cheers when they declared late in 2015 that they could no longer pay a minimum wage of just $3 per day to their employees. Politicians are seldom brave enough to cut civil servants' pay but Nigeria's governors are desperate.

Low oil prices have slashed government revenues. Nigeria, which nowadays is comprised of 36 states and Abuja, the capital territory, operates as a federation in which most decisions over spending take place in the various state capitals. Every month the central government collects money from oil sales (which still account for more than 50% of its total revenues) and hands over just under half to the states. But that sum has plummeted since the price of crude declined. BudgIT, a Lagos-based analysis group, reckons that the states got a ▸▸

bit less than $7 billion between January and September 2015 compared with almost $14 billion over the same period in 2013. That led to a crisis in June when, having not paid their workers for months, 27 state governments begged President Muhammadu Buhari for a bail-out.

By December 2015 several states were again failing to pay civil servants on time, provoking strikes. Although the fiscal crisis came to a head when the oil price collapsed, its origins are much older.

At independence in 1960 the country was made up of just three regions. Since then it has been divided and subdivided. There are perhaps 250 ethnic groups in Nigeria. The big ones all want states where they are in a majority, so they can divvy up oil money and government jobs among their kin. "Some states were created by military leaders just to look after friends and businesses partners," says Adigun Agbaje, a professor at the University of Ibadan.

This balkanisation of Nigeria has spawned a poisonous kind of politics. At the ballot box, religion and ethnicity matter far more than a candidate's ideas. Politicians often win votes by stirring up animosity against the ethnic group next door. This can turn violent. More than 8,000 people were killed in ethnic or religious clashes in 2015.

Few states gather much revenue themselves. Borno, a state in the north-east, collected about $3 per head from its 5m people in the whole of 2014. To be fair, it is besieged by Boko Haram insurgents. Still, other more peaceful states such as Osun are scarcely doing better yet hire civil servants by the busload.

Some financiers think the federal government should provide conditional lending to troubled states. It probably won't, given its own ballooning budget deficit. States could cut wages, but workers will howl. Some governors have hit on the original idea of trying to collect more tax. Lagos, the nation's most self-sufficient state, thinks it can tax another 4m people, doubling the number who pay. Many states, however, are simply "hoping that future residents will pay off today's costs", says BudgIT's Oluseun Onigbinde. ■

Electricity in Africa

Power hungry

DAR ES SALAAM

Electrification plans are stalling because distributors won't pay

AT THE edge of Dar es Salaam, Tanzania's commercial capital, in a space roughly the size of a football field, stands hope for Africa's industrial future: the Ubungo power plant. Gleaming pipes emerge from the ground; five modern generators hum quietly. This was where, in 2013, Barack Obama announced his Power Africa plan to electrify the continent.

The trouble with plants such as Ubungo is that there are not enough of them. Opposite the power plant, young men sell charcoal to burn for cooking and heat. At night in the city centre the streetlights are turned off. South of the Sahara there are only seven countries—Cameroon, Gabon, Ghana, Ivory Coast, Namibia, Senegal and South Africa—in which more than 50% of people have access to electricity. In a typical year the whole region generates less electrical power than Canada, and half of that supply is in South Africa.

Generating power in Africa ought to be a good business. Africans tend to pay extraordinary prices for electricity. Businesses rely on dirty and expensive diesel generators. Tanzanian mines are powered by generators burning diesel that has been trucked across the country; a kilowatt-hour can cost as much as $1. Grid power at an American mine, by way of comparison, costs less than a tenth as much.

So there ought to be a rush to invest in African power plants. But there is not. Tanzania, a country of 50m people with substantial recent discoveries of natural gas, illustrates some of the bottlenecks.

Tanzania has about 1,500MW of installed electricity-generation capacity—about as much as a small American city. More than a third comes from hydroelectric power stations. Because of drought in recent years, these rarely run at full capacity. In early October, at the end of the dry season, the country had to shut down all its hydroelectric plants. Tanzania is not alone in relying heavily on hydropower. In Malawi and Zambia almost all power comes from water, when it flows.

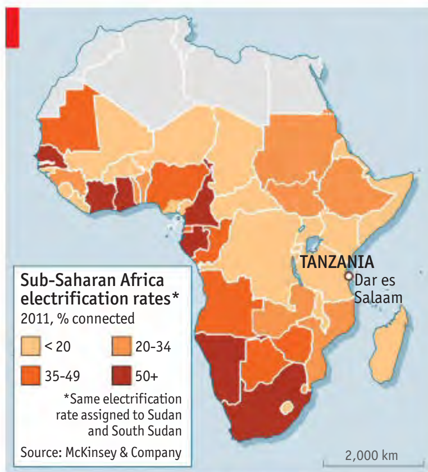
Tanzania wants to build new gas-fired plants, connected via a new pipeline from a newly discovered gasfield in the south. Plants such as the one at Ubungo ought to generate lots of extra power cheaply. But that is not happening as quickly as it should. The Ubungo plant, which is owned by an American firm, Symbion, did not begin running at full capacity on local gas until last September. Before that, shortages meant that production often relied on imported liquid fuels such as kerosene.

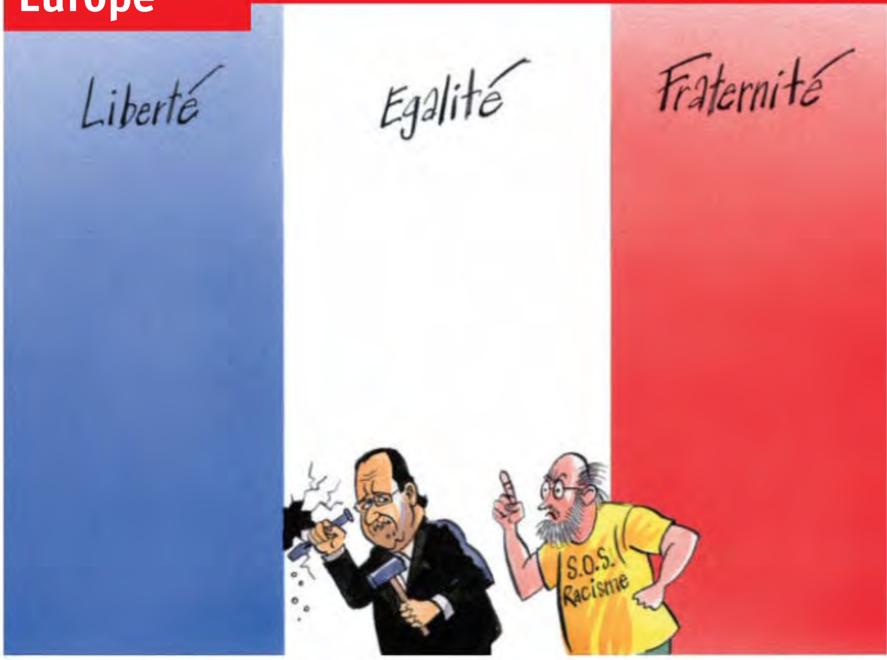
Gas is relatively clean, reliable and inexpensive. Indeed, the Ubungo power station could easily add capacity, says Mageswaran Subramaniam, Symbion's local boss. It is just a matter of buying more mobile generators. The trouble is neither a lack of gas to power the plant nor a shortage of demand for the juice it sends down the wire; it is that the only customer does not pay its bills on time. Tanesco, which has a monopoly on distributing power in Tanzania, is severely cash-strapped. Its outgoings are inflated by the need to buy expensive emergency backup fuel to keep the lights on when the supply from dams falters. In practice, payments to independent power producers such as Symbion often come last on its list.

On December 2nd SonGas, a private-equity owned firm that runs another gas-powered plant in Dar es Salaam, and which contributes as much as 20% of Tanzania's grid power, threatened to stop generating electricity unless it is paid money is it owed by Tanesco. SonGas, like other firms investing in power plants across Africa, has a guarantee from Tanzania's government that it will be paid—something financial backers generally insist on before investing in private power producers. But this does not help its short-term cashflow. Tanesco's arrears do not mean that SonGas can refuse to pay for the gas it buys.

For many, then, the best hope of getting the lights on is to bypass the grid entirely. M-Kopa, a Kenyan firm, is expanding across east Africa selling its solar-powered battery systems, which contain a torch and a mobile-phone charger. Customers are effectively given loans to buy them; repayments are made through mobile money.

Generating power at home may transform life in rural areas for the better, but factories, mines and mills need a reliable, large-scale power supply. If Africa is to industrialise, it needs power plants. These will not be built unless customers start paying their electricity bills. ■





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France's fight against terror

Après Charlie

PARIS

After a year of far-reaching security measures, the left thinks the latest one is a step too far

FOR the French left, SOS Racisme, an anti-discrimination group founded in the 1980s, is a cherished treasure. With its rock concerts and slogans, it was a training ground for Socialist politicians, and remains a nostalgic reminder of multi-racial aspiration. But today, as France marks the first anniversary of the *Charlie Hebdo* terrorist attacks, SOS Racisme has turned its protests on its old Socialist friends: President François Hollande's government and its latest counter-terrorism measures.

As part of a package that will go before parliament next month, Mr Hollande plans to write into the constitution the power to strip nationality from French-born dual citizens convicted of terrorism. French law already allows this for dual citizens who have acquired French nationality. And some other European countries, such as Britain, can deprive even native-born dual citizens of nationality on grounds of national security. But France's tradition of *droit du sol*, or the right to citizenship for those born on its soil, makes such a measure particularly sensitive.

"It's a huge betrayal," says Marouane Zaki, an official at SOS Racisme, who has dual French and Moroccan citizenship. "It gives the impression that dual citizens are not really French, and that terrorism is not a problem among the children of the French republic, only those who come from somewhere else." Over a third of French-born citizens with North African origins have dual nationality, according to the National Institute of Demographic Studies. This week SOS Racisme staged a protest outside the Socialist Party's headquarters in Paris, accusing the government of trying to "write discrimination into the heart of the constitution".

Until now, Mr Hollande's hard-line security policy has drawn broad cross-party support, which will only grow after police foiled an apparent terror attempt in Paris on January 7th. After the attacks in Paris on November 13th, the president stepped up bombing in Syria and adopted a muscular counter-terrorism approach. A state of emergency, which gives the police sweeping powers to make house arrests and raid premises, lasts until February 26th. Yet the citizenship-stripping proposal, backed by 85% of French people and long defended by the xenophobic National Front (FN), is seen by many on the left as a step too far.

Revolt of the foreign-born

Anne Hidalgo, the (Spanish-born) Socialist mayor of Paris, tweeted her "firm opposition" to the proposal. "There cannot be different categories of French citizens," argued Samia Ghali, a Socialist senator born to Algerian parents. Perhaps the most crushing reproach came from Thomas Piketty, a left-wing economist and best-selling author, who accused the government of "running after the National Front".

The prospect of losing a French passport is unlikely to deter suicide-bombers. Better intelligence and policing, which the French are also strengthening, matter far more. Manuel Valls, the (Spanish-born) Socialist prime minister, has acknowledged that the proposal is a "symbolic measure". France's opposition broadly supports it, but Alain Juppé, a centre-right former prime minister, described its likely effectiveness as "feeble, if not zero".

The political outcry exposes the fragility of Mr Hollande's standing on the left. Elected in 2012 to squeeze the rich and end austerity, Mr Hollande has shifted to a more business-friendly economic policy, to the dismay of his party's left wing. He has presided over a painful three-year increase in joblessness. But his bellicose rhetoric after the November 13th attacks, in which 130 people were killed, earned Mr Hollande a big bounce in the polls. Now he seems to hope that public opinion will lend him the legitimacy to face down dissent on the civil-liberties left.

As Europe grapples with the terrorist threat, the row may also reflect a new centre of gravity on matters of national security. The French have been remarkably tolerant of the constraints imposed by the state of emergency, even though few of the 2,700 police raids carried out so far have uncovered evidence that might thwart terrorists. Under Marine Le Pen, the FN has surfed a wave of fear. "The rise of the FN weighs heavily on the political debate," says Augustin Grosdoy of the Movement against Racism and for Friendship between People, a watchdog, "and the left is not immune." A year after *Charlie Hebdo*, France may be better patrolled and more alert. But the fleeting unity of "Je suis Charlie" feels a long time ago. ■

Bavaria's Christian Social Union

Kabuki in the Alps

MUNICH

How to interpret the theatre of German coalition politics

NOMINALLY they are allies. But Angela Merkel, the German chancellor and leader of the centre-right Christian Democratic Union (CDU), and Horst Seehofer, the premier of Bavaria and boss of the conservative Christian Social Union (CSU), have been at loggerheads for months over the refugee crisis. Mr Seehofer demands fixed "upper limits" on the number of migrants that Germany admits. Mrs Merkel, given the 1.1m refugees who arrived in 2015, agrees that a "reduction" is desirable but rules out limits as unconstitutional. At an annual CSU gathering on January 6th-8th, Mr Seehofer expanded his attack. With Mrs Merkel present as an uncomfortable guest, he put a low-ball number on his "limit": no more than 200,000 a year.

The refugee crisis strains not only Germany's governing coalition (which also includes the centre-left Social Democrats) but also the "Union", as the CDU and CSU are jointly called because they form one group in parliament. Yet their fight must be seen in context. The CSU has always been prone to elaborate displays of dissent—without which it would have no reason to exist as a separate party from the CDU.

Start with the setting. The latest showdown took place at Wildbad Kreuth, a historic former spa near an Alpine lake where guests once included emperors and tsars. Every winter for four decades the CSU's members of parliament have gathered there against a picture-perfect Bavarian backdrop. One meeting in 1976 took place amid a power struggle between two swaggering silverbacks, the CSU's Franz Josef Strauss and the CDU's Helmut Kohl. It was in Kreuth that Mr Strauss declared war, when the CSU formally abandoned its partnership with the Christian Democrats. The split was mended only a month later—but with appropriate utterances from both sides about the CSU's prized autonomy.

Ever since, the CSU's attitude towards its sister party has been described as "the spirit of Kreuth". The party thus has three jobs. The first is to rule Bavaria, which it does competently. The second is to ensure, as Mr Strauss put it, that "there must never be a legitimate democratic party to the right of the CSU": the party must be populist enough to appeal to conservative voters and keep them from drifting to the extreme right. The third job is to make enough trouble in national politics, especially for the CDU, for Bavarians to feel important—but without actually toppling a Christian Democrat chancellor (without whom the CSU would also be powerless).

By this definition, as of last summer Mr Seehofer was looking weak. The CSU appeared irrelevant in the governing coalition, and was widely ridiculed for both its signature policies. (One is to subsidise parents who keep their toddlers at home rather than sending them to a crèche. The other is to introduce a road toll which, cunningly, would hit only foreign drivers.) Meanwhile, a new xenophobic party, the Alternative for Germany (AfD), was growing to the right of the CSU, making Mr Strauss turn in his grave.

The refugee crisis has allowed Mr Seehofer to tap into the spirit of Kreuth again. Since September he has been needling Mrs Merkel for her liberal asylum policy. That does not mean he wants to oust her. He only wants to signal to Bavarians that the CSU remains the conservative backstop inside the Union. This also applies when the topic is Brussels. In terms of Euroscepticism, the "Bavarians are the Brits of Germany", as one analyst puts it. To get that message out, Mr Seehofer also invited David Cameron to attend this year's meeting at the spa in Kreuth. All in the spirit. ■

Please direct your complaints to my colleague

Sexual assaults in Cologne

New year, new fear

BERLIN

Attacks on women by mobs of young men inflame Germany's refugee debate

AS THE New Year's fireworks went up in German cities, a brief panic seized Munich, which had information about planned terrorist attacks at two railway stations. Those never occurred. But, much less noticed at first, a different sort of crime was occurring in Cologne and, to a lesser extent, in Hamburg and Stuttgart.

While partiers gathered on the square between Cologne's cathedral and railway station, a large group of young men, later described by the police as "looking North African or Arabic", also massed there. Some threw fireworks into the crowd to cause panic. Then the men formed rings around individual women, so that police and onlookers could not see inside each huddle. According to over 100 women who subsequently filed complaints, the men groped the women sexually, while others stole their mobile phones, wallets or purses. One woman was raped.

Oddly, the Cologne police reported the following day that the festivities had been relaxed and peaceful. Only after scores of women came forward did the country react with rage. The interior and justice ministers promised to bring down the full force of the law—even as the police had to admit that they as yet had no information to make individual arrests. Angela Merkel, the chancellor, called the assaults "disgusting" and demanded justice "without regard to origin or background".

The assaults tapped into deep fears at a tense time, as Germany struggles with record numbers of refugees—more than 1m ▸▸

in 2015, largely from Arab countries. Populist politicians were quick to infer a connection. Frauke Petry, boss of the xenophobic Alternative for Germany, blamed the outrage on the "terrible consequences of a catastrophic asylum and migration policy".

There is no evidence yet that any of the criminals were refugees, as Cologne's mayor, Henriette Reker, emphasised. Ms Reker personifies the conflicts straining German society. She ran for office as a non-partisan candidate with a liberal and welcoming stance toward migrants. For that, a neo-Nazi extremist stabbed her at a campaign event in October. (She was elected the next day, while still in a coma.) If it is confirmed that some of the muggers, molesters and rapists were asylum-seekers, the damage to what is left of Germany's *Willkommenskultur* could be severe. ■

Italy's economy

Mezza mezza

ROME

As other peripheral economies take off, Italy's is just so-so

IT SEEMS that some PIIGS can fly. During the euro crisis Portugal, Ireland, Italy, Greece and Spain looked wobbly and, because of their initials, earned an unflattering porcine label. Yet three of the five grew robustly in 2015 (see chart). The laggard was Greece, still labouring under the terms of its bail-out.

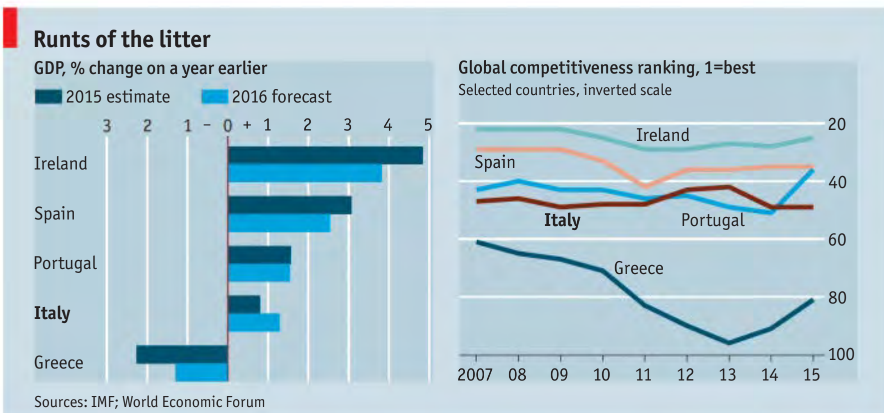
Italy, too, performed disappointingly. In December the bosses' association Confindustria downgraded its estimate of growth in 2015 to 0.8%. No one is expecting a big surge in 2016. The EU expects Italian GDP to rise 1.5%, but last year's quarter-on-quarter figures suggested growth was slowing (from 0.3% in the first two quarters to 0.2% in the third). "There is a recovery," the finance minister, Pier Carlo Padoan, told business leaders in December. "But it is weak." Advisers to the prime minister, Matteo Renzi, worry that the world economy will enter a cyclical downturn before Italy regains the ground it lost in the financial and euro crises.

Confindustria's researchers called Italy's lacklustre recovery "a real puzzle". The prime minister is energetic and reform-minded. His left-right coalition has done good things. It has begun to reform the civil-justice system and the bureaucracy; the sluggishness of the first and the complexity of the second are long-standing obstacles to investment. It has overhauled labour laws, offsetting easier dismissal with gradually enhanced job security and welfare entitlements for newly hired workers. Francesco Giavazzi, a professor at the Bocconi University in Milan who has fiercely criticised previous governments on free-market grounds, calls it "the most important reform in this country in the past 50 years". Unemployment has shrunk encouragingly since June. There has also been a modest improvement in private consumption.

Traditionally, however, it has been surging exports that have pulled Italy out of recessions. Despite a weak euro, export growth this time has been disappointing. That is due in part to the slowdown in emerging markets and the mediocre performance of German industry, which absorbs more than a sixth of Italy's exports. But it is also consistent with low competitiveness. On that score, Italy's performance since the euro crisis has been unimpressive when compared with that of other former porkers (see chart).

So far, the government's main response has been to insert tax breaks in the budget for 2016, aimed at encouraging corporate investment. The budget also includes €3.6 billion ($3.9 billion) of cuts to taxes on primary homes. These are more likely to win votes than to stimulate growth. And Mr Renzi's largesse may be short-lived. The budget deficit, though shrinking, is still forecast to be around 2.4% of GDP, prompting a warning from European fiscal authorities in Brussels, who had expected a faster decline.

Luigi Zingales, an Italian economist at Chicago's Booth business school, notes that slow growth plagued Italy long before the euro crisis. He fears the latest slowdown may show how little the economy has responded to the challenges it faced when it joined the euro and lost the ability to boost exports by devaluing its currency. "When I go to a young entrepreneurs' group in America, I meet young entrepreneurs," he says. "In Italy, I primarily meet trust-fund kids who are there thanks to their parents, not their accomplishments. We need a change of mentality." ■



Runts of the litter

Sources: IMF; World Economic Forum

European nightlife

Less than ecstatic

BERLIN

The lights are going out in night clubs all over Europe

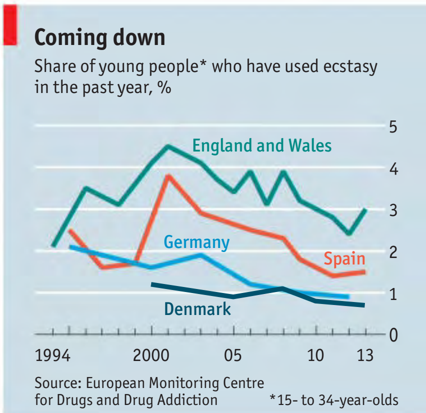
AT HALF past two in the morning a dozen people queue in the freezing cold to get in to Tresor, a night club in a former power station in Berlin. In the sweaty, dimly lit interior, about 100 people are dancing to repetitive beats. Others sprawl on seats near the bar, clutching drinks or other people. The club, one of the first places in Germany to play techno music, seems as popular as when it was launched in 1991. But clubbing itself is on the wane.

