The Economist

SEPTEMBER 3RD–9TH 2016

Brussels spouts, Apple bruised

How to live with terrorism

Statistics and superstitions in China

Britain's post-Brexit economy

Uberworld

The race to reinvent transport

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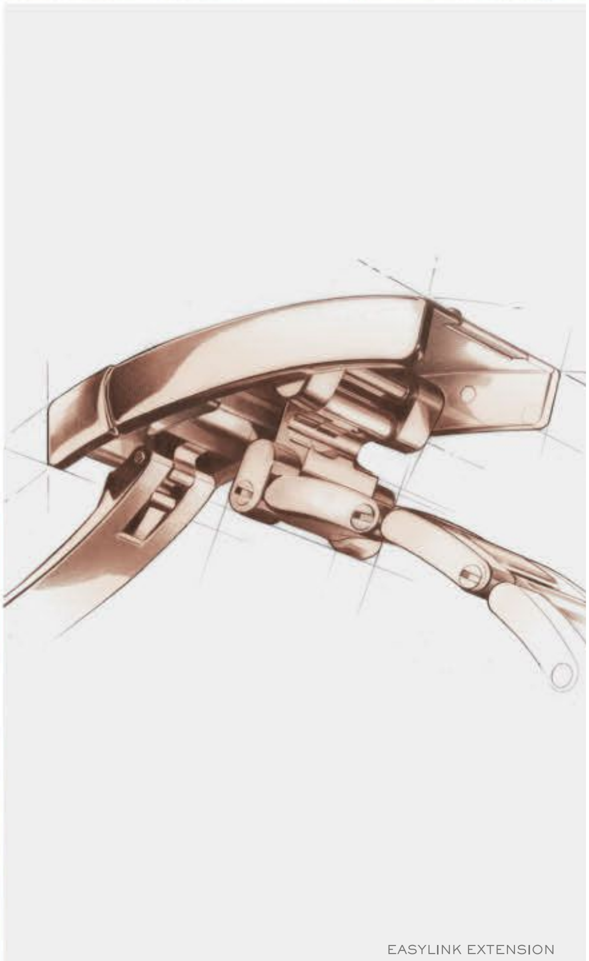
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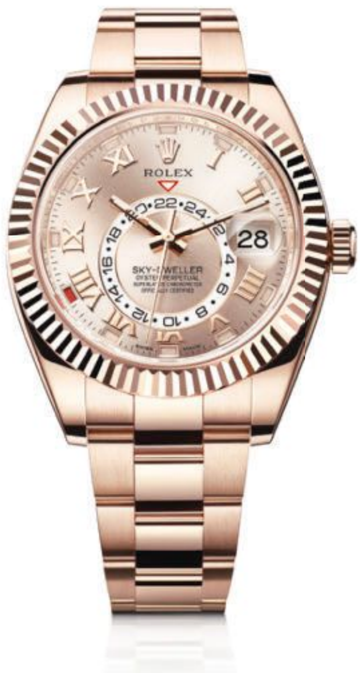

OYSTER PERPETUAL SKY-DWELLER

Borobudur Temple, Central Java • Indonesia

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Politics

Brazil's senate decided to remove the country's president, Dilma Rousseff, from office by 61 votes to 20, after finding that she had tampered with government accounts to conceal the size of the budget deficit. Ms Rousseff's successor is Michel Temer, who has been serving as interim president since May. In his first address as president he promised to reduce the deficit and restore the health of the economy, which is in a deep recession.

A ceasefire between **Colombian** security forces and the FARC, a left-wing guerrilla group, came into effect, ending a 52-year-old war. The FARC will now begin the process of handing over its weapons within six months. Its political wing is to get a guaranteed ten seats in congress.

Three people were charged with murdering a government minister in **Bolivia**. He had tried negotiating with miners who were blocking roads as part of a protest against working conditions. The accused killers are all officials in a local mining union.