After the fall of the Berlin Wall night clubs sprang up in that city in a moment of “cultural anarchy”, says Dimitri Hegemann, one of Tresor’s founders. They took over disused banks, warehouses and power plants. In the rest of Europe several “superclubs” had already opened in the 1980s, and more followed. In London, Fabric opened in 1999 in a former cold store; in Amsterdam, one started in a former print works. Smaller venues proliferated, too.

Since then, however, the party seems to be winding down. Between 2001 and 2011 the number of *discotheken* in the Netherlands fell by 38%. In Britain there were 3,144 clubs in 2005 but only 1,733 ten years later, says the Association of Licensed Multiple Retailers; in 2015 revenues were £1.2 billion ($1.7 billion), down from £1.5 billion in 2010. In Berlin, although the number of music venues has been stable at about 350 (120 of which are clubs), several long-established night spots have closed their doors.

Partly this is because most European cities are becoming nicer to live in. “Even in Berlin it is harder to find an unused space in the inner city,” sighs Sven von Thülen, a DJ who has compiled an oral history of clubbing. Clubs are being pushed farther out. Increasing rents are also a problem, says Lutz Leichsenring of the Club Commission, a German industry body, especially in places such as London where property values have soared.

Gentrification can muffle the high-decibel economy. “If there’s one complaint, then the whole circus starts,” says Eelko Anceaux of De Marktkantine, one of the handful of clubs that bucked the trend and opened in Amsterdam in 2014. It is possible to build good relations with neighbours, he says; his night club, like many new ones, doubles as a restaurant and hosts vintage markets, which makes it more acceptable to nearby yuppie families. Even so, middle-class residents’ complaints about noise and drunk or stoned revellers make the life of a club-owner far trickier.

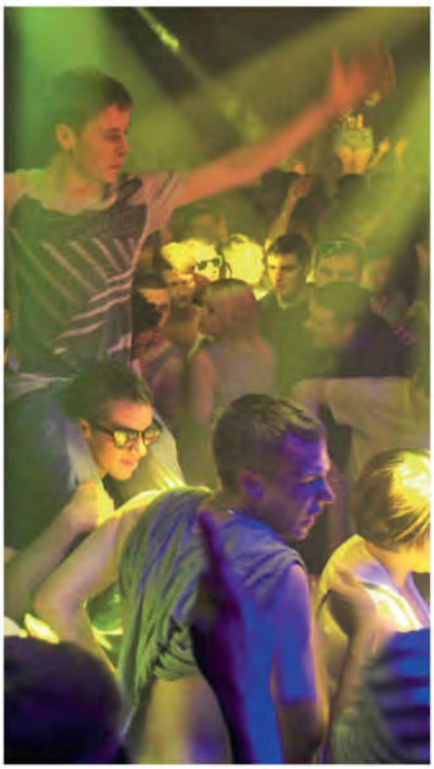


Coming down

Share of young people* who have used ecstasy in the past year, %

Source: European Monitoring Centre for Drugs and Drug Addiction *15- to 34-year-olds

As cities gentrify, local politicians are getting stricter about clubs. Madame JoJo’s, a burlesque bar in London’s Soho, had its licence revoked in 2014 after two bouncers brandished a baseball bat at a rowdy crowd. In December the owners of Fabric at last won a year-long court battle against Islington Council, the local borough, which wanted to introduce drug-sniffing dogs. Last year in Berlin two clubs were closed down for fire-code violations.



This is boring. Let’s go to a gig

Increasingly, anyone who wants to open a club must have a business plan, says Mr von Thülen, rather than just an enthusiastic bunch of friends willing to party. Patience is also useful: it took Mr Anceaux four years to get his club open and another year to get a full licence.

Two big social changes are squeezing club owners still further. The first is that the youth of today are surprisingly abstemious. In Germany, Britain, Denmark and Spain the use of MDMA, or ecstasy, which makes bonding with strangers and dancing to repetitive thumping sounds far more enjoyable, has fallen among 15-34-year-olds (see chart). (Trends in the use of drugs less closely linked to clubbing, such as cannabis and cocaine, vary by country.)

Heavy alcohol consumption has also fallen slightly among young people. Excessive drinking in Britain has seen a particular decline: between 2005 and 2013 the proportion of 16-24-year-olds who were frequent drinkers (defined as drinking alcohol on five days in the previous week) fell from 7% to 2%. Buying a drink in a club is “really expensive”, gripes Amanda, a university student from America in London. (In certain clubs “guys are douchebags”, she adds.)

The second trend is that big outdoor music festivals are replacing clubs. In 2014 around 130 festivals took place in Amsterdam alone. In Britain some 250 take place annually, up from 80 in 2004. Many people are saving up to go to two big festivals a year, rather than clubbing each month, thinks Iason Chronis, a DJ. The economies of scale of big festivals, in which a captive audience splurges on food and drink, make it easier for festival organisers to book big DJs such as Calvin Harris or Jamie XX. This, in turn, makes it harder for clubs to afford them.

The night mayor’s nightmares

Some cities are trying to halt the decline. In 2002, after a stricter pole-dancing law was introduced in Amsterdam, the post of a voluntary “night mayor” was created to lobby on behalf of the night-time club and entertainment industry. “Small events are like small business schools,” claims Mirik Milan, a self-proclaimed “rebel in a suit” who has held the post of night mayor since 2014. In London last year a “music venues task-force” set up by the fun-loving mayor, Boris Johnson, recommended that local authorities should take a more “balanced” approach to dealing with noise and that a night mayor should be appointed. In Germany Mr Leichsenring of the Club Commission sits on a working group for the Berlin chamber of commerce. These night-time champions may be able to achieve better relations between governments, neighbourhoods and clubs. But there is little they can do about the decline of 24-hour party people. ■

Charlemagne | Early adopters

In their coolness towards the EU and multiculturalism, the Dutch were ahead of Europe's curve

CALL them the hipsters of European neurosis. Take any of the anxieties that have lately beset Europe's politics and you find the Dutch got there first. Concerns over fiscal waywardness in the euro zone? They were fuming at German and French profligacy over a decade ago. Asylum and immigration? The Dutch were agonising over multiculturalism while Angela Merkel was still plotting her ascent to the *Bundeskanzleramt*. The threat from anti-European populists? The Dutch have seen several come and go.

Such worries have now gone mainstream across Europe. So it is an interesting time for the Netherlands to take over the rotating six-month presidency of the Council of the European Union (the forum for national ministers). As one of the six founding EU members the Dutch are practised at steering the machinery, even if the presidency is not the force it once was (see page 10). But they are taking charge at a tricky moment. The EU was supposed to be a "fair-weather union", says Bert Koenders, the foreign minister. Now it must prove itself in a storm.

The refugee crisis and the Paris attacks have threatened the EU's passport-free Schengen area. Migration and security will therefore be at the top of the Dutch in-tray. Mark Rutte, the competent if plodding prime minister, should make a decent fist of the job, so far as Europe's squabbling governments allow. But he has his own difficulties at home. The first is a bizarre referendum in April on an EU association agreement with Ukraine. The vote, triggered by a satirical website that gathered the necessary signatures, will inevitably turn into a simple test of the voters' mood.

That could mean trouble for Mr Rutte, for like many of his EU peers he has a populist problem. Geert Wilders, a Dutch Donald Trump (with equally striking hair), is way ahead in opinion polls. His anti-Islam, anti-EU PVV outfit has dragged every party rightward on immigration. Some figures in Mr Rutte's liberal VVD now take an eye-wateringly tough line; their coalition partner, the centre-left Labour Party, frets about refugees undermining support for the welfare state. The PVV has not always translated its poll numbers into votes. But the Netherlands' complex party system could leave future governments with an awkward choice: bring Mr Wilders into office (or rely on his support), or form an unwieldy coalition designed solely to keep him out of it.

This dilemma is hardly unique to the Netherlands. But Dutch Euroscepticism has certain peculiarities. Small and highly dependent on trade (exports contribute 32% to GDP), the Netherlands does not have the luxury of British-style Euro-contempt, as is apparent at any of its hundreds of land border crossings. Indeed, when the political winds have been favourable the Dutch have been among the more enthusiastic members. Two EU treaties—Amsterdam and Maastricht—bear the names of the Dutch cities in which they were signed. The uppermost ranks of EU policymaking are dotted with Dutchmen, from Jeroen Dijsselbloem, head of the Eurogroup of finance ministers, to Frans Timmermans, first vice-president of the European Commission.

But two things seem to have turned the Dutch. The first was a growing gap over Europe between ordinary voters and the cosy elites who have traditionally run the show: in 2005 many politicians were shocked when over 60% of voters rejected a proposed EU constitution in a referendum. (Mr Wilders continues to mine this anti-elitist seam.) The second was the discovery that not every European country can uphold its duties as responsibly as the Dutch—and that in an increasingly integrated club, a failure to behave in a Dutch fashion has painful consequences for others.

Dutch patience has been tested on two counts. First, badly run economies in the euro-zone's periphery have obliged the Netherlands to pay for half a dozen bail-outs (for which they have insisted on extremely tough conditions). Second, over 50,000 asylum-seekers made their way to the Netherlands in 2015, waved through by negligent Mediterranean countries that fail to register migrants properly. This influx, noteworthy if much smaller than the ones that reached Germany or Sweden, has even led some Dutch politicians to call for a revision of the 1951 Refugee Convention, the cornerstone of global asylum law.

The Dutch approach should not be mistaken for an ideological reluctance to integrate. It is rather the frustration of the small, rich country that follows the rules and cannot abide those that don't. Rather than walk away from the club, the Dutch want it to work better. From here spring ideas like a shrunken "neuro", a currency shared by responsible northern Europeans shorn of southern fecklessness, or a "mini-Schengen", an idea floated by Mr Dijsselbloem in which the current 26 members are reduced to a rump of five: the three Benelux countries plus Germany and Austria. Neither proposal was ever likely to pass. The hope was that they might spook other countries into shaping up.

Euroscepticism with Dutch characteristics

Two lessons can be drawn from the Dutch experience. The first is that the nasty brand of populism represented by Mr Wilders is here to stay, and not only in the Netherlands. It will poison public debate, complicate efforts to manage the migrant crisis and cause headaches for politicians trying to assemble governments. Such is the tortured terrain of European politics these days.

But there is a second lesson that may act as a mild corrective to Euro-gloom. As border controls pop up across Europe, Schengen looks gravely imperilled. Yet the wealth and dynamism of the Dutch economy show the value of an open-border regime in an integrated continental club. The Netherlands will not be alone in battling for its future. Today's border checks are troublesome but manageable. But Europeans will not tolerate complete border closures or 50-mile traffic jams. Charlemagne therefore ventures a prediction: forecasts of Schengen's imminent collapse will prove no more accurate than those of the demise of the euro zone so often heard in 2011-12. ■

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The Church of England

Resurrection?

Parts of the established church are learning from their immigrant brethren

TO SEE the future of Christianity in Britain, go on a Sunday morning to an old Welsh Congregational chapel off the Pentonville Road in Islington. The building has been bought by a Pentecostal Ethiopian church; the congregation raises its hands in a show of unEnglish ecstasy to praise God in Amharic. A few hours later, something unexpected happens. A congregation of mainly white members of the Church of England start their service. This group, known as King's Cross Church, or KXC, has grown from a handful in 2010 to 500 now.

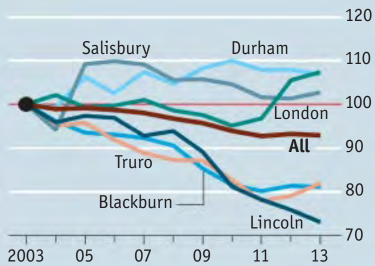
The first service reflects a well-documented phenomenon: an immigrant-led surge in London churchgoing. Weekly participation in Christian services in the capital has grown by 16% since 2005. Most devout Londoners (88%) worship outside the ranks of the established church whose spires pierce the skyline; about a third are Pentecostal. But the second service shows that even some Anglican churches are bucking the downward trend in membership. London is one of several dioceses within the Church of England that are growing, if only a little (see chart).

Overall the drift down in church attendance continues, as new figures later this month will show. The proportion of people calling themselves Christian fell from 72% in 2001 to 59% in 2011. Those saying they have no religion rose from 15% to 25% in that period (including 177,000 claiming to be Jedi). The number of churchgoing Anglicans fell by 12%, and in 2013 stood at 1m. Some 19m baptised Anglicans do not attend church.

Hints of revival in parts of the Church of England point to broader changes. Traditionally, the established church has had an obligation to serve everyone who lives in a parish. Its churches have been the centrepiece for local and national events. But many Anglican churches that are growing, as in King's Cross, are "network" churches. They meet in pubs and offices outside the parish system. Most are evangelical, emphasising a personal faith based on conversion rather than a cultural affiliation to a denomination. They believe in tithing—giving a tenth of their income to the church—which increases their influence as other congregations shrink and expectations of financial giving fall.

Bottoming out?

Church of England, average weekly adult attendance*, 2003=100



Source: Church of England

*Three fastest-growing dioceses, three fastest-shrinking dioceses

Nick Spencer of Theos, a religious think tank, says the Church of England is switching from a broad-based organisation, characterised by affiliation more than commitment, to a smaller grouping of more committed worshippers. Some observers suggest the parochial system, which has helped shape English life for centuries, needs to change. They also question the Church of England's position as the state church, established by law. Should it cling to its old role of thinly spread universal provision or abandon it to foster smaller pockets of exuberance?

Papists and puritans

For centuries, the Church of England has been a broad one. With a low bar for membership—being born usually suffices—it has been there to hatch, match and dispatch anyone who wanted its services, a sort of religious public utility whose moderation has formed the English character and provided a glue for English society.

As in the worldwide Anglican Communion (see box on next page), tensions remain. For liberals, the reasons for decline are obvious. "English society and the Church of England have gradually drifted apart in terms of values," says Linda Woodhead, professor of the sociology of religion at Lancaster University. "This was true over issues like remarriage and the ordination of women, and it's true of same-sex marriage." Evangelicals say the church is right not to be swayed by changing social mores. They emphasise being counter-cultural and point out that many churches which are growing run against the liberal flow. "What is dying in England is not ▸▸

Christianity but nominal Anglicanism," says David Goodhew of Durham University, author of "Church Growth in Britain". The share of evangelicals in the Church of England rose from 26% to 34% between 1989 and 2005, says Peter Brierley, a church demographer, and could now be nearly 50%.

Not all growth is evangelical. Attendance at cathedrals rose by 35% between 2002 and 2012. But four of the five most senior bishops in the Church of England, including the Archbishop of Canterbury, Justin Welby, are from the evangelical tradition. They differ from their American counterparts, says Mr Spencer. "They are less focused on creationism and abortion and less right-wing politically." Archbishop Welby and Nicky Gumbel, vicar of Holy Trinity, Brompton (HTB), London's most influential evangelical church, both have Cambridge law degrees. HTB has planted many churches in London and is doing so in the rest of England. They are conservative on issues like gay marriage, prompting accusations by liberals of bigotry.

To be fair, there is not much sign of bigotry at King's Cross Church's weekly drop-in for prostitutes, nor its programme to keep kids on rough housing estates away from gangs. Many evangelicals want to restore the tradition of conservative social engagement set by William Wilberforce. They sigh at their characterisation as hateful homophobes. "Everyone thinks they know what the church is against," says Pete Hughes, the church's youthful pastor. "We want to be known for the things we are for: proclaiming the love of God and showing it in our actions."

The declining importance of denominational affiliation continues to put pressure on the parish system. With 9,000 of its 16,000 churches in rural villages, "it is not fit for purpose", declares David Voas of Essex University. Network churches are "like a virtual community", he says, better suited to the modern era.

The church is trying other models. One is Fresh Expressions, a mixture of new congregations such as Messy Church for children and Café Church for grown-ups, trying to reach the unchurched. Many have lay leaders. Another bottom-up initiative is the "minster model". A prototype in rural Buckinghamshire, Latimer Minster, has grown from eight people in 2010 to 350. It is financially independent, thanks to tithing. Frog Orr-Ewing, the vicar, calls minsters the "ecclesiastical equivalent of academies" (state-run schools outside local-authority control).

Much of this is difficult for liberals to take. "What about the people who would rather stick their head in a food mixer than become an evangelical?" asks Alan Wilson, the bishop of Buckingham, who openly supports gay marriage. He worries that the increasing number of people who affiliate only loosely or not at all with the Church of England will be alienated. Many do not hold liberal Christian beliefs, let alone evangelical ones. Mr Voas calls them "the fuzzies", epitomised by a 2011 survey that found only 47% of 18- to 34-year-olds declared a religious affiliation, but 67% said they occasionally or regularly pray.

As to the possibility of disestablishment, most think it is unlikely to happen. Politicians are barely involved any longer in choosing bishops. A majority of people say they want a Christian coronation for the next monarch, and no government would tie up parliamentary time unpicking the links between canon and civil law. So the Church of England will probably struggle on. Yet if it is to survive, this most traditional of English institutions must do more to adapt to a post-Christian world. ■

Global Anglicanism

Rowing, not rowing

The Archbishop of Canterbury tries to save the Anglican Communion

WHEN he was an undergraduate at Cambridge, Justin Welby, the Archbishop of Canterbury, was cox of a Trinity College rowing eight. Perhaps coincidentally, rowing metaphors flowed in September when he announced that he had invited all 37 global Anglican primates to Canterbury for a conference starting on January 11th, in what some see as a last-ditch attempt to save the Anglican Communion. One aide suggested that bishops should not spend so much time "trying to placate people and keep them in the boat, without ever getting the oars out and starting to row". Frustrated that bickering is keeping Anglicans from their primary mission, the archbishop will need all his powers as a cox to head off a collision, or even the sinking of the global Anglican boat.

The problem is a row between liberals, mainly North American, who want the church to allow same-sex marriage, and conservatives, who think it must not. Some leaders from each side are not on speaking terms. Archbishop Welby is said to want a looser affiliation, so that both groups can keep relations with Canterbury and continue to call themselves Anglican but not have to deal with each other. He has no "papal" powers to kick out any provinces; previous attempts to discipline those who defy traditional Anglican teaching have been stopped from below. The archbishop is "not so much trying to get closer unity", says one informed cleric; "he is trying to prevent greater disunity."

The biggest danger is that some African conservatives, who take a traditional view of sexual ethics, will walk out and lead a breakaway movement. But liberal North Americans are also angry that Archbishop Welby has invited Foley Beach. He heads a group that has split off from the Episcopal church (the official American wing of Anglicanism) in opposition to its consecration of sexually active gay bishops, which the church first did in 2003. Mr Beach and others have formed alliances with conservative African leaders.

Heading for the rapids

The archbishop's pragmatic risk-taking represents a change from his two predecessors, who tried to encourage the two sides to work together. One way he has managed to get all the primates to attend (at the last big meeting in 2011 a third were absent) is to invite them to set the agenda. Used to spats in the Church of England at home, he has emphasised the need for "good disagreement".

He has also made clear to conservative Africans that, although he supports the church's traditional stance on marriage, it must not translate into homophobia. In June he expressed deep concern about "the stress for the Anglican Communion" after the American Episcopal church started the procedure to enable its clergy to solemnise same-sex marriages. But he has also admonished bishops who support the criminalisation of gays. If he can steady the boat, says the cleric, it will be a miracle.

Bagehot | Battlefields of the mind

To defeat Islamic extremism in the intellectual arena, Britain must understand it better

"THIS is a message to David Cameron," begins the unmistakably British-accented rant, "oh slave of the White House, oh mule of the Jews". Waggling a gun, his features obscured by a balaclava, the man calls the prime minister an "imbecile" for deploying armed forces against Islamic State (IS). His melodramatic, almost adolescent conniptions would be laughable were it not for what follows: the execution of five kneeling men in orange jumpsuits, accused of being British spies. The video, released on January 3rd, ends with a cherubic boy aged perhaps four proclaiming, in a southern English accent: "We will kill *kuffar*."

Amid speculation about the man's identity—newspapers named Siddhartha Dhar, a British-Indian—the tape elicited comparisons to earlier execution videos fronted by Mohammed Emwazi, a Briton known as "Jihadi John" who was apparently killed by a drone strike in November. Theresa May, the home secretary, told MPs this week that 800 Britons have now travelled to Syria and Iraq and about half have returned.

Britain's anti-terrorism strategy is evolving. Despite new powers to monitor suspects and seize their passports, exit checks at borders and dollops of money, the spooks are having to set priorities. The state's capacity to restrain every individual minded to kill for an idea has natural limits. So the government is turning its attention to the sort of non-violent extremism that creates conditions for the violent kind. In the process it is tacitly conceding an awkward point: most British Muslims abhor extremism, but a distinct minority is ambivalent. One poll in November suggested that one in five had at least some sympathy with young Muslims fighting in Syria (although, as many reports omitted to add, the question did not specify for whom).

Such thinking has been circulating in Whitehall for a decade, but the radicalising effect of IS and the exit of civil libertarian Liberal Democrats from the government in May have given Mr Cameron the impetus and political freedom to pursue it more forcefully (in Downing Street this is seen as one of the four main issues that will define his second term). So last July the anti-extremism "Prevent" programme was expanded to give public bodies like schools, universities and prisons a statutory duty to shield their charges and monitor them for signs of radicalisation. In a speech a month later Mr Cameron pledged more, adding: "Let's not forget our strongest weapon: our own liberal values."

This sleeves-up, ideological onslaught on Islamism is so sensible that other European countries want to emulate it. Yet it faces problems. Grandstanding by the government (blimpishly labelling as "British values" principles like tolerance that are in no sense autochthonous), as well as by some Islamic bodies (the Muslim Council has railed unhelpfully against Prevent) and the press (prone to lazy talk of "the Muslim community" as an indivisible monolith) steers British Muslims away from anti-extremism initiatives. Figures from the National Police Chiefs Council suggest that less than 10% of Prevent tip-offs in the first half of 2015 came from Muslims. Jahan Mahmood, a former government adviser, knows this mistrust: "People think: 'Shit, who is this guy?' "

Suspicion among Muslims is matched by bewilderment among public servants. London teachers whom Bagehot asked about their new role said they felt overwhelmed; the complexity of modern British Islam is such that non-Muslim staff must resort to crude methods such as listening out for deaths in pupils' families that might betoken youngsters on a foray to the Middle East. But often radicalisation happens online or outside the home ("If it is him, bloody hell am I shocked? I am going to kill him myself," Mr Dhar's sister said of reports that he might be the new Jihadi John). The authorities told one head that some pupils were at risk—but gave no names. Very little apart from ideology unites the jihadists, notes Innes Bowen, an analyst of British Islam.

The answer is for schools and councils to work with Muslim leaders. But which? Sifting out those energetically committed to fighting radicalism can be beyond well-meaning but strained local branches of the British state. Consider the Prevent grants that end up in the hands of ideologically contentious groups. Or the revelation in November that a community centre in north London was inadvertently hosting proselytising sessions for IS. Or the blind eye turned by local authorities to the recent infiltration of some Birmingham schools by Islamists.

Many of the more exciting anti-radicalisation initiatives are led by Muslims themselves and take place outside the Prevent framework. Mr Mahmood, wary of its brand, independently mentors young men. Alyas Karmani, a Bradford imam who has aptly compared the psychological function of IS guns to penis extensions, is similarly sceptical of Prevent. Abu Khadeejah, a Birmingham-based Salafist, posts theologically justified critiques of IS on his blog. Yet such types face intimidation and even physical danger. One anti-jihadist Muslim activist tells how a critic threatened him by drawing a finger across his throat.

Of pens and swords

What to do? In the short term the government should consider renaming and relaunching Prevent, a good programme with a bad reputation. But a generational struggle over ideas and minds requires a generational answer: a dramatic improvement in mutual understanding between different parts of an increasingly diverse society. That means more briefing on the nuances of British Islam for local authority figures (Ms Bowen's book, "Medina in Birmingham, Najaf in Brent", is a good start), arm's-length liaison bodies for Muslim moderates uncomfortable about engaging with the state, efforts to reverse the decline of religious studies and better policing of fashionable but often unaccountable "faith schools". One Prevent officer in London jokes that more students should be encouraged to study theology. Why not? In a battle of ideas, knowledge is the most powerful of weapons. ■

Also in this section

Racial segregation

The great melting

CHICAGO AND NEWHAM

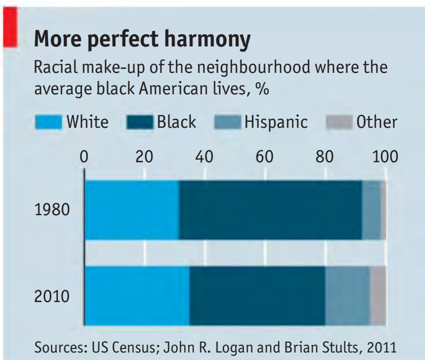
Cities are becoming less racially segregated. For that, thank suburban sprawl, extortionate house prices and immigrants

OAK PARK, just outside Chicago, is known to architecture aficionados as the home of Frank Lloyd Wright, who built some fine houses there. This small suburban village also has another distinction: it is racially mixed. In the 1970s it vigorously enforced anti-segregation laws; today the "People's Republic of Oak Park", as it is sardonically known, is 64% white, 21% black and 7% Hispanic. "Oak Park stands out so much," says Maria Krysan at the University of Illinois at Chicago. But it does not stand out quite as much as it used to.

America remains a racially divided country, and Chicago is one of its most segregated cities. The south side is almost entirely black; northern districts such as Lincoln Park are golf-ball white; a western slice is heavily Hispanic. Yet the Chicago metropolis as a whole—the city plus suburban burghs like Oak Park—is gradually blending. For several reasons, that trend is almost certainly unstoppable.

When it comes to race, appearances often deceive. Streets can appear black or Asian when they are actually full of black or Asian shoppers who live somewhere else. Statistics are more reliable, and the best measure is known as the dissimilarity index. This reflects the proportion of people of a given race who would have to move out of their census tract—an area of a few thousand inhabitants—and into another one in order to spread themselves evenly. In 1970 the black-white dissimilarity index for Chicago was above 90, meaning that more than 90% of blacks would have had to move in order to become integrated with whites. By 2000 the figure had fallen to 81. William Frey, a demographer at the Brookings Institution, a think-tank, calculates that it now stands at 76.

In 45 of 52 big American metropolises with sizeable black populations, black-white segregation has fallen since 2000, according to Mr Frey. Southern cities, which many blacks fled in the first half of the 20th century, are now less segregated than northern ones such as Chicago and New York; sunbelt cities such as Las Vegas and Phoenix are more mixed still. In 1980 the average black urbanite lived in a district that was 61% black. Now he or she lives in a place that is 45% black (see chart). Asians and Hispanics are neither more nor less segregated than they were, probably because two trends are cancelling each other out: as some members of those fast-growing groups move out of ethnic enclaves, they are replaced by new immigrants. Still, both groups are far more integrated than blacks: the Hispanic-white index of dissimilarity was 44 in 2010, and the Asian-white score just 40.



America is unusual, both for its obsession with race and for its superb statistics. Poor countries lack the means to collect precise data, and many rich ones choose not to. Some, like France, are so high-minded that they hold race to be irrelevant; in others racial censuses smell uncomfortably like fascism. A few countries distinguish foreigners from natives, though, and there the trend is mostly the same as in America.

In Sweden migrants from outside Europe have become less segregated since the 1990s, calculate Bo Malmberg and others at the University of Stockholm. By one measure, desegregation is happening fastest in Malmo, a city with lots of immigrants. In the Netherlands Sako Musterd, a geographer, calculates that foreigners have become less segregated from the native Dutch in Rotterdam. Amsterdam grew more segregated until the late 2000s, but now seems to be going the other way.

The European country that stands out is Britain. Like America, Britain collects excellent data on race and ethnicity; also like America, it is becoming steadily more mixed. Gemma Catney at the University of Liverpool has shown that every ethnic minority became less segregated between 2001 and 2011 (the two most recent British census years). Black Africans, who had been among the most clustered, are ▸▸

spreading out especially quickly.

Yet Britain's streets are often quite different from America's. Around West Ham football ground, in the east London borough of Newham, is a ward called Boleyn. Once largely white and British, it is now something else entirely. In the Ercan fish-and-chip shop, on the Barking Road, the managers complain that whites have moved to the suburbs, to be replaced by immigrants and ethnic minorities who have not developed a taste for fish fried in batter. "Only on match days you see English people around here," says one. The supermarket next door has 27 national flags above the entrance.

Ethnic Pakistanis, who may be immigrants or British-born, are now the biggest group in Boleyn. That is not saying much, though. Of the ward's 16,000 inhabitants, just 2,500 were Pakistani at the time of the 2011 census, making them 16% of the population. Most of the remainder belonged to Britain's largest ethnic groups—white Britons (who are 13% of the population), Indians, Bangladeshis, black Africans, black Caribbeans and white eastern Europeans. Boleyn also contains mixed-race people and members of groups that are rare in Britain as a whole, such as Filipinos and Sri Lankans.

Newham has become astonishingly diverse, as have other working-class parts of London (see map). That has shaped its politics. Newham not only lacks powerful ethnic blocks; its politics is actually anti-ethnic. In Newham's old town hall Sir Robin Wales, the mayor of the borough, talks proudly about removing ethnic newspapers from local libraries and refusing to subsidise street parties if they are designed to attract only one group. Sir Robin, who is a white Briton (specifically a Scot, and thus a rarity thereabouts), was easily re-elected in 2014, winning 61% of the vote.

Perhaps Britain and America will become more segregated over time, with ghettos in new places. Perhaps many cities in countries that refuse to collect race data are quietly dividing. Perhaps—but probably not, because the forces driving integration are both powerful and widespread.

The first is the drift of non-whites from city centres to suburbs and commuter towns. British and American suburbs are still mostly white, but less so than before. In 1990 just 47% of American Hispanics and 37% of blacks lived in suburbia; by 2010, 59% of Hispanics and 51% of blacks did. Cook County, which includes the city of Chicago, has lost 140,000 black inhabitants since 2000, while the surrounding rural and suburban counties all gained them. Whites are moving into some cities, including Chicago, though rarely as quickly as blacks are leaving.

Some old suburbs have become heavily black or Hispanic—or, in Britain, south Asian. But for the most part suburbanisation leads to mixing. Ethnic minorities who leave city centres tend to be better-off and neither need nor want to live in enclaves. If they choose to move to a newly built suburb, as they often do in America, they will be blocked neither by racist housing laws, which have been abolished, nor by bigoted assumptions about the character of the neighbourhood. That is why the swelling, sprawling cities of the American south and west are so mixed.

A second force for integration is immigration. In Newham the churn caused by immigrants arriving and then moving to better districts has thoroughly dissolved old colour lines. The same is true of parts of America, too. John Logan of Brown University says that whites often stay when Latinos and Asians move in to a district. After a while blacks move in too, taking advantage of the path paved by the Latinos and Asians—and whites mostly continue to stay. Logan Square, a handsome district in north Chicago with wide boulevards and big, stylish houses, seems set to become such a "global neighbourhood". Its population is 42% white and 46% Hispanic.

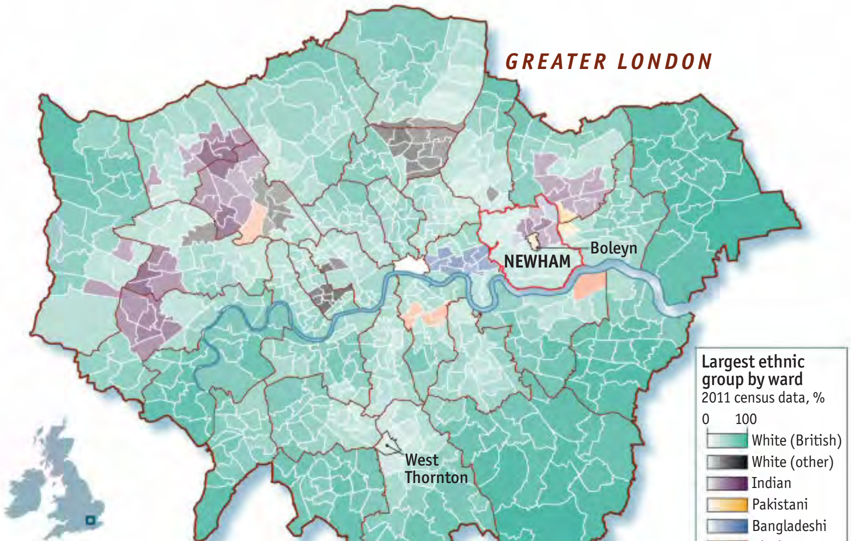
A powerful third force is love, which integrates families as well as places. In London whites and black Caribbeans marry or cohabit in such numbers that there are now more children under five who are a mixture of those two groups than there are black Caribbean children. Marriages between whites and Asians are growing, too. America is mixing just as quickly. In 2014, Mr Frey calculates, 19% of new American marriages involving whites and 31% involving blacks were mixed-race. The share for both Hispanics and Asians was 46%. The children of such unions can be hard to deal with statistically. So in the future the numbers will probably underestimate the speed of desegregation.

All this is most welcome. But there is a fourth driver of racial and ethnic integration in cities, which is not so benign. Because big cities are such desirable places to live, and have failed to build enough new homes, they are now so expensive that people can barely afford to segregate themselves. In London property prices have risen so steeply that the average first-time buyer needs to raise a deposit equivalent to about 120% of annual income, according to Neal Hudson of Savills, an estate agent. In the 1980s it was enough to raise just 20-30%.

Increasingly, people just buy property where they can. And along with the great weight of evidence showing that countries are becoming less segregated by race and ethnicity, there is also growing proof that they are becoming more segregated by income. One kind of separation might be replaced by another. ■

White shuffle, not white flight

When, three years ago, it was revealed that white Britons had become a minority group in London, with just 45% of the population, there was much hand-wringing over "white flight". The release of more fine-grained data since then has shown what is really happening. White Britons have abandoned almost no part of London. They remain the biggest ethnic group in huge swathes of the capital, partly because non-whites are themselves so diverse. But their numerical dominance is eroding, and in some places it is barely noticeable. White Britons are the biggest group in West Thornton, in south London, with just 17% of the population. This is not white flight—it is more a lazy shuffling of white feet away from the most immigrant-dominated areas. How British.



Interactive: Explore further with our ward-by-ward breakdown of each ethnic group at Economist.com/ethniclondon

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The future of personal transport

The driverless, car-sharing road ahead

Carmakers increasingly fret that their industry is on the brink of huge disruption

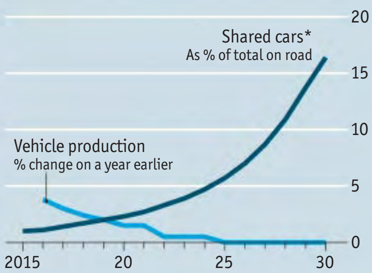
THE whizzy gadgets for geeks to goggle at during CES, an annual consumer-electronics show in Las Vegas, have typically been small enough to pick up. But they been joined in recent years by an increasing number of cars. The Detroit motor show, America's biggest and glitziest, starts later this month, but many in the car industry now regard CES, which opened on January 5th, as a more important event. Mary Barra, GM's boss, unveiled a new production version of its Bolt electric car at Las Vegas this week.

Incumbent manufacturers are recognising the double threat posed by technology, as car-sharing takes off and driverless vehicles come closer. First, some people who might hitherto have wanted to own a car may no longer do so, cancelling out the growth the motor industry might otherwise have expected from the rising middle classes in developing countries (see chart). Second, technology firms may be better placed than carmakers to develop and profit from the software that will underpin both automated driving and vehicle-sharing. Some of these firms may even manufacture cars of their own.

In a report ahead of the Las Vegas and Detroit shows, Morgan Stanley, an investment bank, said the motor industry was being disrupted "far sooner, faster and more powerfully than one might expect." It predicted that conventional carmakers would scramble in the coming year to reinvent themselves. As if to demonstrate this, shortly before CES opened, GM announced a $500m investment in Lyft, a ride-sharing service.

A rumoured tie-up between Ford and Google to produce driverless cars failed to materialise at the show, but even the rumours underlined the disruption that tech firms are bringing to the motor industry. And other partnerships were announced: Ford is teaming up with Amazon to connect its cars to sensor-laden smart homes.

Sharing, not growing
Worldwide forecast



Source: Morgan Stanley

*Including taxis, excluding car rental

It was also revealed at CES that Toyota would adopt Ford's in-car technology, which is a competitor to Apple's CarPlay and Google's Android Auto, to access smartphone apps and other features.

That is not the only example of carmakers joining forces to avoid being beholden to the tech giants. In August BMW, Daimler and Volkswagen's Audi division jointly bought Here, a mapping service, from Nokia, to ensure that carmakers have an independent provider rather than having to depend on Google Maps. Nevertheless, carmakers are also teaming up with tech firms because each has something the other needs. Building and marketing cars, and dealing with safety and emissions regulators, is tricky. Tech firms could copy Tesla, which has built its own electric cars for more than a decade. Apple, which is said to be planning an electric car, may try to have them made in the same way as it does its iPhones, outsourcing to a contract manufacturer. But a more obvious route is to ally with an established carmaker.

Carmakers also have lots to learn. Most are working on making their vehicles either fully or partly self-piloting, and a number are running their own car-sharing experiments. But Google remains the leading exponent of autonomous driving. Its robotics, drones and search engine all contribute expertise that helps to guide a driverless car down the road avoiding pedestrians, obstacles and other vehicles, using computing power and sophisticated software to interpret masses of data received both from the car's on-board sensors and from external sources through wireless connections.

Yet if the tech firms have much to gain as they muscle in to the motor business, ▸▸

the carmakers are wary of what they have to lose. Profits may seep away towards the producers of the software and the owners of the data, and away from the makers of the hardware. Hitherto, new cars—even quite modest ones—have tended to be bought as status symbols and expressions of personal style, but if consumers become more interested in what software and entertainment systems a car can run, rather than what it looks like, the industry's whole business model may come apart.

Ride-sharing, car clubs and other alternatives to ownership are already growing fast. Young city-dwellers are turning their backs on owning a costly asset that sits largely unused and loses value the moment it is first driven. Carmakers insist that such consumers are merely deferring buying a vehicle, pointing to the fact that people continue to drive at an older age than they used to. But the pronouncements of motor-industry bosses suggest that doubts are creeping in. At CES Mark Fields, Ford's CEO, said that it would in future be "both a product and mobility company".

Membership of car clubs, which let people book by app for periods as short as 15 minutes, is growing by over 30% a year, according to Alix Partners, a consulting firm, and should hit 26m members worldwide by 2020. Competition is intense. ZipCar, owned by Avis Budget, a conventional car-hire firm, is thriving. More carmakers are copying Daimler's Car2Go and BMW's Drive Now apps. Earlier this year Ford began testing both a car-sharing service in America and a car club in Britain. Daimler reckons its scheme is profitable. But such services are unlikely ever to match the returns, especially for premium makers, from selling vehicles.

At the same time, app-based taxi services such as Uber and its Chinese counterpart Didi Dache, which are often cheaper and more efficient than conventional cabs, are also growing quickly. Once these are able to dispense with drivers for their vehicles, the taxi, car-club and car-sharing businesses will in effect merge into one big, convenient and affordable alternative to owning a car.

So when will the fully autonomous car hit the showrooms? Google, whose cars have done 1.3m test miles (2.1m km) on public roads, once promised 2018, whereas most analysts reckoned the 2030s more plausible as carmakers introduced automated-driving features in stages. Now, Mr Fields is talking about autonomous cars being ready to roll by 2020. More conservative car bosses add five years.

Barclays, another bank, forecasts that the fully driverless vehicle will result in the average American household cutting its car ownership from 2.1 vehicles now to 1.2 by 2040. A self-piloting car may drop off a family's breadwinner at work, then scuttle back to pick up the kids and take them to school. The 11m or so annual sales of mass-market cars for personal ownership in America may be replaced by 3.8m sales of self-driving cars, either personally owned or part of taxi fleets, Barclays thinks.

Driverless cars still have problems in bad weather. They may struggle to recognise that light shining off a puddle is harmless or guess that a pedestrian is about to step into the traffic without looking. But sophisticated systems for hands-free driving on motorways, and for automated parking, are already available on a number of manufacturers' models. Fully driverless cars will ferry workers round GM's technical centre in Detroit in late 2016.

Convincing regulators to allow fully driverless cars onto the streets is the next hurdle. Insurers and consumers also need to be won round. If self-driving cars can be introduced first on private roads or designated areas of cities to prove their worth in avoiding accidents and reducing congestion, that might help. Within the industry, the big question is not whether this future will arrive, but whether tech firms or carmakers will grab the spoils. Will the sign on the dashboard say Ford (powered by Google) or Google (powered by Ford)? ■

The cost of cheating

Volkswagen's hopes that it was getting on top of the emissions-test cheating scandals that emerged in September were short-lived. European regulators have accepted its proposals to fix affected cars. The damage to sales in America was less than feared—they fell by 9% year on year in December. But now VW faces a civil action by the Department of Justice that could cost it up to $48 billion. Criminal charges and more fines may follow. Investors shuddered, fearing a repeat of BP's colossal Deepwater Horizon payouts. Exane BNP Paribas, a bank, reckons VW will end up paying a fraction of that sum.

Volkswagen share price, €

Source: Company reports

Biotechnology

Cutting remarks

A gene-editing company files for an IPO

AS DIFFICULT sales pitches go, this one is hard to beat. This biotech company has burned through $75m in the past few years and has not yet started clinical work on a drug candidate. It says it will be many years, "if ever", before it has something ready to commercialise. If this were not enough, not only is there a thorny patent thicket to manage but the firm must fight and win a case seeking to overturn its own intellectual-property claims on the ground that it was not the first to invent them.

Despite all this, shares in Editas Medicine, which filed on January 4th for an initial public offering, look set to draw great interest from investors. It will be an opportunity to buy into a revolutionary new technology called CRISPR-Cas9, which allows DNA to be cut and edited almost as easily as one might rewrite a document on a computer. Editas, spun out of the work of geneticists at the Broad Institute in Cambridge, Massachusetts, has already raised $163m from private investors and is seeking a further $100m from the markets. Its initial aim is to begin trials by 2017 on a possible treatment for a rare form of blindness.

Editas is not alone in pursuing the CRISPR-Cas9 technology. Others include Caribou Biosciences, CRISPR Therapeutics and Intellia Therapeutics. There are also firms such as Bluebird Bio and Sangamo, which are further ahead with drug candidates developed using older, and clunkier, forms of gene-editing.

In the past two years about $1 billion of venture-capital financing has been invested in new gene-editing technologies, reckons the Boston Consulting Group. This reflects the promise the technology offers for producing treatments, and even cures, for a wide range of conditions—and not just those linked to mutated genes, such as haemophilia or sickle-cell anaemia. An early move to go public will help Editas stand out from the crowd, and perhaps help it recruit and retain good scientists.

CRISPR Therapeutics says it is also thinking about going public, given investors' interest. Although enthusiasm for biotech IPOs as a whole may have cooled in the second half of 2015, Eva Haas of Hume Brophy, an investor-relations firm, says the Editas IPO is happening because it is "in a hot area and because it can." Editas is also helped by having a stellar list of private investors, including Google, Bill Gates and Fidelity Investments, as well as three venture-capital backers, Polaris Partners, Third Rock and Flagship Ventures. (A number of other biotech companies filed to go public this week, including Corvus Pharmaceuticals, which is working on small-molecule drugs for cancer, and Audentes Therapeutics, a gene-therapy firm.)