The first commercial airliner to fly from the **United States** to **Cuba** in 55 years took off from Fort Lauderdale in Florida and landed in Santa Clara, in the centre of Cuba.

Into the vortex

Islamic State claimed responsibility for a suicide-bombing at an army training camp in the **Yemeni** port of Aden that killed at least 71 people. Aden is the base of Yemen's president, backed by Saudi Arabia, who fled Sana'a when Houthi rebels took control of the capital. IS and other Islamist groups have taken advantage of the chaos in Yemen to inflict their own brand of carnage.

Al-Shabab, a jihadist group in **Somalia**, struck at the capital, Mogadishu, twice in one week. It detonated a car bomb targeted at hotels used by officials and which killed 22 people. It also claimed responsibility for an attack on a restaurant in which ten people were killed.

Jean Ping, the leader of the opposition in **Gabon**, rejected the results of a presidential election that was reported to have delivered a narrow victory to Ali Bongo, whose family has ruled the country for almost 50 years. Protesters set fire to the parliament building.

Macronomics

Emmanuel Macron stepped down as **France's** economy minister, fuelling speculation that he will run against his Socialist Party mentor, François Hollande, in next year's presidential election. Mr Macron rose to prominence as the champion of labour-market reforms. Various presidential hopefuls argued with each other over a ban on burkinis, modest swimsuits worn by some Muslim women. The ban has been overturned by a French court.

The **Transatlantic Trade and Investment Partnership** being negotiated between the European Union and America suffered a double blow. The French minister for foreign trade called for an end to talks, saying there was no political support for a deal in France. Germany's economy minister said negotiations over TTIP had "de facto failed" because Europe did not want to give in to "American demands".

The UN refugee agency estimated that 100 **migrants** a day arrived on Greek islands from Turkey in August, up from 60 in July. Meanwhile, the Italian coastguard rescued around 6,500 migrants on a single day. Those plucked from the Mediterranean this week join some 270,000 who have made the dangerous crossing this year so far; an estimated 3,165 have lost their lives.

Theresa May, **Britain's** prime minister, moved to quell dissent over Brexit at a cabinet meeting to brainstorm plans to leave the EU. She was clear that there would be no second referendum and that Britain would not attempt to stay in the EU "by the back door". Mrs May also ruled out holding an early election. A vote now could give her Conservative Party a sizeable increased majority: opposition Labour MPs are still trying ineptly to get rid of their hapless leader, Jeremy Corbyn.

Mysterious circumstances

The government of **Uzbekistan** announced that its despotic president, Islam Karimov, had been hospitalised. Other reports suggested he had died. Observers braced for a messy succession in Central Asia's most populous country.

Aung San Suu Kyi, **Myanmar's** de facto leader, convened a summit of groups representing the country's many ethnic minorities, in the hope of ending the insurgencies that have racked the country since independence.

A suicide-bomber attacked the Chinese embassy in **Kyrgyzstan**, injuring three locals. Suspicion immediately fell on the restive Uighur minority in the neighbouring Chinese province of Xinjiang.

China banned entertainment news that promotes "Western lifestyles" or dwells on celebrities' personal lives. Rather, it must convey "positive energy" in line with the Communist Party's ideology, says the government.

The Communist Party chief of **Xinjiang**, Zhang Chunxian, was replaced by the boss of Tibet, Chen Quanguo. Under Mr Zhang, ethnic Uighurs had to carry special ID cards if they travelled, to help officials track troublemakers.

North Korea reportedly executed a senior official for dozing off in the presence of Kim Jong Un. Around 100 officials are thought to have been purged since the dictator came to power in 2011.

The spectacle of the bizarre

Donald Trump visited Mexico where he met the president, Enrique Peña Nieto, and spoke of his affection for Mexicans as "honest, hardworking people". He then went to Arizona where he reiterated his hardline policy on immigration, promising to build an "impenetrable " wall on the border that Mexico would pay for. Mr Trump said he did not discuss who would pay for the wall with Mr Peña Nieto; the president said they did and it wouldn't be Mexico.