Some startups in other areas of technology have chosen in recent years to delay going for IPOs and to raise money privately instead. However, Sam Zucker of Sidley Austin, a law firm that manages corporate transactions in biotech, says that early-stage firms in this area may be keen to go public because they want to be free from dependence on a small network of venture-capital firms. The pool of public capital they will then be able to dip into is often faster to materialise, as well as larger, than private capital, he says. Wherever the money comes from, however, Editas and other gene-editing firms will need to show results eventually. ■

Facebook in India

Can't give it away

Mark Zuckerberg's internet-access programme hits a roadblock

"WHO could possibly be against this?", Mark Zuckerberg, Facebook's boss, asked in an editorial in the *Times of India* on December 28th. The "this" in question is "Free Basics", a programme that gives its users free access to Facebook and a handful of other online services on their smartphones in 36 poor countries. According to Mr Zuckerberg, Free Basics acts as a gateway drug to the internet: half of those who first experience going online through the service start paying for full internet access within a month. Though the programme is promoted by Facebook, its costs are borne by the mobile-telecoms operators it works with—in the case of India, Reliance Communications, the country's fourth-largest.

As it turns out, plenty of people are against Free Basics. They include everyone from India's internet-and-mobile-industry body (of which Facebook is itself a member) to a ragtag group of volunteer activists who mustered almost 400,000 people to write to the Telecom Regulatory Authority of India (TRAI) as part of a public consultation on whether mobile operators should be allowed to charge different amounts for different forms of data. At stake is one of the world's largest and fastest-growing internet markets outside China, which bars foreign digital services such as Facebook from entering. Around a quarter of the Indian population—or 300m people—were online at the end of 2014, and the number is expected to double by 2020.

Critics of the programme say that Facebook's generosity is cover for a landgrab. They argue that Free Basics is a walled garden of Facebook-approved content, that it breaches consumer privacy by sucking up all the data generated by users of the service, and that it is anticompetitive to boot. Moreover, critics fear that if new internet users are merely Facebook users, other online businesses will have no choice but to operate within Facebook's world. Nandan Nilekani, an Indian tech luminary opposed to Free Basics, suggests that, instead, the government subsidise a monthly allowance of free mobile data for each user.

Facebook counters that the programme is open to all-comers that meet certain technical requirements, that user data are stored for only 90 days, and that there is no profit motive: the service does not include advertising. As for suppressing local competition, Facebook argues, "there is no greater threat to local innovation than leaving people offline." If, as Mr Zuckerberg says, Free Basics users quickly graduate to paying for full internet service, India's ferociously competitive mobile operators should provide it cheaply. And if Free Basics proved popular there would be little to stop India's big media and e-commerce groups from creating rival services to attract new surfers to their web offerings.

Over the past few weeks, Facebook has run an extensive campaign with full-page ads in Indian newspapers touting Free Basics. Newspapers, blogs and television channels have presented arguments and counterarguments every day. Even All India Bakchod, a popular comedy collective, got into the act. The group's video arguing against Free Basics has been watched 800,000 times on YouTube—and another 350,000 on Facebook itself.

Activists in India won early victories in 2015, leading Facebook to change the name of its service from internet.org, which they said was misleading, and forcing the company to accept more services than those it handpicks. In December the TRAI suspended Free Basics in India pending the results of its consultation. The TRAI has received 1.4m notes of support for Free Basics as part of this process, driven largely by an automated response tool Facebook used to gather support from its Indian users. But the regulator says it may have to disregard them, since they do not answer the question it is asking. The TRAI itself will deliver its verdict at the end of this month. ■

Sorry, I'm just talking to my Facebook friends

Off-price fashion retailing

To the Maxx

NEW YORK

Clothes shops that sell famous brands at big discounts are thriving

THE downtown Manhattan store of T.J. Maxx, with its dreary fluorescent lighting and haphazard displays, is about as glamorous as the average petrol station. Yet to retail analysts, and bargain-hunters, it is thrilling. At the end of one bedraggled rack, a red jacket offers a hint of the store's appeal. The coat, from Michael Kors, an American designer, is on sale at $99.99. A comparable coat would cost $140 elsewhere, the label boasts.

Using discounts to shift clothes is no novelty in fashion retailing. Indeed, in the current climate, with competition fierce and consumers hesitant, it is hard to avoid. But what marks out T.J. Maxx and other "off-price" retailers is that most of their stock is from habitually pricey designer labels, at drastic reductions. TJX, the parent company of T.J. Maxx and a handful of other off-price chains, rarely gives interviews, like its closest competitor, Ross. But their model is essentially as follows: when the designer labels produce more clothes than normal shops will sell at full price, TJX and Ross buy them at a deep discount, then resell them. As a strategy for global domination, it sounds underwhelming. But TJX and Ross are booming.

TJX has become the top seller of clothing not just in America but, according to some measures, the world. Ross is smaller but, given its room to grow, has become an investor darling. The Dow Jones United States Apparel Retailers Index fell by 6% during 2015 but the shares of Ross and TJX rose by 15% and 4% respectively.

Other American fashion chains are having a harder time. Shoppers are snubbing once-beloved names like Gap, J.Crew and Abercrombie & Fitch. Department stores' habit of ordering their stocks of clothes months in advance leaves them vulnerable to ever-faster changes in tastes and to unpredictable weather. This autumn's mild temperatures, for example, left them stuck with unwanted coats and scarves. All are threatened by more agile foreign "fast fashion" retailers, such as Inditex of Spain and H&M of Sweden.

In contrast, the American off-price chains are continuing to expand. In 2014 TJX's sales overtook those of Macy's, a famous department-store chain (which this week announced big job cuts and store closures). They are not at the cutting edge of high-street fashions: many of their lines are last season's. Their skill lies in hunting down surplus batches of stock from well-known brands and negotiating steep reductions. But the wind is at their backs. According to Bryan Gildenberg of Kantar Retail, a consulting firm, it is getting harder for shops to predict which clothes will sell at full price. "If the apparel industry is harder to forecast, there's more inventory at risk, and if there's more inventory at risk, the opportunity for this sort of buying goes up astronomically," he says.

Maxx-imising their share

US clothing and footwear retail market share by company, % of total

Source: Euromonitor

*TJX includes T.J. Maxx and Marshalls †Gap Inc includes Gap, Old Navy and Banana Republic

Off-price retailers do not try to offer every size in every colour in every outlet. They buy whatever is available, so their shops have a constantly changing, seemingly random assortment. Ross says its stores typically get fresh stock three to six times a week. They therefore appeal to the sort of shopper who loves to rummage, hoping to stumble across the perfect item at an irresistible price. "It looks like a jumble, but actually it's a very deliberate jumble," says Neil Saunders of Conlumino, another consulting firm.

The shops are spartan and thinly staffed, since customers are happy to hunt for bargains without help, and understand that if it isn't on display, the store doesn't have it. As a result, the overheads at TJX and Ross are, as a percentage of sales, about half those of Macy's or Nordstrom, another department-store chain. The experience of shopping in an off-price store is hard to replicate online, notes Oliver Chen of Cowen and Company, a financial-services firm, so TJX and Ross are less threatened by the rise of internet retailing than other clothing chains.

It may all sound simple, yet some off-price chains have flopped. The company that owned Filene's Basement, for example, filed for bankruptcy in 2011. Ross and TJX now have the benefits of scale as well as, analysts say, strong management. TJX is spreading across Europe, where it trades as T.K. Maxx.

The two chains are not just admired by industry analysts. They are also appreciated, albeit more discreetly, by the designer labels. An elite brand dare not damage its image by flooding off-price retailers with its products. But TJX and Ross have become an essential part of the retail ecosystem, offering a way for brands to clear their excess stock quickly. The off-price chains may drive a hard bargain but are otherwise easy to deal with. Department-store chains often demand sale-or-return clauses, or retrospective discounts for stock that they were forced to reduce.

The risk for the fashion brands is that they end up a bit like American carmakers before their bail-outs, habitually overproducing and dumping their growing surpluses on the off-price chains and thus gradually losing their ability to sell at full price. As for TJX and Ross, one long-term worry, says Mr Gildenberg, is that younger consumers expect ever less expensive clothes. Forever 21, which specialises in cheap, trendy wear, has grown quickly. Primark of Ireland, which opened its first American branches last year, boasts fashionable clothes for Walmart prices.

For now, though, both of the big off-price chains have room for further expansion. It is no surprise then, that some rivals are seeking to muscle in to the business: Macy's is expanding a new off-price chain, Macy's Backstage, and Nordstrom is opening more branches of its one, Nordstrom Rack. Off-price is in fashion. ■

Jollibee

Acquired tastes

SINGAPORE

A tenacious Filipino burger chain tries a different way to conquer the world

DESPITE coming from a region full of celebrated cuisines, the food of the Philippines has a grim reputation among foreigners. Among its delicacies is the *balut*—a duck egg containing a two-week-old embryo, which is eaten straight from the shell. A more representative picture of local tastes is painted by the menu of Jollibee, a fast-food chain that peddles sugary burgers, noodles and fried chicken.

At home, Jollibee is much loved and highly profitable. But its attempts to conquer foreign markets have had only modest success. After decades of trying, the Jollibee chain has only 133 foreign branches (compared with 890 back home), catering mainly to clusters of expat Filipinos in places such as the Gulf and California.

Jollibee's roots lie in a pair of ice-cream parlours opened in 1975 by Tony Tan Caktiong, the company's founder and chairman. At home Mr Tan and his burger joints are feted for having survived the arrival of McDonald's, which entered the Philippines in 1981. Today Jollibee far outsells its great rival there. It catered better to the whims of locals, who prefer dishes such as Jollibee Spaghetti—an odd Bolognese mixed with chopped frankfurters—to Western chains' more savoury offerings. And it has marketed itself cannily as a family firm and a store of national pride.

Over the years Jollibee Foods, the parent company, has expanded to include restaurants run under a handful of other brands, including Chowking (which sells Chinese-style dishes) and the local Burger King franchise. Since 2010 the parent's sales and net profits have increased by around 70%, to 118 billion pesos ($2.5 billion) and 5.4 billion pesos respectively, as the growth of Filipino call-centres and other outsourcing businesses has boosted overall consumer spending. The parent group's total number of outlets has grown to more than 3,000 (of which 630 are abroad). The firm still has a lot of room to expand in fast-growing provinces beyond the densely populated main island of Luzon, which is home to only about half the country's 100m people.

However, Mr Tan has long aspired to make Jollibee Foods a global champion. His current target is for the company's foreign revenues eventually to be half of the total, up from less than one-quarter now. Managers talk of it becoming one of the world's five most valuable fast-food operators. There are still substantial pockets of expats unable to feast on an Amazing Aloha Champ Burger (a bacon-cheeseburger with a wodge of pineapple), and in 2016 the company will open new branches of its eponymous chain in places such as Britain, Italy and Canada to reach them. But the company has gradually come round to the view that to reach its goal, it needs to buy foreign restaurant chains with menus better suited to the tastes of non-Filipinos.

A trio of chains acquired since 2004, offering Chinese cuisine, have given Jollibee Foods a sizeable foothold in mainland China. They now generate about 12% of its sales, though collectively they have taken a decade to turn consistently profitable. In January 2015 the company announced that it was part of a joint venture which plans to bring at least 1,400 branches of Dunkin' Donuts to China in the next two decades, which will mean tussling with such fellow invaders as Starbucks and Costa Coffee.

America is the next frontier. In October Jollibee Foods said it would fork out a little under $100m—its biggest investment to date—for a 40% stake in Smashburger, an American "fast-casual" burger joint. That should allow it to benefit from America's increasing fondness for slightly finer on-the-go nosh, which is shaking McDonald's grip on its home market. Mr Tan said in November that he was looking for one or two further foreign acquisitions of the same size or bigger.

There is no guarantee that venturing into new markets with unfamiliar menus will succeed any better than its forays under its own brand. In America as in China, the market for all sorts of low-cost dining is getting ever more competitive. It will be vital to avoid unforced errors such as Jollibee's shambolic overhaul of its IT systems in 2014, which briefly closed more than 70 of its branches and which is still weighing on its performance.

Some analysts back home are, however, confident it is up to the task. Creating a national brand in the Philippines, a disparate archipelago with distinct local cultures, will have been good practice for venturing abroad, reckons Ghia Yuson of First Metro Securities, a stockbroker in Manila. She thinks the relentless market research which has kept Jollibee in tune with Filipino food fads will also serve it well overseas. Furthermore, its strategy seems to be to buy food chains that are already well established and have capable managers, rather than buying weaker businesses and attempting to turn them around.

Several other cash-rich Philippine firms, such as Universal Robina, a food manufacturer, and Emperador, a distiller, are now spreading their wings across South-East Asia, says Hazel Tañedo of CLSA, another broker. But none has made so direct a beeline for the world's biggest markets. If Jollibee's American venture succeeds and its profits in China keep growing, it should boost ambition among other Filipino firms, even if it doesn't change foreigners' minds about the country's cuisine. ■

Filipinos' fave

Startups in Australia

From lucky to plucky

SYDNEY

An entrepreneurial prime minister calls for a culture of innovation

WHEN people call Australia "The Lucky Country", they often do not realise that Donald Horne, the writer who coined that phrase in a book of the same name in 1964, meant it as a criticism. "Australia is a lucky country run mainly by second-rate people who share its luck," he wrote. "It lives on other people's ideas…" Horne intended the phrase as a warning to Australians, and a plea for more curiosity from its leaders.

The country's good fortune has long rested on wealth from its mineral resources and farmland. Now, however, with the prices of the commodities it exports hitting rock-bottom, Australians are beginning to realise that more must be done to encourage the formation of innovative businesses. Instead of living on other people's ideas, in other words, it needs to generate its own.

Among Australia's 2.6m registered businesses, the survival rate compares well with America's and Canada's, and is better than New Zealand's. But a study published last month by the government's Productivity Commission found that few young Australians start their own firms; that only about 0.5% of newly formed businesses are startups as commonly understood (innovative, ambitious and with high growth potential); and that only 1-2% of existing businesses can be described as innovating. This puts Australia on a par with Canada, say, but behind America and Britain. The commission concluded that one reason why Australia lags is that entrepreneurs need "other entrepreneurs nearby to connect and work with."

Fortunately, Australia now has both a shining example of a tech startup becoming a global success, and a former tech entrepreneur as prime minister. Atlassian, a software firm whose products are used by developers and project managers, listed on the NASDAQ exchange in America last month, making its founders, Scott Farquhar and Mike Cannon-Brookes, Australia's first tech billionaires. And in September Malcolm Turnbull, a lawyer and investor turned politician, unseated Tony Abbott as prime minister and leader of the Liberal Party. In the 1990s Mr Turnbull had made a fortune investing in OzEmail, an Australian internet-service provider.

Atlassian's blunt slogan befits its Australian roots: "Open company, no bullshit". Though it has offices in San Francisco, its headquarters remain in Sydney. Its founders, two university friends, started it in 2002 with a A$10,000 (then $5,400) credit-card loan. Fourteen years later, Atlassian's customers include NASA, Netflix and Facebook and the company is valued at $5.6 billion. "When we began, there was no startup culture in Australia to follow," says Mr Farquhar. "The attitude, fear of failure, was a problem." Some say it still is.

Three days before Atlassian's listing, Mr Turnbull gave a speech that Australian business leaders hailed as a welcome change in official attitudes to promoting innovation. Mr Abbott had cut a backward-looking figure, stopping public funding for wind energy and describing coal as "good for humanity". Mr Turnbull called for an "ideas boom" to replace mining booms as the country's new growth source, and told Australians they were falling behind most other rich countries in turning their ideas into commercial ventures. He promised about A$1 billion ($720m) in incentives, including tax breaks for investors in startups and venture-capital partnerships.

Mr Turnbull's pitch to brand himself as the leader of the future, and to get his compatriots to rethink their "Lucky Country" attitudes, may take more than tax breaks. To begin to create the sort of community of entrepreneurs and innovators the Productivity Commission called for, Atlassian tried to buy a 19th-century former railway workshop near Sydney's business district. In November, however, the New South Wales state government sold the site instead to a consortium led by Mirvac, a property company.

Mirvac plans to use much of the site for new offices for the Commonwealth Bank, though it will convert a former locomotive shed into spaces for tech firms and other startups. Even so, Mr Farquhar laments the sale as a lost opportunity to build a larger tech ecosystem that could help spawn more companies like his. Australia, he says, must decide if it wants to be a software producer for the world or a consumer, "missing this whole revolution and left wondering how we are going to pay for it".

Mr Turnbull is putting his faith in a strengthening of links between science and business. He has restored a A$111m budget cut that Mr Abbott made to the Commonwealth Scientific and Industrial Research Organisation (CSIRO), Australia's chief science agency, the outfit that invented the technology behind Wi-Fi.

Larry Marshall, the CSIRO's head, was struck by Australia's somewhat timid approach to business risk when he returned to his home country in 2015 after working as an entrepreneur for 26 years in Silicon Valley. He suggests would-be tech pioneers could find a model in Australia's "incredibly risk-tolerant" frontier economy. Facing enormous distances and tough terrain, miners and farmers have survived only by innovating. The CSIRO has, for instance, collaborated with BHP Billiton, Newcrest Mining and others on better ways to drill ores, detect their grades and raise productivity. Cotton farmers now mainly use varieties the CSIRO has developed, which need less water and pesticides to deliver high yields. The challenge, Mr Marshall argues, is to channel the old economy's risk-taking into new industries in which Australia has a good chance to excel: high-value food and biotechnology.

Some are already following in Atlassian's wake. Alec Lynch and Adam Arbolino launched DesignCrowd in Sydney eight years ago after an earlier startup failed. Undeterred, Mr Lynch saw a chance to change the "slow, risky and expensive" way people procure projects from local graphic designers. DesignCrowd lets customers set budgets and receive ideas from designers around the world. After self-funding at first, capital came in from local angel investors and Starfish Ventures, a Melbourne venture-capital firm. DesignCrowd now has revenues of almost A$20m a year, four-fifths from outside Australia, and has opened offices in San Francisco and Manila.

Mr Lynch foresees a "mini startup boom" emerging in Australia. And he is optimistic that the interventions of the tech-friendly prime minister can only help Australia go from being the Lucky Country to one that makes its own luck. ■

Japanese entrepreneurship

Thinking inside the box

TOKYO

Furniture for the introverted

IT STARTED in a cosy *izakaya*, or pub, in Fujieda, in Shizuoka prefecture, when a gathering of furniture-makers dreamed of marking out some space for themselves in their cramped family homes. The result was an *otoko no kakureya*, or "hiding place for men", a tiny, cockpit-like wooden room with a desk, shelves and reclining chair. Sales are taking off.

Another popular Japanese product offering the illusion of personal space is the Solo Theatre (pictured), a cardboard box that users put over their heads, which has a slot for Apple's iPhone. Inside there is a black cut-out of a row of heads, as if the user is at a cinema.

The product's surrealism has tickled thousands of Japanese social-media users. It is a selfish product that appeals to the need to get into a small womblike space of one's own and watch films and other content, explains Satoshi Aoyagi, of Lucy Alter Design, who fashioned it with a colleague.

Another factor is shrinking living-space. The average Japanese apartment has dwindled from 70 to 60 square metres over the past decade, so that people are even more on top of each other. Cultural forces are powerful too, notes Masahiro Abe, a sociologist at Konan University. Japanese must don a public mask for their hierarchy-bound, open-plan offices, and a second face for their families. Turning to small, private boxes at home is their way of searching for a "third space", he says.

Now all we need is a tiny popcorn-seller

Hayato Kasai, a subculture expert at Bibi Lab, a design firm, went so far as to bring a tent to the office as a way of tucking himself away and avoiding interaction with colleagues. His company quickly spotted a new product in it, and designed an indoor "Bocchi Tent". *Bocchi* is a sarcastic word for "alone", but now it is becoming a brand.

There is also a new "Danbocchi" soundproofed cardboard box for karaoke from Bandai Namco Entertainment, a video-game company, so that singers no longer have to record under blankets at home. Bibi Lab's tent for loners now far outsells the firm's regular ones for camping outdoors.

Despite the success of such products at home, it remains unclear if there is much demand outside Japan from people hankering for privacy. They are also examples of the introversion of Japanese product designers, who nowadays tend to think more of the home market, and struggle to create world-beating ideas like the Sony Walkman. They are also often unwilling to compromise. One enthusiastic customer asked the makers of the Solo Theatre to produce a double-sized cardboard box so that he could watch films in it with another person. The answer was a firm "no".

Schumpeter | Toy story

What the fad for the non-hovering hoverboard tells us about business

THAT was quick. A couple of months ago hoverboards were the next big thing. Today they are a bad joke. It turns out that they sometimes burst into flames, pitch their riders onto the floor and otherwise cause mayhem. In his boxing career, Mike Tyson was knocked out only five times. A YouTube video shows him felled by a hoverboard in a matter of seconds.

This is more than a story of a short-lived fad. It is a parable of business life under what Jeremy Corbyn, the hard-left leader of the British Labour Party, would probably call "late capitalism". "This is the modern economy in a nutshell," says Josh Horwitz on *Quartz*, a news website: "viral trends, massive manufacturing hubs, IP disputes, weak regulation, immensely powerful businesses, and global ripple effects." The big question is whether it is a prophecy as well as a parable: a growing number of analysts think that 2016 will be the year in which the new economy falls back to earth.

The hoverboard craze exemplifies three facets of modern business. The first is its propensity to blur the boundaries between fantasy and reality. Many modern high-tech devices started life in science fiction: think of "Star Trek" characters consulting clever hand-held devices and talking to their computers. Elon Musk wants to shoot people across California in vacuum-sealed tubes. Jeff Bezos wants to deliver packages by drone. Hoverboards themselves were introduced to the world by Hollywood in "Back to the Future Part II".

One problem with hoverboards is that they don't blur the line between fantasy and reality far enough. Rather than hovering above the ground, they trundle along it on a couple of wheels (although someone has now invented one that really hovers; see our Science section). Hoverboard entrepreneurs dealt with this problem by pulling another rabbit from the fantasist's hat—pretending that hoverboarding is part of the celebrity lifestyle. The trick was to put the product in the right places—at the MTV awards ceremony and under the feet of Justin Bieber. The fad gained momentum as the B-list celebs followed the A-listers, and the wannabes aped the B-listers. Kendall Jenner, a reality-TV starlet, posted a video of herself on one. More than a million people "liked" it on Instagram. Wiz Khalifa, a rapper, was stopped and handcuffed for riding on one in Los Angeles airport. A Filipino priest sang to his congregation while gliding around on one.

The craze for hoverboards also exemplifies the agility of modern business, from the prowess of China's manufacturing cluster in Shenzhen to the reach of e-commerce platforms in both China (Alibaba) and America (Amazon). China's manufacturers have a long record of churning out cheap knock-offs at high speed. But they are more efficient than ever thanks to the arrival of internet platforms. Alibaba allows Chinese manufacturers to place bulk orders for components and lets wholesalers place bulk orders for finished products. Amazon completes the picture by allowing Western consumers to have their hoverboards delivered rapidly with just the click of a mouse.

And the hoverboard fad points to a third characteristic: the difficulty of regulating a global supply chain that starts with a fantasy, ends with an Amazon package and takes in a bustling Chinese assembly plant in the middle. Everything in the product's supply chain emphasised speed over competence. Britain's National Trading Standards agency found that 15,000 of the 17,000 hoverboards it examined were unsafe because of problems with their plugs, cabling, chargers, batteries or cut-off switches. It is frustratingly hard to hold the various producers of the gadgets accountable for these problems: manufacturers subcontract as much as they can and internet retailers are often simply electronic shopfronts with no influence over product quality. The regulation of hoverboards was complicated further by a legal battle between three separate entrepreneurs over who has the rights to them. Even so, this still does not explain why retailers in the United States were able to sell the products apparently without even rudimentary health-and-safety tests.

Hovering on the edge of legality

The problem may have solved itself: so many hoverboards have burst into flames that Amazon has either dramatically restricted the number of models it sells, as in America, or banned them entirely, in the case of Britain. Several Chinese firms have stopped producing them. But, for a remarkable number of new-economy businesses, the regulatory problem remains unresolved.

Many tech startups have tended to adopt the same approach as the hoverboard industry—exploiting legal grey areas on the ground that, if they build enough momentum, legislators and judges will simply adjust the law to take into account new commercial realities. That is a big bet: many of today's biggest firms are like hoverboard riders heading for bumpy ground. Uber may be forced to reclassify its drivers as employees rather than contractors, rendering it liable for millions of dollars in back pay and upending its business model. Airbnb may be forced to abide by the health-and-safety and licensing rules that apply to hotels.

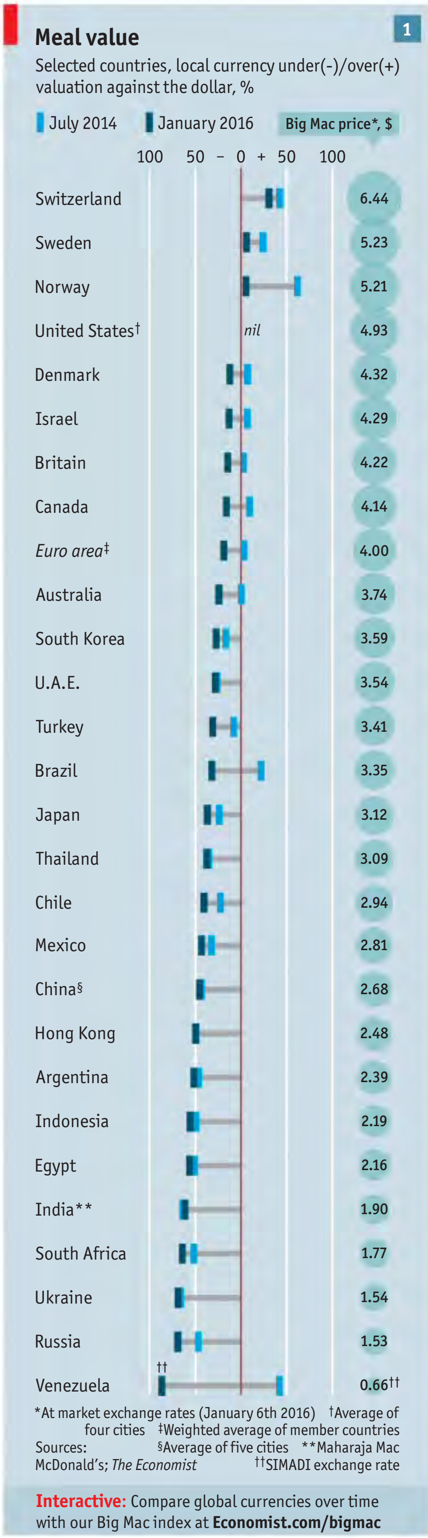
The threat of adverse regulation animates the question of whether the hoverboard fiasco is a prophecy as well as a parable. Silicon Valley has long displayed some of the classic characteristics of a bubble: companies vying to build the most eye-catching headquarters and CEOs competing to produce the most extravagant ideas to "change the world". There are growing signs that private valuations of tech "unicorns" will not hold up when they are subjected to the rigours of the public market. Some unicorns have shied away from going public at the last moment and others such as Good Technology, a mobile-device security firm, have sold themselves at lower valuations than they had hoped. If regulators alter the landscape further, 2016 might be the year that such firms follow the hoverboard and go up in a puff of smoke. ■

The Big Mac index

After the dips

Also in this section

Big currency devaluations are not boosting exports as much as they used to



*At market exchange rates (January 6th 2016) †Average of four cities ‡Weighted average of member countries §Average of five cities **Maharaja Mac ††SIMADI exchange rate

Sources: McDonald's; *The Economist*

Interactive: Compare global currencies over time with our Big Mac index at **Economist.com/bigmac**

MIGHT "Made in Russia" labels become common? If currency depreciation alone could boost exports, then yes. According to our latest Big Mac index, the Russian rouble is one of the cheapest currencies around, 69% undervalued against the dollar. The index compares the cost of the famous burger at McDonalds outlets in different countries by converting local prices into dollars using market exchange rates (as of January 6th, see chart 1). It is based on the idea that in the long-run, exchange rates ought to adjust so that one dollar buys the same amount everywhere. If a burger looks like a bargain in one currency, that currency could be undervalued.

Americans hunting for cut-price burgers abroad are spoilt for choice: the index shows most currencies to be cheap relative to the greenback. This is partly owing to the Federal Reserve's decision to raise interest rates when the central banks of the euro zone and Japan are loosening monetary policy. The euro is 19% undervalued against the dollar, according to the index, and the yen 37%. Another force weakening many currencies, including the rouble, has been the ongoing slump in commodity prices since mid-2014. Shrinking demand from China and a glut of supply have sapped the value of exports from Australia, Brazil and Canada, among other places, causing their currencies to wilt, too. By the index, they are respectively 24%, 32% and 16% undervalued. If commodity prices continue to fall, they could slide even further.

These large currency devaluations can hurt, by raising the price of imports and spurring inflation. But although devaluations may not be pleasant, they are meant to be nutritious. Pricier imports should encourage consumers to switch towards domestic products and stimulate local production. A cheaper currency should also boost growth by spurring exports.

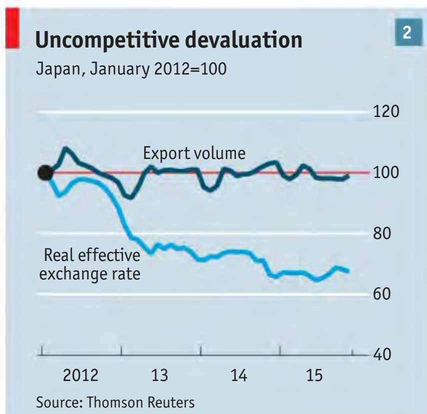
Between 1980 and 2014, according to an analysis of 60 economies by the IMF, a 10% depreciation relative to the currencies of trading partners boosted net exports by 1.5% of GDP over the long term, on average. Most of the improvement came within the first year.

But devaluations do not seem to have provided quite the same boost recently. Japan is the best example. The yen has been depreciating rapidly. A Big Mac was 20% cheaper in Japan than in America in 2013; now it is 37% cheaper. Yet export volumes have barely budged (see chart 2). This is a surprise: the IMF calculates that Japanese exports are around 20% lower than it would have expected, given how the yen has weakened. Devaluations in other countries, including South Africa and Turkey, have also disappointed.

A global contraction of trade in dollar terms may be obscuring devaluation's benefits. Although exports from countries with weakening currencies may look limp, many of them are still securing a bigger slice of the shrinking pie. The collapse in commodity prices is also masking some signs of life. Take Brazil, where the volume of exports rose by 10% in 2015 even as their value plunged by 22%. Some of that is caused by commodity exporters compensating for falling revenue by selling ever more minerals and oil. But not all of it. In Australia, for instance, exports of goods other than raw materials jumped by around 6% in mid-2015, according to the Commonwealth Bank of Australia.

But there are also signs that "Dutch disease" has taken a toll on the capacity of commodity-producing countries to ramp up other exports. When prices were high, capital flowed in, pushing up their currencies and thus making their other exports less competitive. Labour and investment flowed mainly to commodity firms. That has left other industries too weak to pick up the slack now that these once-soaring currencies have fallen back to earth.

Russia is a good example. Non-energy exporters appear to be struggling despite ▸▸



Source: Thomson Reuters

Retail banking

Blunt elbows

There is less competition among banks than first meets the eye

HERE'S a puzzle: in bustling Manhattan, where bank branches abound, people pay much more for the privilege of stashing their cash than in sleepy Kansas. Greater competition should reduce charges and fees. Yet there is no sign of such a relationship. That is because much of the competition is phoney, according to a new working paper*.

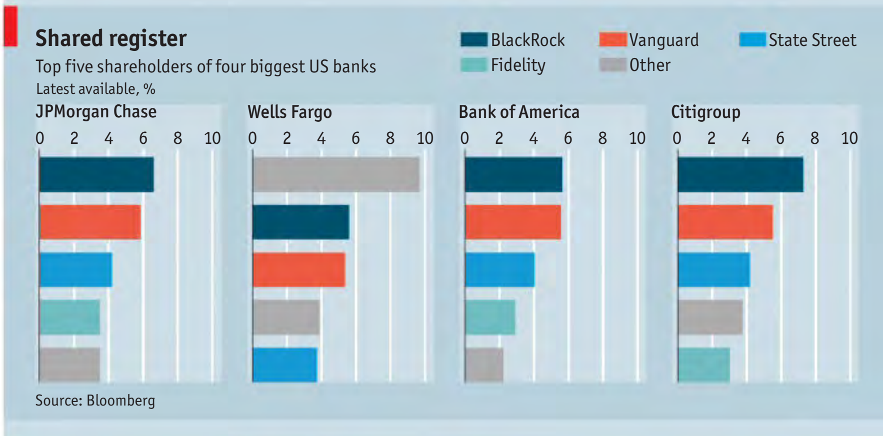
Antitrust authorities typically gauge competition by looking at how many different banks operate in a given area. But the authors argue that this ignores the fact that a handful of big asset-management firms have large holdings in many of these "competing" banks (see chart). An investor who owns shares in two rival banks would naturally be reluctant for them to compete away profits. To please their shareholders, the banks might keep charges and fees high.

The authors calculate the extra degree of market concentration implied by American banks' common ownership. In 2013 this additional concentration was so great that it would typically be associated with an increase of 11% in fees on current accounts, and a rise of 20% in the minimum balance at which banks stop levying fees. Where common ownership rose the most in 2002-13, charges were also most prone to rise.

These findings may seem implausible to those who see asset managers like Vanguard and BlackRock as purely passive investors. But even passive funds can be actively involved as shareholders. And firms may themselves decide not to compete in order to keep common owners happy. At any rate charges and thresholds crept steadily upwards during the 2000s, at the same time as index funds expanded their shareholdings in banks.

Banking is not the only industry in which the authors have found evidence that common ownership saps competition: a working paper published in March found that the concentration of ownership at airlines in America had boosted ticket prices by 3-5%. Common ownership has never really been on the radar of competition authorities. That may need to change.

* "Ultimate Ownership and Bank Competition" by José Azar, Sahil Raina and Martin Schmalz



the rouble's plunge. Over the first half of 2015, as the volume of energy exports surged, non-energy exports fell, according to Birgit Hansl of the World Bank. She points out that it is not enough to have a price change: "First you have to produce something that someone wants to buy." The rouble's weakness is an opportunity for industries that already export, such as chemicals and fertiliser. But boosting other exports requires investment in new production, which takes time.

Both the IMF and the World Bank have highlighted another possible explanation for the weak performance of exports in countries with falling currencies: the prevalence of global supply chains. Globalisation has turned lots of countries into way-stations in the manufacture of individual products. Components are imported, augmented and re-exported. This means that much of what a country gains through a devaluation in terms of the competitiveness of its exports, it loses through pricier imports. The IMF thinks this accounts for much of the sluggishness of Japan's exports; the World Bank argues that it explains about 40% of the diminished impact of devaluations globally. That leaves many manufacturing economies in a pickle. ■

Oil benchmarks

Crude measure

American oil exports have boosted the WTI benchmark, for now

FORTY years ago America, still reeling from the 1973 oil crisis, banned most exports of crude oil. That prohibition was lifted by Congress in mid-December. The first shipment under the new rules set sail on December 31st from the Texan port of Corpus Christi. The renewed flow of crude is already changing how oil is priced.

Not all barrels of oil are alike. Crudes can be viscous like tar or so "light" they float on water. Their sulphur content ranges from the negligible ("sweet") to the highly acidic ("sour"). Though hundreds of grades are bought and sold, traders use a handful of benchmarks to make sense of the market. Brent, from the North Sea, is the current international standard. Americans prefer to use a similar grade known as West Texas Intermediate (WTI).

WTI was once the main global benchmark. It has a number of advantages over Brent. For one thing, it arrives at the delivery point—Cushing, Oklahoma—by pipeline, and so can be sold in batches of variable size. Brent, in contrast, can only be sold by the tankerload. As Brent sees fewer, bigger transactions, generating continuous prices is tricky. The ever-shifting price of WTI can be observed directly, making it more transparent. And Brent is umbilically connected to a declining oil province. It comes from only a handful of oilfields, whereas a WTI contract can be satisfied by any suitable oil delivered to Cushing.

WTI had one vital flaw, though. The export ban meant that it could detach from world oil prices if America produced more crude than expected, since the surplus could not be exported. For most of the late 20th century that risk was hypothetical, as America's output steadily declined. But in recent years the shale-oil boom revived ▸▸

American production. A glut of crude emerged, first at Cushing and then by the cluster of refineries on the Gulf of Mexico. That pushed American crude prices below Brent. The spread peaked in 2011 at $28 a barrel. As the price of WTI began to say less and less about the state of the world market, traders spurned it in favour of Brent. Trading in contracts linked to Brent overtook those linked to WTI in early 2012.

The resumption of American exports has changed all that. The two benchmarks now trade at more or less the same price. WTI has duly regained its position as the most traded oil benchmark. This back-and-forth, however, may prove a distraction compared with another shift in the oil market: its centre of gravity is moving inexorably eastwards. OPEC, a cartel of oil exporters, expects demand in Asia to grow by 16m barrels a day by 2040. If that happens, Asia would end up consuming more than 46m barrels a day—four times as much as Europe. As Asia grows, it will become the dominant force in the world market.

A good benchmark has to reflect supply and demand for oil wherever it is used. WTI may continue to be influenced by bottlenecks in the American market. Brent reflects the market for oil in north-west Europe. That was once a positive, but as Europe's share of global demand for oil declines, proximity to the continent is no longer the advantage it was.

That suggests that an Asian benchmark will rise to the fore. The Shanghai International Energy Exchange plans to launch its own yuan-denominated contract this year. The new benchmark will have trouble getting off the ground. For one thing, China's capital controls make it difficult for foreigners to buy the yuan needed to trade the contracts. The wild swings in China's equity markets set an unnerving example for investors. But time is on its side. ■

Buttonwood | Loathe thy neighbour

Politics is making international co-operation harder

POLITICS is local but most problems are international. That is the fundamental problem for national governments caught between the twin forces of globalisation and voters' anger.

The European refugee crisis, for example, seems to cry out for a continent-wide solution. But the tide of migrants has been so vast that national governments have been tempted to put up barriers first, and answer questions later. The latest example saw Sweden introduce checks on those travelling from Denmark, leading the latter country, in turn, to impose temporary controls on its southern border with Germany. Anti-immigration parties have been gaining in the polls; with the exception of Angela Merkel, mainstream politicians want to head off the threat.

The current system combines unchecked movement within the Schengen area (which does not include all members of the European Union) with external borders patrolled by national governments. There is no Schengen border force, but once inside, refugees can go anywhere within the Schengen countries.

In a way, this looks like the same mismatch that has plagued the euro: a single currency without a unitary fiscal and political authority. Many economists have advocated much greater integration of the euro zone in the wake of the bloc's crisis. The European banking system would be stronger if there was a comprehensive deposit-insurance scheme; the economy would be more balanced if there were fiscal transfers from rich to poor countries. But such plans are unpopular with voters in rich countries (who perceive them as handouts) and in poor countries (who worry about the implied loss of local control that reforms would require).

All that the EU's leaders have managed so far is to cobble together solutions (such as the Greek bail-outs) at the last minute. The impression of indecisiveness in Brussels has done nothing to make the EU more popular with voters—surging anti-immigrant parties are also Eurosceptic.

At the global level, co-operation also seems more difficult. Gone is the unity of the G20's summit in London in 2009, when leaders agreed on a co-ordinated stimulus in response to the financial crisis. The appetite for fiscal stimulus seems to have completely disappeared.

Central banks are now heading in different directions: the Federal Reserve has just tightened monetary policy while the European Central Bank and the Bank of Japan are committed to easing. The euro zone, which has a big trade surplus, seems happy to let its currency depreciate, adding to deflationary pressures elsewhere.

Trade creates tighter links between countries, but global trade growth has been sluggish in recent years. The OECD thinks that trade grew by only 2% in volume in 2015. No longer is trade rising faster than global GDP, as it was before the crisis. In a widely expected but still depressing development, the Doha round of negotiations on a new global trade agreement has been abandoned, although the trans-Pacific deal did make it through.

International agreements require compromise, which leaves politicians vulnerable to criticism from inflexible opponents. Voters are already dissatisfied with their lot after years of sluggish gains (or declines) in living standards. When populist politicians suggest that voters' woes are all the fault of foreigners, they find a ready audience. With the global economic pie growing more slowly, the temptation is to try and grab a bigger slice of it—at the expense of everyone else.

Furthermore, economic woes can lead to much more aggressive foreign policy. It is hard to believe that the fall in oil prices—and the effect on national budgets—has not played some part in the current turmoil in the Middle East.

In the developed world, demographic constraints (a static or shrinking workforce) may limit the scope for the kind of rapid growth needed to reduce the debt burden and make voters happier. Boosting that sluggish growth rate through domestic reforms (breaking up producer cartels, making labour markets more flexible) is very hard because such reforms arouse strong opposition from those affected.

The danger is that a vicious cycle sets in. Global problems are not tackled because governments fail to co-operate; voters get angrier and push their leaders into more nationalistic positions. And it is hard to see things changing this year, with no country likely to take the lead. America will be consumed by its presidential election, Europe by refugees and fear of terrorism, China by its adjustment to slower growth. No one is in charge.

Economist.com/blogs/buttonwood

The market for economists

The right match

SAN FRANCISCO

America's biggest economic conference doubles as a jobs fair

THE American Economic Association's annual conference, held each January, is ostensibly a gigantic teach-in, with lots of seminars featuring famous economists. But the three-day event, held this year in San Francisco with 13,000 attending, is also a big jobs fair. More than 500 employers—both universities and companies—were tied up in hotel rooms holding marathon interview sessions with freshly minted PhDs. The ballroom of the Marriott was set aside for a hundred more.

It is a gruelling three days for candidates: one exhausted PhD likened it to speed-dating. It is also arduous for recruiters. Towards the end of the first day Alan Green and Christopher de Bodisco of Stetson University, a small private college in Florida, review the candidates they have seen so far. They are looking for someone with an interest in health and development. They plan to grill a dozen candidates each day before inviting the most promising ones to visit its campus and meet the rest of the faculty.

The grandest universities use suites for comfort but also as a display of prestige. Plausible candidates are given a code to exchange for the hotel-room number in order to deter gatecrashers. The leading institutions speak to the best candidates; the rest to anyone they think they can get. "There's no point in talking to someone who's going to end up at Harvard," says a professor at a British university.

Yet the hierarchy can be disrupted. A star European PhD from a leading American school may have a homesick spouse or an ailing parent. Events may conspire in your favour. When the AEA conference was last held in San Francisco, in 2009, fiscal turmoil left American state universities cash-strapped. Universities in Europe took full advantage. They could hire—and perhaps keep—someone who would otherwise have gone to Iowa or Michigan State, says the professor.

The financial crisis created shortages as well as opportunities. The IMF, which a year previously had planned to lay off staff because of the paucity of crises, swept up many of the PhDs in macroeconomics in 2009. Recruiters say the shortage of macro and finance experts has lingered: central banks and government agencies are keen hirers of these types.

There are other bidders for talent. More than a dozen of the Marriott's tables were reserved for Chinese universities, which increasingly follow an American-style economics curriculum and will pay the going global rate. Tech firms want the best number-crunchers for their big-data projects, and PhD economists have the right skills. Liberal-arts colleges like Stetson want faculty who can teach and do research across disciplines. They believe economics is the best grounding.

The market for economists appears to be tightening as a result. Economics is one of two departments at Stetson (the other is engineering) in which hiring has become noticeably dearer, its recruiters say. University deans may gripe, but that is good news for the tired-looking PhDs trudging the corridors of San Francisco's big hotels. ■

Banking for immigrants

Far-sighted

NEW YORK

Catering to foreign-born customers is a growing niche in finance

MOST banks wouldn't lend to Roberta. She arrived in New York from Mexico with papers but no credit history. But Neighborhood Trust Federal Credit Union, which specialises in lending to immigrants, gave her advice and a $2,000 loan. She started out selling Mexican food from a cart. She now runs a food truck, employs five people and has plans to expand.

Many immigrants, like Roberta, want to save or start a business. But they struggle to get finance. In America 23% of households headed by a non-citizen, and 35% of households where only Spanish is spoken, have no bank accounts—compared with 8% for the population as a whole. There are multiple barriers: not just low incomes, which make it hard to meet minimum-balance requirements, but also trouble with language, identification and trust.

Bankers will also ask to see an ID

Neighborhood Trust is trying to change that. More than half its members are Latino, largely from the Dominican Republic, and many are undocumented. Most of the staff are themselves immigrants, and know their members well: they visit borrowers' businesses often and offer workshops on financial literacy. The hands-on approach keeps default rates low.

Other financial firms, in both America and Europe, are also finding new ways to serve immigrants. Some are like Neighborhood Trust—small and community-minded. Others are startups hoping for big profits. Oportun is a good example: the American lender has made loans of $1.9 billion since 2006, mostly to Latinos, using big data and clever algorithms to lend to those without a credit history.

These firms have several tactics in common. The first is to make it easy to open an account—a process that is often unnecessarily slow and intimidating. Monese, a startup based in London, allows European migrants to open an account by phone with just a photo of a passport and a selfie.

A second shared tactic is to make life easier for those, such as illegal immigrants, who may struggle to prove their identity. Banks can be fussy: in one survey half of unbanked Mexican immigrants in New York said a lack of documentation prevented them opening an account. But many American banks will accept taxpayer identification numbers and consular ID cards, which can be obtained irrespective of immigration status. In New York 12 financial firms, including Neighborhood Trust, accept a new card launched by the city government to help undocumented migrants access services—though no big banks do.

Third, instead of waiting for immigrants to come knocking, these firms seek them out. Oportun, for instance, has branches inside shops in Latino neighbourhoods. Mission Asset Fund, a Californian non-profit group, assists informal savings groups in immigrant communities. As members make small, regular payments into a common pot from which they take turns to borrow, they are also able to develop a formal credit history.

A final tactic is to tailor services to meet the particular needs of migrants. Extrabanca, in Italy, explicitly markets itself as a bank for immigrants. Many of its customers are from China, the Philippines and eastern Europe. It helps them deal with the red tape involved in renting a house or starting a business. Many American credit unions offer "citizenship loans" to cover the costs of naturalisation. Some offer illegal immigrants loans to pay the fees for amnesty schemes.

Larger banks can be put off, at least in ▸▸

part, by regulation. Many have stopped offering international transfers in response to tighter rules on money-laundering and terrorist financing. In Britain, new laws bar banks from opening accounts for illegal immigrants. But some big banks are catching on. Scotiabank, in Canada, allows Chinese migrants to start opening an account before leaving home, through a partnership with three banks in China. Deutsche Bank woos Turkish customers in Germany with a service called Bankamiz ("Our Bank"), which offers bilingual tellers, free withdrawals at ATMs in Turkey and five free transfers to Turkey each year.

Catering to immigrants can be profitable in the long run, suggests Sherief Meleis of Novantas, a consultancy. Banks can win customers who will be loyal for years to come. As Rafael Monge-Portaro, the boss of Neighborhood Trust, says of Roberta: "We trust her and she trusts us." ■

Room rentals v hotels

Buffett's revenge

Services like Airbnb are altering the economics of the hotel business

FOR those exhausted by the festive season, now is the time to book a holiday. Hotels in New York's Times Square cost four times more on New Year's Eve than they do just a week into 2016; a room at the cheapest four-star property in Cancún in Mexico on December 31st was half as dear by January 7th.

The economics behind this price crash are simple: hotels are expensive to build and staff, and demand for them is seasonal. Only by ramping up prices at peak times can they be run profitably. But seasonality inflicts wider economic costs than eye-watering bills. Tourists find other destinations because rooms are full on their desired dates and, despite lower prices, inventory goes unused during the off-season. One-off events like sports tournaments, concerts and conferences can exacerbate the problem of mismatched supply and demand, by flooding cities with visitors for just a few days.

The advent of the "sharing economy" should offer a solution. Just as Uber's surge pricing draws part-time taxi drivers onto roads at rush hour, room-rental services like Airbnb, HomeAway and Onefinestay should allow a city's supply of temporary accommodation to expand when more people want to stay there. Airbnb recently released data to support this hypothesis, showing that many of the site's hosts list their homes specifically to cash in on periods of high demand (see chart).

The shareholders' meetings in Omaha, a Midwestern American city, of Berkshire Hathaway, a financial conglomerate, provide a good illustration. In 1980 12 people showed up to the first one, including the firm's boss, Warren Buffett. These days, the gathering draws some 40,000, the equivalent of nearly 10% of the city's population. Omaha's few hotels have built their business models around this surge, jacking up prices to as much as $400 a night and imposing three-day minimum stays around the one-day event. This has outraged the frugal Mr Buffett, who has threatened to move the conference to Dallas.

Happily, home-sharers have begun to offer some competition. In the three weeks before the 2015 meeting, 1,750 Omaha residents added new properties to Airbnb—the equivalent of three Omaha Hiltons, the city's biggest hotel. That brought the number of Airbnb listings in the city to 5,000, of which 76% were occupied on May 1st at an average price of $209. Moreover, Airbnb hosts only charged 60% more during the meeting than in days before and after. The surge at hotels was 200% or more.

Omaha may be an exceptional case, but it reflects a trend. Across the 31 specific events for which Airbnb shared data, the number of listings rose by 19% in the three preceding weeks. Three times as many stays occurred during the period of the events as in the weeks before and after. Even cities where supply has expanded slowly are seeing more stays. Airbnb bookings during the Volta art fair in Basel, Switzerland, last year were 268% higher than during the neighbouring weeks, even though listings rose by only 6%.

The Airbnb figures do not spell the end of extortionate hotel prices. Spare-room rentals and hotels are not perfect substitutes: many visitors want the service and convenience of a hotel. Room rentals, naturally, have more of an impact in smaller cities than in big ones, which can more easily absorb an influx of visitors. Airbnb's turnover in Paris during the 2015 French Open tennis tournament rose by a mere 4%.

But by easing temporary supply squeezes, room rentals may change the economics of the hotel business, at least in smaller cities. If hotels can no longer double their prices when demand peaks, that could drive weaker properties out of business. Those that stay afloat may need to increase rates at other times of year, which could further depress off-season travel and hurt complementary businesses such as restaurants and taxis. Conversely, more room rentals should also mean that more money flows directly to residents every time small cities stage a tourist-magnet event. (Airbnb passes on around 85% of guests' total payments to hosts, whereas hotels spend just 30-35% on labour.) At the margin, that might increase municipal governments' appetite to host such events. Omaha 2024, anyone? ■

The spare-bed bug

Airbnb accommodation at selected events, latest

Source: Airbnb *2014

Free exchange | A mean feat

Despite forecasters' best efforts, growth is devilishly hard to predict

"THE only function of economic forecasting is to make astrology look respectable," John Kenneth Galbraith, an irreverent economist, once said. Since economic output represents the aggregated activity of billions of people, influenced by forces seen and unseen, it is a wonder forecasters ever get it right. Yet economists cannot resist trying. As predictions for 2016 are unveiled, it is worth assessing the soothsayers' records.

Forecasters usually rely on two different predictive approaches. One is theory-based, shaped by how economists believe economies behave. The other is data-based, shaped by how economies have behaved in the past. The simplest of the theoretical bunch is the Solow growth model, named for Robert Solow, a Nobel-prize winning economist. It posits that poorer countries should generally invest more and grow faster than rich ones. Central banks and other big economic institutions use far more complicated formulas, often grouped under the bewildering label of "dynamic stochastic general equilibrium" (DSGE) models. These try to anticipate the ups and downs of big economies by modelling the behaviour of individual households and firms.

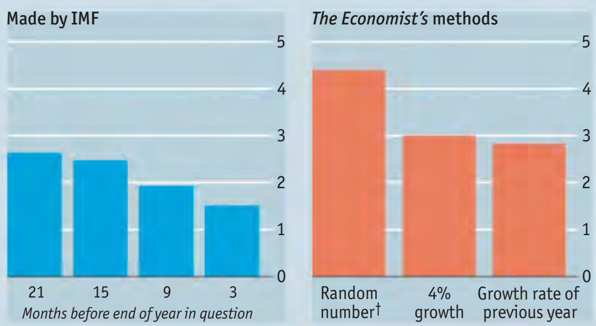
The empirical approach is older; indeed, it was the workhorse of government forecasting in the 1940s and 1950s. Data-based models analyse the relationship between hundreds or thousands of economic variables, from the price of potatoes to snowfall in January. They then work out how zinc sales, for example, affect investment and growth in the years that follow.

Both strategies have faced withering criticism. DSGE models, for all their complexity, are typically built around oversimplifications of how markets function and people behave. Data-based models suffer from their own shortcomings. In a paper* published in 1995 Greg Mankiw of Harvard University argued that they face insurmountable statistical problems. Too many things tend to happen at once to isolate cause and effect: liberalised trade might boost growth, or liberalisation might be the sort of thing that governments do when growth is rising, or both liberalisation and growth might follow from some third factor. And there are too many potential influences on growth for economists to know whether a seemingly strong relationship between variables is real or would disappear if they factored in some other relevant titbit, such as the wages of Canadian lumberjacks.

In practice, most forecasters combine the two approaches and inject, when necessary, a dose of common sense. The IMF, for instance, relies on a global model, built in part on economic theory and in part on data analysis. The global projections generated by that hybrid model are combined with country-specific details to produce country-level forecasts. The country forecasts are then checked for consistency against the global projections and adjusted when necessary—to make sure, for example, that most countries do not show strong trade growth when the global projection heralds a decline in trade. A recent analysis of the IMF's forecasts by the organisation's Independent Evaluation Office concluded that their accuracy was "comparable to that of private-sector forecasts". But how accurate is that?

Pick a number

Mean absolute error of GDP forecasts*, 2000-14, percentage points



Sources: IMF; *The Economist*

*For countries included in World Economic Outlook database
†From a range of -2 to 10

Not very, Lant Pritchett and Larry Summers of Harvard University argued in 2014. Forecasters overestimate the extent to which the future will look like the recent past, they reckon. It is assumed that fast-growing countries will keep speeding along while the economic tortoises continue crawling. The IMF, for instance, reckons that China's GDP growth will decline gently to 6% a year by around 2017, and then accelerate slightly. That is highly unlikely, say Messrs Pritchett and Summers: "Regression to the mean is perhaps the single most robust and empirically relevant fact about cross-national growth rates." In other words, booming countries slow down and slumping ones speed up.

The IMF publishes forecasts for 189 countries twice a year, in April and October, for the year in question and the following one. *The Economist* has conducted an analysis of them from 1999 to 2014, and compared their accuracy with several slightly less sophisticated forecasting methods: predicting that a country will grow at the same pace as the year before, guessing 4% (which is the average growth rate across all countries during the period) and picking a random number from -2% to 10%. For each method, the absolute difference between the actual and predicted growth rates is calculated and then averaged. The lowest average is taken to be the best performance.

Encouragingly, the guesses produced by our random-number generator performed worst (see chart); it yielded predictions that were off by 4.4 percentage points on average. Predicting the previous year's growth rate came last-but-one, as Messrs Pritchett and Summers might have foreseen. The projections the IMF made in October of the year being forecast, which were off by an average of 1.5 percentage points, unsurprisingly did best; by that point plenty of actual economic data are available. Yet the quality of the IMF's forecasts deteriorates surprisingly quickly the further from the end of the year in question they are made. Those from April of the preceding year are only slightly more accurate than those generated using the average growth rate.

No one expects the Spanish recession

An important caveat is in order. Forecasts of all sorts are especially bad at predicting downturns. Over the period, there were 220 instances in which an economy grew in one year before shrinking in the next. In its April forecasts the IMF never once foresaw the contraction looming in the next year. Even in October of the year in question, the IMF predicted that a recession had begun only half the time. To be fair, an average-growth prediction also misses 100% of recessions. One model does better, though. Our random-number generator correctly forecast the start of a recession 18% of the time. ■

* Studies cited in this article can be found at www.economist.com/forecasting16

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Astronomy

Now there's a look in your eyes, like black holes in the sky

KISSIMMEE, FLORIDA

The universe's darkest denizens are being dragged into the light

IN 1783 John Michell reasoned they must be out there. In 1916 Karl Schwarzschild calculated how big they would be. In 1930 Subrahmanyan Chandrasekhar showed that big enough stars were doomed to become them. Yet it took until the 1970s to convince holdouts among astronomers that black holes actually exist. That was when studies of a celestial X-ray source called Cygnus X-1 revealed an object so massive that it could be nothing else.

Even before that, though, black holes had caught the imagination of astronomers and public alike. The idea of something so dense that its gravitational attraction can stop light (or anything else) escaping from its surface is mind-boggling. Yet such holes are crucial building blocks of the universe. Most, if not all galaxies have one at their centre. Meanwhile, on Earth, the idea that something or someone has "fallen into a black hole" and thereby, from the speaker's point of view, vanished, has become proverbial.

In fact, black holes—or, rather, their surroundings—are often not black. The process of attracting and swallowing matter acts like a giant particle accelerator as the matter spins around the hole. As with such accelerators on Earth, this generates electromagnetic radiation, from radio waves to X-rays. A big black hole's neighbourhood, with lots of spinning matter, can thus be very bright indeed. That neighbourhood is also a place where space and time themselves are warped more intensely than anywhere else in the observable universe.

This chaos, and black holes' restricted dimensions (even the "supermassive" ones in galactic cores are mere millions of kilometres rather than light-years across), makes studying them hard. But not impossible, as delegates to this week's meeting of the American Astronomical Society (AAS) in Kissimmee, Florida, have heard.

Blown on the steel breeze

Whether galaxies formed around pre-existing black holes or the holes formed after those galaxies had come into being is not yet known. It is suspected, though, that their central black holes help regulate galaxies' rates of star formation. Eric Schlegel of the University of Texas, San Antonio, brought some evidence to bear on this question. His instrument of choice is *Chandra*, a space telescope named after Chandrasekhar which detects X-rays. The object of Dr Schlegel's interest is NGC 5195, a small companion galaxy of the Whirlpool, a well-known spiral galaxy (see above; NGC 5195 is on the right, dangling from one of the Whirlpool's spiral arms).

Looking at X-rays from NGC 5195 Dr Schlegel and his colleagues spotted two bright, arc-shaped features in the gas opposite the point where the Whirlpool's arm reaches into NGC 5195 and material is pulled from it towards the galaxy's central black hole. The shapes and orientations of these arcs suggest the hole has undergone a pair of explosive events caused by the overwhelming amount of material the Whirlpool is dumping on it. The shock waves from such explosions would sweep away dust and gas that are the raw material from which new stars are built. And NGC 5195 is indeed noticeably bereft of new stars—in contradistinction to the Whirlpool, which is rich in them. Dr Schlegel may thus have found a mechanism by which black holes can switch off star formation in their vicinities.

Julie Comerford, of the University of Colorado, Boulder, described another such mechanism. She observes that galaxies often bash into one another and merge. The result of such a merger will have, at least for a time, two central black holes.

Dr Comerford used data from *Chandra* and also from the *Hubble* space telescope, which sees visible light, rather than X-rays, to study such galaxies. She found that, on average, galaxies with two black holes in their cores put out more than ten times as much light as those with one. This extra light is created by the extra quantities of material sucked into their twinned cores. One consequence of all this light is to ionise (ie, to strip the electrons from) much more of the surrounding galaxy's gas than would usually be the case, and then push this ionised gas out of the way. That pro- ▸▸

The Richard Casement internship

vides a second way that the behaviour of a galaxy's black-hole-inhabited core can switch off star formation in the rest of the star system.

Working out how black holes affect galactic growth, though, is not the same as finding out what is happening in the vicinity of the holes themselves. Here, matter is circling close to a black hole's point of no return, the "event horizon" whose radius was described by Schwarzschild's calculations. And next month, JAXA, Japan's space agency, will launch *Astro-H*, a telescope that will help to do this. It can detect X-rays of exceptionally high energies. As material slips ever closer to the event horizon, the precise details of its X-ray output are a signal of how it is moving. *Astro-H* will be able to measure this radiation, and thus infer that motion with unprecedented precision. This will permit researchers to measure unambiguously, for the first time, how fast a black hole is spinning. That, in turn, permits tests of Einstein's general theory of relativity—the very theory that Schwarzschild used to put black holes on solid mathematical ground—that have remained out of reach until now.

Shadows at night

There is, though, a fundamental limit to such pursuits; there can be no way to peer within the event horizon. The best astronomers can hope for is to snap a detailed picture which shows not only the shadow cast by the horizon—an actual black void within the picture—but also the violent environment just outside it.

That will require yet another bit of kit, and another spiral galaxy: the one that plays host to Earth. Feryal Ozel of the University of Arizona told the meeting about progress on the Event Horizon Telescope (EHT). This is designed to capture an image, built up from radio waves, of the Milky Way's own supermassive black hole, dubbed Sagittarius A* because it is the brightest radio source in that constellation.

Over the horizon

Locations of the Event Horizon Telescope's components

Source: EHT

Making such an image is hard. Sagittarius A* (or, rather, its event horizon) should be about 12m km across. That sounds big, but it is a twenty-billionth of the black hole's distance from Earth. A telescope's resolving power depends on the width of its aperture. The resolving power needed to see at that distance something even of the enormous size of Sagittarius A* therefore requires an extraordinarily large telescope.

As a result the EHT is not a single facility but rather a collaboration between existing radio telescopes scattered across the world (see map). Together, these instruments perform a trick called very long baseline interferometry. At times when they are acting as part of the EHT, they will be pointed simultaneously at Sagittarius A*. The data thus gathered will then be shipped to a central facility in Cambridge, Massachusetts, on enormous disk drives, and there carefully combined in a way that makes it seem as if they had been collected by a single radio telescope with an aperture nearly as wide as the Earth itself.

This should, if the EHT works as advertised, solve a number of outstanding mysteries about black holes: precisely how material falls into them, what causes the jets of material that sometimes squirt from near their polar regions, and just how good Einstein's equations are at describing the most warped spacetime it is possible to see. That would be a rich haul of facts for a phenomenon that took two centuries to be taken seriously. ■

The search for ET

Cluster analysis

KISSIMMEE, FLORIDA

A good place to look for little green men

ONE of astronomy's biggest changes of perspective in recent years has been the realisation that planets are abundant in the cosmos. But not everywhere. Collections of stars called globular clusters seem bereft of them.

Globular clusters are roughly spherical collections of hundreds of thousands of stars. These, in turn, are among the oldest stellar inhabitants of galaxies. But though the Milky Way, the Earth's home galaxy, has more than 150 globular clusters, so far only a single planet has been spotted in one: Messier 4 (see picture).

Ripe for colonisation

Nothing daunted, Rosanne Di Stefano of the Harvard-Smithsonian Centre for Astrophysics and Alak Ray of the Tata Institute of Fundamental Research, in India, told the 2016 meeting of the American Astronomical Society why they think globular clusters are a good place to go hunting for advanced civilisations.

First, the clusters' very age means that life will have had the best chance of coming into existence and then climbing the ladder of complexity to the point where it can travel from star to star. Second, that age also means clusters have stopped being disrupted by life-destroying stellar explosions like supernovae and gamma-ray bursts. Third, the proximity of a cluster's stars to one another means interstellar travel is not nearly as onerous as it would be for humanity. A spacefaring cluster-inhabitant would have to travel, on average, only about 1,000 times the distance from Earth to the sun to get to its nearest stellar neighbour. For humans, that distance is 275,000 times the Earth-sun distance. Not only does this make travel easier, it also makes communication practical. Messages between a home planet and its outposts could be sent and received with the same sort of delay as those between European countries and their colonies before the invention of the electric telegraph.

This speculation does, of course, require the existence of many more globular-cluster planets than the lone example so far discovered. But Dr Di Stefano and Dr Ray are optimistic about that. Their models suggest that such planets will often be in stable orbits in the "Goldilocks" zones (not too hot and not too cold) of their host stars. It may be, then, that the galactic empires dreamed of by science-fiction writers were wrong only in scale, rather than concept. Colonising an entire galaxy was always going to be a big ask. Annexing a cluster, though, looks eminently doable.

A real hoverboard

Skating with McFly

Rocket scientists have come up with a hoverboard that works

EVER since Marty McFly arrived in 2015 in "Back to the Future Part II" and discovered a levitating skateboard, people have tried to make one for real. But the film's prediction, made in 1989, never quite came true. Although so-called hoverboards have created quite a public splash this Christmas (see page 59) they do not really count. They use a wheel (or wheels) to do their "hovering", with fancy electronics and stabilisers keeping them upright. A few boards that really do hover, employing magnets for the task, have been demonstrated—but these work only over appropriate metal surfaces. Various lash-ups, including one powered by four leaf-blowers that seems more hovercraft than hoverboard, have also appeared. Film of hoverboarders gliding across a car park in Los Angeles turned out to be an elaborate YouTube hoax.

As 2015 turns into 2016, however, something resembling the real thing is going on sale. The ArcaBoard (pictured) does, admittedly, look like a giant iPhone case rather than a skateboard. But it truly does hover. It is 145cm long by 76cm wide (57x30 inches), is built from composite materials and contains 36 high-powered electric ducted fans of the type used to fly model jet aeroplanes. The fans are run by a pack of 72 lithium-polymer batteries, which provide just over 200 kilowatts of power. That, the manufacturers claim, is sufficient to lift and carry someone weighing 82kg (180lbs). In the ArcaBoard's current configuration it can do this for six minutes. A beefed-up version is able to lift heavier people, but its flight duration drops to three minutes.

The ArcaBoard has been developed by ARCA Space, a Romanian aerospace company founded in 1999 that recently moved its headquarters to Las Cruces, New Mexico. The firm has built a number of rockets and high-altitude drones, and has worked with the European Space Agency. The hoverboard arose from a discussion among the firm's engineers about whether such a machine was possible, says Dragos Muresan, one of ARCA Space's vice-presidents. They built a prototype and successfully rode on it. As enthusiasm for the idea grew, the company decided to put the device into production. The first hoverboards should be delivered in April.

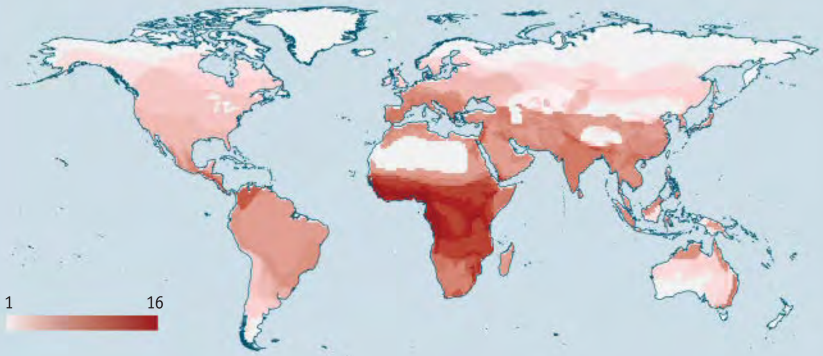
The rider steers the board by shifting his body weight to provide yaw, but a built-in stabilisation system makes things easier. This uses a gyroscope and an accelerometer, connected to a computer, to keep the board level. It adjusts the thrust of individual fans in order to control the other two degrees of freedom of movement, pitch and roll. A proximity sensor on the board's underside ensures it stays 30cm above the ground and a speed-limiter keeps its rate of progress below 20kph (12mph).

Before adding such a hoverboard to next Christmas's wish-list, however, you will want to consider the price: $19,900, plus an extra $4,500 for a fast-charger that can top up the batteries in 35 minutes rather than the six hours it would otherwise take. The gold-plated tag is hardly surprising, considering the hoverboard is made by rocket scientists using what they readily admit is pricey aerospace technology. Nevertheless, they hope to get the price down. The first mobile phones, after all, began as clunky, costly devices with limited performance. Now they are cheap enough for billions to own one. Imagine if (genuine) hoverboards went the same way. ■

Bugs from the belfry

This map, just published in the *American Naturalist* by Kate Jones of University College, London, and her colleagues, shows, for any given part of the world, how many viral diseases bats and people share. That bats are reservoirs of illnesses which also affect people was brought to general attention by the recent outbreak of Ebola fever in west Africa. Ebola is spread by bats and, as the map shows, tropical Africa is the place with the greatest number of shared diseases. Dr Jones and her team used these data, culled from 453 studies carried out since the beginning of the 20th century, as the foundation of a model that also looked at things like population density and farming practices to pick out those areas at greatest risk of interspecies transmission. Adding these other factors in showed that a second risky place is south-eastern Asia, including south China. This was the point of origin of another disease outbreak, that of SARS (severe acute respiratory syndrome) in 2002.

Number of viruses shared by bats and people



Source: *American Naturalist*

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American economic history

G force

Why economic growth soared in America in the early 20th century, and why it won't be soaring again any time soon

The Rise and Fall of American Growth: The US Standard of Living since the Civil War. By Robert Gordon. *Princeton University Press; 762 pages; $39.95 and £27.95*

ON JANUARY 20th those who see themselves as the global elite will gather in the Alpine resort town of Davos to contemplate the "fourth industrial revolution", the theme chosen by Klaus Schwab, the ringmaster of the circus known as the World Economic Forum. This revolution will be bigger than anything the world has seen before, he says. It will be a tsunami compared with previous squalls. It will be more disruptive. It will be more interconnected; indeed, the revolution will take place "inside a complex ecosystem". Not only will it change what people do, it will change who they are.

Anybody who is tempted by this argument should read Robert Gordon's magnificent new book. An American economist who teaches at Northwestern University, Mr Gordon has long been famous in academic circles for advancing three iconoclastic arguments. The first is that the internet revolution is hyped. The second is that the best way to appreciate the extent of the hype is to look at the decades after the civil war, when America was transformed by inventions such as the motor car and electricity. The third is that the golden age of American growth may be over.

In "The Rise and Fall of American Growth" Mr Gordon presents his case for a general audience—and he does so with great style and panache, supporting his argument with vivid examples as well as econometric data, while keeping a watchful eye on what economic change means for ordinary Americans. Even if history changes direction, and Mr Gordon's rise-and-fall thesis proves to be wrong, this book will survive as a superb reconstruction of material life in America in the heyday of industrial capitalism.

The technological revolutions of the late 19th century transformed the world. The life that Americans led before that is unrecognisable. Their idea of speed was defined by horses. The rhythm of their days was dictated by the rise and fall of the sun. The most basic daily tasks—getting water for a bath or washing clothes—were back-breaking chores. As Mr Gordon shows, a succession of revolutions transformed every aspect of life. The invention of electricity brought light in the evenings. The invention of the telephone killed distance. The invention of what General Electric called "electric servants" liberated women from domestic slavery. The speed of change was also remarkable. In the 30 years from 1870 to 1900 railway companies added 20 miles of track each day. By the turn of the century, Sears Roebuck, a mail-order company that was founded in 1893, was fulfilling 100,000 orders a day from a catalogue of 1,162 pages. The price of cars plummeted by 63% between 1912 and 1930, while the proportion of American households that had access to a car increased from just over 2% to 89.8%.

America quickly pulled ahead of the rest of the world in almost every new technology—a locomotive to Europe's snail, as Andrew Carnegie put it. In 1900 Americans had four times as many telephones per person as the British, six times as many as the Germans and 20 times as many as the French. Almost one-sixth of the world's railway traffic passed through a single American city, Chicago. Thirty years later Americans owned more than 78% of the world's motor cars. It took the French until 1948 to have the same access to cars and electricity that America had in 1912.

The Great Depression did a little to slow America's momentum. But the private sector continued to innovate. By some measures, the 1930s were the most productive decade in terms of the numbers of inventions and patents granted relative to the size of the economy. Franklin Roosevelt's government invested in productive capacity with the Tennessee Valley Authority and the Hoover Dam.

The second world war demonstrated the astonishing power of America's production machine. After 1945 America consolidated its global pre-eminence by constructing a new global order, with the Marshall Plan and the Bretton Woods institutions, and by pouring money into higher education. The 1950s and 1960s were a golden age of prosperity in which even people with no more than a high-school education could enjoy a steady job, a house in the suburbs and a safe retirement. ▸▸

But Mr Gordon's tone grows gloomy when he turns to the 1970s. Economic turbulence increased as well-known American companies were shaken by foreign competition, particularly from Japan, and as fuel prices surged thanks to the OPEC oil-price rise. Economic inequality surged as the rich pulled ahead of the rest. Productivity growth fell: having reached an average of 2.82% a year between 1920 and 1970, output per hour between 1970 and 2014 grew by an annual rate of no more than 1.62%. America today faces powerful headwinds: an ageing population, rising health-care and education costs, soaring inequality and festering social ills.

What chance does the country have of restoring its lost dynamism? Mr Gordon has no time for the techno-Utopians who think that the information revolution will rescue America from such "secular stagnation". His attitude to the IT revolution is much the same as that of Peter Thiel, a venture capitalist, who famously said: "We wanted flying cars but instead we got 140 characters." America has already harvested the fruits of the IT revolution. The growth rate increased each year in the decade after 1994, but the spurt did not last and it has since fallen back since.

Now Mr Gordon thinks that Moore's law is beginning to fade and the new economy is turning into a mirage. He can be forgiven for giving such short shrift to Davos types who have no sense of history: driverless cars will change the world less than the invention of cars in the first place. He is also surely right that America faces unusually heavy challenges in future.

But he goes too far in downplaying the current IT revolution. Where the first half of the book is brilliant, the second can be frustrating. Mr Gordon understates how IT has transformed people's lives and he has little to say about the extent to which artificial intelligence will intensify this. He also fails to come to terms with the extent to which, thanks to 3D printing and the internet of things, the information revolution is spreading from the virtual world to the physical world. Mr Gordon may be right that the IT revolution will not restore economic growth rates to the level America once enjoyed. Only time will tell. But he is definitely wrong to underplay the extent to which the revolution is changing every aspect of our daily lives. ■

Understanding Africa

Clear-sighted

The Rift: A New Africa Breaks Free. By Alex Perry. *Little, Brown; 448 pages; $30. Weidenfeld & Nicolson; 320 pages; £20*

FEW African leaders arouse such divided opinions as Paul Kagame, president of Rwanda since 2000 but its de facto leader since 1994, when his Rwandan Patriotic Front (RPF), a rebel group, seized power and ended the country's genocide. For many observers Mr Kagame is an ascetic, an austere moderniser who has pulled his country back from its descent into barbarism and overseen reforms aimed at improving its governance and boosting the economy.

Critics contend that his forces have killed thousands of people and that his government ruthlessly suppresses opposition, murdering dissidents both at home and abroad. For Alex Perry, who spent time with Mr Kagame while he was Africa bureau chief for *Time* magazine, neither of these Manichean views is quite right; nor are they quite wrong. After confronting Mr Kagame with allegations that his rebel forces had killed 25,000 people in reprisal massacres after the genocide, the president "growled that the real story was how many people the RPF *didn't* kill," Mr Perry writes. "We had to battle extreme anger among our own men," he quotes Mr Kagame as saying. "So many had lost their families and they had guns in their hands. Whole villages could have been wiped out. But we did not allow it."

Mr Perry's ability to capture the complexities of stories in which there are no clear heroes nor outright villains echoes again and again through his latest book, "The Rift". Written with a clear eye after criss-crossing the continent, he offers telling glimpses of an Africa that defies stereotyping. The author is at his strongest when he describes just how many people have done Africa a disservice, even when setting out to help. He stands in the ruins of the Somali capital, Mogadishu, talking to a mother whose child dies of malnutrition before his eyes; the famine was largely caused by Western governments blocking the flow of food aid to Somalia in the belief that this would weaken the grip of the Shabab, a jihadist group.

In another chapter Mr Perry describes how United Nations (UN) peacekeepers working in South Sudan shuffle paperwork in air-conditioned bungalows or jog around their sprawling camps wearing Lycra, while outside the gates large bulldozers are shovelling bodies into mass graves. "They saved our lives late," says one refugee who described repeated rebel attacks on a refugee camp just a few minutes away from a large UN base whose peacekeepers did not venture out. "They did not risk until it became peaceful."

Yet the clarity of Mr Perry's reporting, which is reason enough to read his book, is not matched by the metaphor of "The Rift". The book revolves around the idea that, much as a new continent is slowly cleaving itself away from the rest along the Rift Valley, so too a new Africa is being born from the old. Aside from a few pages at the end where Mr Perry writes of African innovations, including ways of reversing desertification, the book does not quite live up to its promise.

Britain and America

The slog of war

Eisenhower's Armies: The American-British Alliance during World War II. By Niall Barr. *Pegasus; 544 Pages; $35*

MANY writers have explored the relationship between Franklin Roosevelt and Winston Churchill. Just as rich, but sometimes overlooked, are the complexities of British and American military co-operation during the second world war. Niall Barr, a military historian at King's College London, sifts through the squabbles and triumphs; his is an authoritative and highly readable account.

It was, he writes, the first time that two armies had worked together so closely in wartime. During the first world war, America's top general had irked Britain and

France by insisting on maintaining a separate army. In the second world war the British and the Americans adopted a unified command structure, clearing the way for the appointment of Dwight Eisenhower (pictured) in 1943 as Allied Supreme Commander. However, one lingering benefit of the earlier structure, Mr Barr notes, is that it gave American officers like George Marshall and George Patton an independence and authority that would prove invaluable in the strike against Hitler.

The transatlantic military alliance did not restart auspiciously. As Hitler rolled through Europe, some Americans wondered if Britain could hold out. One military observer questioned whether the British army could handle the "high centralisation and co-ordination demanded by the machine age." Britain urgently sought American aid, which often fell short. Even before Lend-Lease, America sent Britain rifles leftover from 1919, still packed in grease, with bullets of the wrong calibre, which made them useless.

"Eisenhower's Armies" is packed with such nuggets. When cultures mixed, the British came across as snobby, the Americans as braggarts. Tensions grew in England as better-paid American soldiers arrived ahead of the cross-Channel invasion, depressing local troops. "Morale is a psychological problem like sex, and therefore the Britisher is almost ashamed to talk about it," said one anxious British general.

On the battlefield, British troops often shaved daily; Americans grew stubble. British drinks baffled the Americans. "All they seem to be doing is brewing tea," stormed one American officer in the Netherlands, incredulous that British troops had been made to pause rather than push forward to aid another division.

Among the generals, rivalries ran deep. Commanders from both nations wanted to be the first to grab big prizes such as Berlin. America's swaggering General Patton disliked Brits, including Field Marshall Bernard Montgomery, a vital but flawed commander. Montgomery in turn scorned Eisenhower, who for his part had the unenviable task of soothing egos and balancing political concerns with military ones. Eisenhower had to deal with Churchill, who nosed into military affairs more than American politicians did. Disagreements arose over strategy, most prominently over whether to make the first big joint operation a cross-channel invasion (the Americans' choice) or a strike into the Mediterranean (Britain's choice).

The rise of America is a prominent theme. Before the war, its army was smaller than Romania's. But as the nation rearmed and GIs poured overseas, Britain felt its standing begin to wane. British brass felt "pipped at the post", Mr Barr writes, by their huge, ever-more-powerful ally. In August 1944 Eisenhower was forced to reassure Churchill that America had no desire to "disregard British views, or coldbloodedly to leave Britain holding an empty bag in any of our joint undertakings".

Tensions were clearly rife. But in the end, Mr Barr offers high praise for the fundamentals of the partnership. The "sheer depth, scale and scope of the alliance between Britain and the United States during the second world war is hard to comprehend, even now," he writes. Seven decades into the special relationship, no test as grave as a world war has resurfaced; but on countless vital matters, from Afghanistan to Syria, the alliance endures, made stronger by discussion and debate. ■

20th-century history

The cold war's first chill

1946: The Making of the Modern World. By Victor Sebestyen. *Pantheon; 438 pages; $30. Macmillan; 456 pages; £25*

IT WOULD be hard to imagine a more depressing moment than the first year after the end of the second world war. The guns had mostly fallen silent, but millions were still dying from famine, disease or civil strife. Large areas of Europe and Asia lay in ruins. Vast numbers of refugees were on the move. Many people wondered how their economies could ever be revived.

Britain was, in effect, broke; Berlin's water supply was still polluted by corpses. Japan, an island nation vitally dependent on trade, had lost 80% of its merchant marine. The Marshall Plan, which would use funds provided by America to coax European industries back to life, lay in the future. As Victor Sebestyen points out in his new book, "1946", optimists were in short supply. "Very few people at the end of 1946 believed that recovery was around the corner, or even that it was possible," he writes.

The main change that year was the start of the cold war. As Mr Sebestyen argues, it was a Soviet-sponsored coup in an obscure corner of Iran at the beginning of the year that first prompted policymakers in the West to question Moscow's motives. Stalin stepped up his campaign against internal dissent; the Gulag camps began to fill again. Civil wars in Greece and China pitted communists against defenders of the old order, reflecting global tensions as much as internal ones. All this helps to explain why 1946 was the year when Winston Churchill, by then out of office, gave a speech in America that made "Iron Curtain" a household phrase.

Mr Sebestyen would have been well advised to shape his narrative around this theme. Instead he bombards the reader with short, staccato chapters, in rough chronological order. One moment he is in Japan, as Emperor Hirohito renounces his divinity (on the orders of General Douglas MacArthur, supreme commander for the Allied powers). The next he is in Calcutta, where sectarian riots are hastening British withdrawal from the subcontinent and foreshadowing the horrors of the partition to come. The author would have done better to spend more time on moments that deserve sustained analysis (like the resumption of hostilities between China's communists and nationalists) and less on events that had little lasting significance (such as the first American nuclear tests on Bikini Atoll in the Pacific).

But these are quibbles. Mr Sebestyen deserves praise for illuminating a low point in modern history. Mass shootings in America are a scandal, but the number of gun-related homicides (a little over 12,000 in 2015) would have excited little notice amid the hardship of the immediate post-war world; 6,000 people died and a further 15,000 were injured in communal riots in Calcutta in just three days in the summer of 1946, itself a drop in the bucket compared with the bloodletting of the Chinese civil war. Terrorist attacks have a huge impact thanks to the power of modern media, yet the number of deaths they cause is modest in comparison with previous eras of violence. In Lwów," Mr Sebestyen notes, "the story that a mother driven mad with hunger killed and ate her two children barely made the newspapers."

The one place that approaches the levels of despair experienced in 1946 is Syria, where nearly five years of civil war have resulted in 250,000 deaths and millions more being forced to flee. Inter-state wars have become more rare, but civil conflict, proxy battles and genocide still cause great misery. ■

Mathematics

The master of them all

Leonhard Euler: Mathematical Genius in the Enlightenment. By Ronald Calinger. *Princeton University Press; 669 pages; $55 and £37.95*

LEONHARD EULER is hardly a household name. Born in Switzerland in 1707, he was one of the most productive and influential mathematicians ever, yet surprisingly little has been written about him. Ronald Calinger's major new biography aims to set this right.

Sir Isaac Newton (and independently Gottfried Wilhelm Leibniz) had introduced calculus a generation or so earlier. But it was Euler whose work really established calculus as the basic tool of the mathematical sciences. Euler also carried forward another aspect of Newton's legacy, by showing that Newtonian theories of motion and gravitation gave incredibly accurate predictions of the motions of the Moon and other planetary phenomena. He made advances across an astonishing range of subjects, from the very pure to the very applied, in a way that would be impossible today. His publications covered physics, astronomy, acoustics, ballistics and gunnery, cartography, navigation and shipbuilding, optics and the theory of music, as well as number theory and the foundations of calculus.

Euler's gifts were remarkable. He had great energy and an exceptional memory; he could recite the entire text of Virgil's "Aeneid" by heart. His productivity was equally amazing. Over his career, he wrote more than 850 publications, including 18 books. His collected works run to more than 80 large volumes, and have been appearing steadily since 1910 (a few volumes remain to be published).

Euler was born in Basel, but his career followed the great royal powers of Europe. At the age of 19, he made the seven-week journey to Russia to take up a post at the St Petersburg Imperial Academy of Sciences, which the emperor, Peter the Great, had set up as part of his plan to modernise Russia. Euler was heavily involved in practical scientific matters, such as the construction of accurate maps of the Russian Empire and studies of floods, fire and shipbuilding. But he also pursued interests including number theory, infinite series and the shape of the Earth. A notable breakthrough happened in 1735, when he announced his solution to the famous Basel Problem. This asked for the sum of the infinite series $1+1/4+1/9+1/16+\ldots$ and had resisted the efforts of mathematicians for nearly a century (the answer is $\pi^2/6$).

While in St Petersburg, Euler married. He and his wife had 13 children, though only five made it past early childhood. Euler also started suffering from headaches, and his eyesight deteriorated steadily. He lost the sight of one eye in his early 30s, and was nearly blind by the age of 60.

In 1741 he was hired away to Berlin. Frederick the Great wanted to build a new Royal Prussian Academy, populated by the superstars of science and philosophy. Euler had hoped to lead it, but he did not fit in. His scientific reputation was undeniable, but he had neither the refined manners nor the sparkling wit that flourished at Frederick's court. Writing to Voltaire, Frederick played both on Euler's eminence and his disability, calling him the "great Cyclops of geometry".

As relations with Frederick soured, Euler decided to move again. In 1766 Catherine the Great (it was an age of Greats) hired Euler back to St Petersburg. Despite being almost blind, he became a central figure in the academy there, publishing more than 400 articles, a major three-volume work on lunar motion and "Letters to a German Princess", one of the earliest and most successful popularisations of science for a general audience.

Mr Calinger's book is an impressive work of scientific biography. It is long, but it gives a fascinating portrait of Euler, his work and the world around him. For the reader who seeks more, a huge array of Euler's writings can be found online at the Euler Archive. As Pierre-Simon Laplace, another 18th-century mathematician, reportedly said: "Read Euler, read Euler, he is the master of us all." ■

Illustrations from the edge

When anger turns to ink

Drawing Blood. By Molly Crabapple. *Harper; 352 pages, $29.99 and £20*

MOLLY CRABAPPLE is an angry young woman. The 32-year-old American illustrator is a cross between a photojournalist chasing hot spots and a 19th-century *écrivain engagé* who champions causes with art. Her drawings of the Occupy Wall Street protest in 2011 became the visual anthem of the movement. She has applied her dark, curvy illustrative style to document Guantánamo prisoners, Libyan snipers, gay refugees in Beirut and protesters of police violence in Ferguson, Missouri.

Ms Crabapple has already published two volumes of her artwork. "Drawing Blood" is a personal narrative of her maturation as an artist. Born Jennifer Caban in Far Rockaway, Queens, she always sought to shed childhood. At 17 she gathered every photo of her younger self, burned them, and the next day left for Europe and north Africa with pen and pad. Her adopted name comes from a character modelled after her in a play written by a friend.

Rewriting history

In New York in the 2000s she could not sell her art, so she sold herself. She worked as a nude for clubs, private parties, music videos, art classes and amateur "photographers" (essentially, live porn). Her proximity to the steamier parts of the city eventually got her into the Box—a Manhattan nightclub infamous for its secretive, highly sexualised burlesque—where Ms Crabapple became the in-house artist; a modern-day Henri de Toulouse-Lautrec.

The Box was Ms Crabapple's artistic boot camp, not simply to depict the surreal, but to capture the asymmetries of power: bankers quaffing pricey champagne while the true gods, in her view, were the naked performers. In time, she grew disillusioned with her decadent, sexualised art that in effect prostituted her talents. She burned to put her nib to political and social issues. When the Occupy movement sprang up, she became its unofficial chronicler. Since then she has journeyed into dark corners to document people's plights for *Vice*, *Fusion* and the *New York Times*—giving victims not just a voice, but a face.

"Drawing Blood" sparkles as an artistic coming-of-age memoir of an artist who represents her generation as much as depicts it. Some readers may be shocked by her walk on the wild side. Like Joan Didion, another American writer, Ms Crabapple's toughness comes from her willingness to accept her vulnerability as much as from her talent and unique eye. "Drawings, like photojournalism, [can] distil the essential," she writes. "Unlike photography, though, visual art has no pretence of objectivity. It is joyfully, defiantly subjective. Its truth is individual." ■


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Publications

Conferences

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	Jan 6th	year ago
United States	+2.1 Q3	+2.0	+2.5	-1.2 Nov	+0.5 Nov	+0.2	5.0 Nov	-456.6 Q3	-2.5	-2.6	2.23	-	-
China	+6.9 Q3	+7.4	+6.9	+6.2 Nov	+1.5 Nov	+1.5	4.1 Q3§	+275.9 Q3	+3.0	-2.7	2.79§§	6.56	6.21
Japan	+1.6 Q3	+1.0	+0.6	+1.6 Nov	+0.3 Nov	+0.7	3.3 Nov	+126.2 Oct	+3.3	-6.8	0.26	119	119
Britain	+2.1 Q3	+1.8	+2.4	+1.7 Oct	+0.1 Nov	+0.1	5.2 Sep††	-134.2 Q3	-4.4	-4.4	1.95	0.68	0.66
Canada	+1.2 Q3	+2.3	+1.1	-4.0 Oct	+1.4 Nov	+1.2	7.1 Nov	-54.1 Q3	-3.3	-1.8	1.33	1.41	1.18
Euro area	+1.6 Q3	+1.2	+1.5	+1.9 Oct	+0.2 Dec	+0.1	10.7 Oct	+340.3 Oct	+3.0	-2.1	0.51	0.93	0.84
Austria	+1.0 Q3	+1.9	+0.8	+1.5 Oct	+0.6 Nov	+0.9	5.6 Oct	+10.7 Q3	+2.0	-2.1	0.84	0.93	0.84
Belgium	+1.3 Q3	+0.9	+1.3	+0.7 Oct	+1.5 Dec	+0.6	8.7 Oct	+1.1 Sep	+0.4	-2.6	0.98	0.93	0.84
France	+1.1 Q3	+1.0	+1.1	+3.6 Oct	nil Nov	+0.1	10.8 Oct	+6.0 Oct‡	-0.3	-4.1	0.91	0.93	0.84
Germany	+1.7 Q3	+1.3	+1.5	+0.2 Oct	+0.3 Dec	+0.2	6.3 Dec	+275.8 Oct	+8.1	+0.7	0.51	0.93	0.84
Greece	-0.9 Q3	-3.5	+0.5	-1.7 Oct	-0.7 Nov	-1.1	24.6 Sep	-1.6 Oct	+2.5	-4.1	8.53	0.93	0.84
Italy	+0.8 Q3	+0.8	+0.7	+2.9 Oct	+0.1 Dec	+0.1	11.5 Oct	+38.5 Oct	+1.9	-2.9	1.48	0.93	0.84
Netherlands	+1.9 Q3	+0.6	+2.0	+2.1 Oct	+0.7 Dec	+0.4	8.3 Nov	+74.8 Q3	+10.6	-1.8	0.73	0.93	0.84
Spain	+3.4 Q3	+3.2	+3.1	-0.3 Oct	nil Dec	-0.6	21.6 Oct	+19.7 Oct	+1.0	-4.4	1.70	0.93	0.84
Czech Republic	+3.9 Q3	+2.2	+3.4	+3.8 Oct	+0.1 Nov	+0.3	5.9 Nov§	+2.0 Q3	-0.1	-1.8	0.64	25.1	23.2
Denmark	+0.6 Q3	-1.8	+1.5	+0.3 Oct	+0.3 Nov	+0.5	4.5 Nov	+22.0 Oct	+7.1	-2.9	0.85	6.94	6.24
Norway	+3.0 Q3	+7.3	+0.7	-2.6 Oct	+2.8 Nov	+1.7	4.6 Oct‡‡	+37.3 Q3	+9.3	+5.9	1.46	8.97	7.68
Poland	+3.5 Q3	+3.6	+3.4	+7.8 Nov	-0.5 Dec	nil	9.6 Nov§	-2.1 Oct	-1.4	-1.5	2.96	4.05	3.62
Russia	-4.1 Q3	na	-3.8	-3.5 Nov	+12.9 Dec	+15.3	5.8 Nov§	+67.1 Q3	+5.2	-2.8	9.56	74.7	61.7
Sweden	+3.9 Q3	+3.4	+3.2	+4.0 Oct	+0.1 Nov	nil	6.2 Nov§	+31.8 Q3	+6.3	-1.2	0.88	8.60	7.91
Switzerland	+0.8 Q3	-0.1	+0.9	-2.8 Q3	-1.4 Nov	-1.0	3.4 Nov	+84.1 Q3	+8.6	+0.2	-0.14	1.01	1.01
Turkey	+4.0 Q3	na	+3.3	+14.7 Oct	+8.8 Dec	+7.6	10.3 Sep§	-38.1 Oct	-4.9	-1.6	11.24	3.01	2.32
Australia	+2.5 Q3	+3.8	+2.3	+1.9 Q3	+1.5 Q3	+1.6	5.8 Nov	-49.5 Q3	-4.3	-2.4	2.76	1.42	1.23
Hong Kong	+2.3 Q3	+3.5	+2.4	-1.9 Q3	+2.4 Nov	+3.1	3.3 Nov‡‡	+9.3 Q3	+2.8	nil	1.55	7.75	7.75
India	+7.4 Q3	+11.9	+7.2	+9.8 Oct	+5.4 Nov	+5.0	4.9 2013	-22.7 Q3	-1.1	-3.8	7.74	66.8	63.6
Indonesia	+4.7 Q3	na	+4.7	+5.2 Oct	+3.4 Dec	+6.2	6.2 Q3§	-18.4 Q3	-2.0	-2.0	8.77	13,948	12,658
Malaysia	+4.7 Q3	na	+5.4	+4.2 Oct	+2.6 Nov	+2.5	3.1 Oct§	+7.8 Q3	+2.5	-4.0	4.20	4.39	3.56
Pakistan	+5.5 2015**	na	+5.7	+5.2 Oct	+3.2 Dec	+3.9	5.9 2015	-1.3 Q3	-0.7	-5.1	10.04†††	105	101
Philippines	+6.0 Q3	+4.5	+6.4	-1.8 Oct	+1.5 Dec	+2.4	5.6 Q4§	+9.6 Sep	+4.1	-1.9	4.14	47.0	44.9
Singapore	+2.0 Q4	+5.7	+2.9	-5.5 Nov	-0.8 Nov	+0.2	2.0 Q3	+68.6 Q3	+21.2	-0.7	2.53	1.44	1.33
South Korea	+2.7 Q3	+5.3	+2.6	-0.3 Nov	+1.3 Dec	+0.7	3.1 Nov§	+104.9 Nov	+8.0	+0.3	2.04	1,198	1,099
Taiwan	-0.6 Q3	-1.2	+3.2	-4.9 Nov	+0.1 Dec	+0.1	3.8 Nov	+77.2 Q3	+12.8	-1.0	1.04	33.2	32.0
Thailand	+2.9 Q3	+4.0	+3.4	+0.1 Nov	-0.9 Dec	+0.8	0.9 Nov§	+32.1 Q3	+2.4	-2.0	2.55	36.2	32.9
Argentina	+2.3 Q2	+2.0	+1.3	-2.5 Oct	— ***	—	5.9 Q3§	-8.3 Q2	-1.8	-3.6	na	13.8	8.55
Brazil	-4.5 Q3	-6.7	-3.4	-11.3 Oct	+10.5 Nov	+9.6	7.5 Nov§	-68.0 Nov	-3.7	-6.0	15.93	4.02	2.70
Chile	+2.2 Q3	+1.8	+2.8	+0.5 Nov	+3.9 Nov	+3.9	6.1 Nov§‡‡	-2.7 Q3	-1.2	-2.2	4.62	715	615
Colombia	+3.2 Q3	+5.1	+3.3	+1.3 Oct	+6.8 Dec	+4.2	7.3 Nov§	-20.8 Q3	-6.7	-2.1	8.49	3,254	2,455
Mexico	+2.6 Q3	+3.0	+2.5	+0.5 Oct	+2.2 Nov	+2.7	4.1 Nov	-29.9 Q3	-2.6	-3.4	6.21	17.4	14.8
Venezuela	-2.3 Q3~	+10.0	-4.5	na	na	+84.1	6.6 May§	+7.4 Q3~	-1.8	-16.5	10.98	6.31	6.30
Egypt	+4.5 Q2	na	+4.2	-3.0 Oct	+11.1 Nov	+10.0	12.8 Q3§	-14.7 Q3	-1.4	-11.0	na	7.83	7.15
Israel	+2.3 Q3	+2.0	+3.3	-5.3 Oct	-0.9 Nov	-0.2	5.4 Nov	+12.5 Q3	+4.9	-2.8	2.06	3.94	3.95
Saudi Arabia	+3.4 2015	na	+2.7	na	+2.3 Nov	+2.7	5.7 2014	-1.5 Q2	-2.7	-12.7	na	3.75	3.75
South Africa	+1.0 Q3	+0.7	+1.4	-1.1 Oct	+4.8 Nov	+4.7	25.5 Q3§	-14.0 Q3	-4.1	-3.8	9.56	15.8	11.7

Source: Haver Analytics. *% change on previous quarter, annual rate. †*The Economist* poll or Economist Intelligence Unit estimate/forecast. §Not seasonally adjusted. ‡New series. ~2014 **Year ending June. ††Latest 3 months. ‡‡3-month moving average. §§5-year yield. ***Official number not yet proven to be reliable; The State Street PriceStats Inflation Index, October 25.52%; year ago 41.05% †††Dollar-denominated

Markets

	Index Jan 6th	% change on one week	% change on Dec 31st 2014 in local currency	% change on Dec 31st 2014 in $ terms
United States (DJIA)	16,906.5	-4.0	-5.1	-5.1
China (SSEA)	3,518.5	-5.9	+3.8	-1.8
Japan (Nikkei 225)	18,191.3	-4.4	+4.2	+5.3
Britain (FTSE 100)	6,073.4	-3.2	-7.5	-13.3
Canada (S&P TSX)	12,726.8	-3.2	-13.0	-28.5
Euro area (FTSE Euro 100)	1,052.5	-4.4	+1.5	-9.8
Euro area (EURO STOXX 50)	3,139.3	-4.5	-0.2	-11.4
Austria (ATX)	2,362.7	-1.4	+9.4	-2.8
Belgium (Bel 20)	3,613.7	-3.2	+10.0	-2.3
France (CAC 40)	4,480.5	-4.2	+4.9	-6.8
Germany (DAX)*	10,214.0	-4.9	+4.2	-7.5
Greece (Athex Comp)	617.6	+1.1	-25.2	-33.6
Italy (FTSE/MIB)	20,422.4	-4.7	+7.4	-4.6
Netherlands (AEX)	428.8	-3.9	+1.0	-10.3
Spain (Madrid SE)	930.2	-4.6	-10.8	-20.7
Czech Republic (PX)	936.2	-2.1	-1.1	-9.9
Denmark (OMXCB)	895.6	-1.2	+32.6	+17.6
Hungary (BUX)	24,000.5	+0.3	+44.3	+28.6
Norway (OSEAX)	620.6	-4.4	+0.1	-16.3
Poland (WIG)	45,200.8	-2.7	-12.1	-22.9
Russia (RTS, $ terms)	736.8	-2.7	+15.9	-6.8
Sweden (OMXS30)	1,387.0	-4.1	-5.3	-13.8
Switzerland (SMI)	8,613.4	-2.3	-4.1	-5.6
Turkey (BIST)	71,197.9	-2.7	-16.9	-35.5
Australia (All Ord.)	5,178.0	-3.5	-3.9	-16.8
Hong Kong (Hang Seng)	20,980.8	-4.1	-11.1	-11.1
India (BSE)	25,406.3	-2.1	-7.6	-12.7
Indonesia (JSX)	4,609.0	+0.3	-11.8	-21.7
Malaysia (KLSE)	1,668.0	-1.5	-5.3	-24.6
Pakistan (KSE)	32,968.3	+0.4	+2.6	-1.7
Singapore (STI)	2,804.3	-2.8	-16.7	-23.2
South Korea (KOSPI)	1,925.4	-1.8	+0.5	-7.8
Taiwan (TWI)	7,990.4	-3.5	-14.1	-18.4
Thailand (SET)	1,260.0	-2.2	-15.9	-23.6
Argentina (MERV)	11,423.3	-2.2	+33.2	-18.4
Brazil (BVSP)	41,773.1	-3.6	-16.5	-44.8
Chile (IGPA)	17,866.6	-1.6	-5.3	-19.7
Colombia (IGBC)	8,353.0	-2.3	-28.2	-47.6
Mexico (IPC)	41,691.2	-3.1	-3.4	-18.3
Venezuela (IBC)	14,591.3	nil	+278	na
Egypt (Case 30)	6,922.7	-0.8	-22.4	-29.2
Israel (TA-100)	1,311.7	-0.3	+1.8	+0.5
Saudi Arabia (Tadawul)	6,517.7	-5.6	-21.8	-21.8
South Africa (JSE AS)	49,082.3	-3.4	-1.4	-27.9

The Economist poll of forecasters, January averages (previous month's, if changed)

	Real GDP, % change Low/high range 2015	Low/high range 2016	Average 2015	Average 2016	Consumer prices % change 2015	2016	Current account % of GDP 2015	2016
Australia	1.9/2.5	1.9/3.0	2.3	2.5 (2.6)	1.6	2.4	-4.3 (-4.1)	-4.0 (-3.8)
Brazil	-3.8/-2.9	-3.7/-1.5	-3.4 (-3.1)	-2.6 (-1.9)	9.6 (9.3)	7.4 (7.1)	-3.7 (-3.8)	-2.9 (-3.0)
Britain	2.2/2.7	1.7/2.7	2.4	2.2	0.1	1.1 (1.2)	-4.4 (-4.5)	-4.0
Canada	1.0/1.3	1.2/2.3	1.1	1.9	1.2	1.8 (1.9)	-3.3 (-3.2)	-2.6 (-2.4)
China	6.7/7.0	5.8/6.8	6.9	6.4	1.5	1.7 (1.8)	3.0 (3.1)	2.9 (3.1)
France	1.0/1.2	0.9/1.7	1.1	1.4 (1.3)	0.1	0.8 (1.0)	-0.3	-0.3
Germany	1.4/1.7	1.3/2.3	1.5 (1.6)	1.7	0.2	1.1 (1.3)	8.1 (7.9)	7.5
India	6.0/7.5	5.9/7.9	7.2 (7.3)	7.5 (7.6)	5.0 (5.1)	5.2	-1.1 (-1.2)	-1.3
Italy	0.6/0.8	0.9/1.6	0.7 (0.8)	1.3	0.1 (0.2)	0.8 (1.0)	1.9	1.7 (1.8)
Japan	0.5/0.8	0.7/1.6	0.6	1.1 (1.2)	0.7	0.9	3.3 (2.6)	3.4 (2.7)
Russia	-4.3/-3.5	-2.5/1.5	-3.8	-0.3	15.3 (15.2)	8.0 (7.3)	5.2 (4.7)	4.9 (4.5)
Spain	3.1/3.2	2.3/3.1	3.1 (3.2)	2.7	-0.6	0.7 (0.8)	1.0 (0.9)	0.9 (0.8)
United States	2.4/2.5	2.0/2.9	2.5 (2.4)	2.4 (2.5)	0.2	1.6 (1.8)	-2.5	-2.6
Euro area	1.5/1.6	1.3/2.0	1.5	1.7 (1.6)	0.1	0.9 (1.1)	3.0	2.7 (2.8)

Sources: Bank of America, Barclays, BNP Paribas, Citigroup, Commerzbank, Credit Suisse, Decision Economics, Deutsche Bank, EIU, Goldman Sachs, HSBC Securities, ING, Itaú BBA, JPMorgan, Morgan Stanley, Nomura, RBS, Royal Bank of Canada, Schroders, Scotiabank, Société Générale, Standard Chartered, UBS. For more countries, go to: Economist.com/markets

Other markets

	Index Jan 6th	% change on one week	% change on Dec 31st 2014 in local currency	% change on Dec 31st 2014 in $ terms
United States (S&P 500)	1,990.3	-3.5	-3.3	-3.3
United States (NAScomp)	4,835.8	-4.5	+2.1	+2.1
China (SSEB, $ terms)	408.8	-4.2	+48.6	+40.6
Japan (Topix)	1,488.8	-3.8	+5.8	+6.9
Europe (FTSEurofirst 300)	1,392.4	-3.7	+1.7	-9.6
World, dev'd (MSCI)	1,610.2	-4.0	-5.8	-5.8
Emerging markets (MSCI)	759.8	-4.0	-20.5	-20.5
World, all (MSCI)	386.3	-4.0	-7.4	-7.4
World bonds (Citigroup)	873.1	+0.3	-3.2	-3.2
EMBI+ (JPMorgan)	706.1	+0.2	+2.1	+2.1
Hedge funds (HFRX)	1,168.5§	-0.6	-4.1	-4.1
Volatility, US (VIX)	20.6	+17.3	+19.2	(levels)
CDSs, Eur (iTRAXX)†	79.7	+3.2	+26.7	+12.5
CDSs, N Am (CDX)†	90.7	+2.6	+37.2	+37.2
Carbon trading (EU ETS) €	7.8	-5.5	+5.1	-6.6

Sources: Markit; Thomson Reuters. *Total return index.
†Credit-default-swap spreads, basis points. §Jan 5th.

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

The Economist commodity-price index

2005=100

	Dec 29th	Jan 5th*	% change on one month	% change on one year
Dollar Index				
All Items	126.6	124.6	-1.3	-18.2
Food	147.4	145.5	-2.2	-16.3
Industrials				
All	104.9	102.9	nil	-20.8
Nfa†	109.9	107.9	-2.8	-13.1
Metals	102.7	100.8	+1.4	-23.8
Sterling Index				
All items	155.6	154.7	+0.9	-15.2
Euro Index				
All items	144.3	144.5	nil	-9.0
Gold				
$ per oz	1,069.0	1,077.8	+0.3	-10.8
West Texas Intermediate				
$ per barrel	37.9	35.9	-4.5	-25.5

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.

Live fast, die old

Ian "Lemmy" Kilmister, epitome of the rock lifestyle, died on December 28th, aged 70

IT WAS never hard to pick out Lemmy in a crowd. First, that black hat, vaguely cowboy in style, with silver medallions round it and crossed Confederate swords. Then very long hair (eventually dyed, or else he looked like Willie Nelson), and matching moustache. A black shirt, often open to a jungle of chest hair, with very tight black jeans. And, to complete the look, cowboy boots. Around the mid-1970s many rock bands and their fans spent Saturday night in something similar. Lemmy, founder in 1975 and frontman of Motörhead, wore that outfit, all the time, for 40 years.

He played the same music, too: fundamentally pure rock and roll, rooted in Buddy Holly and Jerry Lee Lewis, sent through two 100-watt black stacks and classified by the Guinness Book of Records as the loudest rock music ever. Bass was his instrument, but bashed in big up-down chords like the rhythm guitar on which he'd started: the effect was sometimes compared to crushed razor blades, sometimes to showers of gravel. Over this, through a mic tilted perilously over his head, he would rasp out vocals that were hard to hear and usually absurd, he admitted, once you'd made them out: songs about war, drugs, sex, rich people, kicking ass and broken glass, with titles like "Die, You Bastard", "Antisocial" and "Overkill", scrawled mostly by him in a few chortling minutes on the back of a cigarette packet.

Motörhead's selling point was not high culture. It was that, in a scene encompassing heavy metal, punk, psychedelia, rockabilly and all the rest, the band played reliable, raw, ear-splitting rock and roll of the old style, and went on doing so round the world—or at least round the M1, M6 and M4—as long as Lemmy lasted. He led the band through 22 studio albums, the latest released in August. Guitarists and drummers came and went, sometimes by falling offstage or through bathroom mirrors they mistook for windows. The black hat with silver bits was a constant.

Surprisingly, the body inside the clothes also stayed much the same, despite serial abuse from chain-smoking, a bottle of Jack Daniel's every day (no health-food shit for him!) and handfuls of acid crammed down like dolly mixtures when, for a while, he was roadie for Jimi Hendrix. Acid, he claimed, made him a better person. It gave you a new angle—several new angles—on things. His shift to amphetamines ("motorhead" was American slang for "speed freak") came when he joined Hawkwind, a dreamy psychedelic band, in 1972. The pills kept him functional through tours from then on, though he was fired from Hawkwind when he was busted for possession in Canada; and though for one show he had to be propped up, his bass hung on him, and pointed in the rough direction of the audience, which he couldn't see. A doctor once told him that a transfusion would kill him, because his body no longer contained any human blood.

Yet he couldn't imagine a better life than this, and certainly couldn't have foreseen it as a troubled, bullied English boy in north Wales—fiddling to catch Bill Haley on the wireless, messing around with short-lived useless bands, slaving at the Hotpoint factory. In the end he spent his entire career making the music he loved, thrilling fans, trashing hotel rooms, instigating riots with firehoses or squirty cheese, and taking restricted substances. ("If we moved in next door to you," he remarked, "your lawn would die.") He was a hedonist son of a bitch whose age seemed very nicely stuck at around 25.

Laid today, gone tomorrow

Meanwhile, girls desperate to bed him formed a disorderly queue at every stage door. The best part of any gig was getting laid afterwards; he estimated his conquests in the thousands, because chicks loved men intent on the wandering life, and it suited him, too, to be here today and gone tomorrow. Nowhere was home (though LA, with its "paradise" palm trees, came closest) and marriage wasn't his style. The one girl he deeply loved died from heroin, making him even more determined not to touch that stuff, at least.

His other regret was that after Motörhead's greatest hit, "Ace of Spades", had soared to number 15 in the charts in 1980, even the band's fans seemed deaf to the equally good music that came next. Though he was on the road most of the year for 40 years, playing to packed houses, he seemed to be always broke. On the fringes of venues he would loiter by the slot machines (his favourite form of that addiction), hoping someone would buy him a drink.

The big time, however, never came any closer, because he refused to change a thing he did. He wore his usual gear, including the Iron Cross necklace from his treasured collection of Nazi memorabilia, even to the Grammy awards. Nor would he kowtow to any asshole, record company or manager. He remained stubbornly his own man, and not always at full volume. On the road he bought dozens of chocolate Kinder eggs for the little toys inside. He enjoyed pondering the beauty and randomness of Nature. And at lights-out on the tour bus he would settle down to P.G. Wodehouse, quietly happy in his own company. He hoped to be remembered as "an honourable man". But then, with a throaty laugh, he had to admit there wasn't really any question of that. ■


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