Paul LePage, the Republican governor of Maine, hinted he might resign. He has stoked controversy, most recently by leaving a tirade of abuse on a legislator's voicemail and by calling him a "snot-nosed little runt" and challenging him to a duel. Mr LePage was angry because the lawmaker had called him a racist for blaming black drugdealers for a heroin epidemic sweeping his state. Mr LePage has said he will seek "spiritual guidance".

Business

The European Commission found that the tax advantages offered by Ireland to **Apple** broke EU rules on state aid and ordered it to recover €13 billion ($14.5 billion) in taxes from the company, by far the highest penalty the commission has imposed in its crackdown on corporate tax avoidance. But the decision was criticised for intervening in an arrangement struck with Irish authorities 25 years ago, and which the government still supports. Tim Cook, Apple's chief executive, said the company had never sought any special favours from Ireland, and is being asked to pay taxes to a government that insists it is not owed any money.

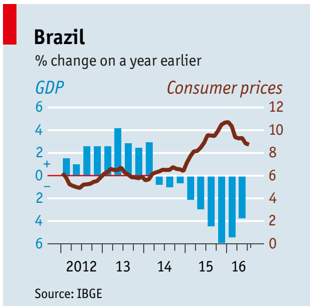
Activist shareholders in Germany claimed a rare victory in toppling the chairman of Stada, a drug company. Active Ownership Capital, an investment firm, said Stada was being managed mostly by pharmacists and doctors with little global ambition. It ran a campaign to install a new slate of shareholder representatives on the supervisory board made up of executives who have worked in some of Germany's biggest corporations.

In the crosshairs

The argument over sharp rises in the price of medicines came to the fore again in America's presidential campaign. **Mylan**, a drug company, has come under fire for the $608 wholesale price it charges for EpiPen, which is used to treat severe allergic shock. That is a huge increase since 2007, when Mylan bought the product. After Hillary Clinton intervened, Mylan said it would start selling a generic version of the treatment costing $300. It had already offered to help low-income patients with the cost.

In a clinical trial, an antibody-based drug for **Alzheimer's** shrank disease-associated protein plaques in the brains of many patients. There were suggestions it might also have reduced rates of cognitive decline, but the trial was not designed to investigate this.

Japan's **Government Pension Investment Fund**, the biggest in the world, ran up another quarterly loss, this time of ¥5.2 trillion ($50 billion). In 2014 the fund changed its investment strategy and doubled the proportion of domestic and foreign shares in its portfolio. But the value of those shares has been battered by the strengthening yen, which surged after Britain voted to leave the EU.



Adding to the country's uncertain political prognosis, **Brazil's** economy shrank by 3.8% in the second quarter compared with the same period last year, worse than expected and the ninth quarter of decline. At its latest meeting the central bank kept its key interest rate on hold at 14.25%.

India's GDP grew by 7.1% in the second quarter, down from the 7.9% notched up in the first three months of the year but still outpacing China.

Nigeria fell into recession, as its economy shrank by 2.1% year on year from April to June, the second consecutive quarter of decline. Inflation is at an 11-year high of 17.1%. The country has been hit hard by the slump in oil prices, which used to account for 70% of state revenues and 90% of export earnings.

Feeling the heat

Rounding out a busy week for government statisticians, **Canada** said its economy contracted by an annualised 1.6% in the second quarter, in part because of the effects from the wildfires that began near Fort McMurray in May. It was the costliest disaster for insurance companies in Canadian history.

Hanjin Shipping, based in South Korea and one of the world's biggest freight-container lines, filed for bankruptcy protection after a downturn in the industry left it with debts of 5.6 trillion won ($5 billion) at the end of 2015. Hanjin's creditors, led by Korea Development Bank, had earlier refused to continue providing a financial lifeline that had kept the company afloat. Some ports in America, China and Spain were already refusing entry to its ships, worried they could not pay port fees. A court will now decide whether Hanjin should restructure or be split up and sold off.

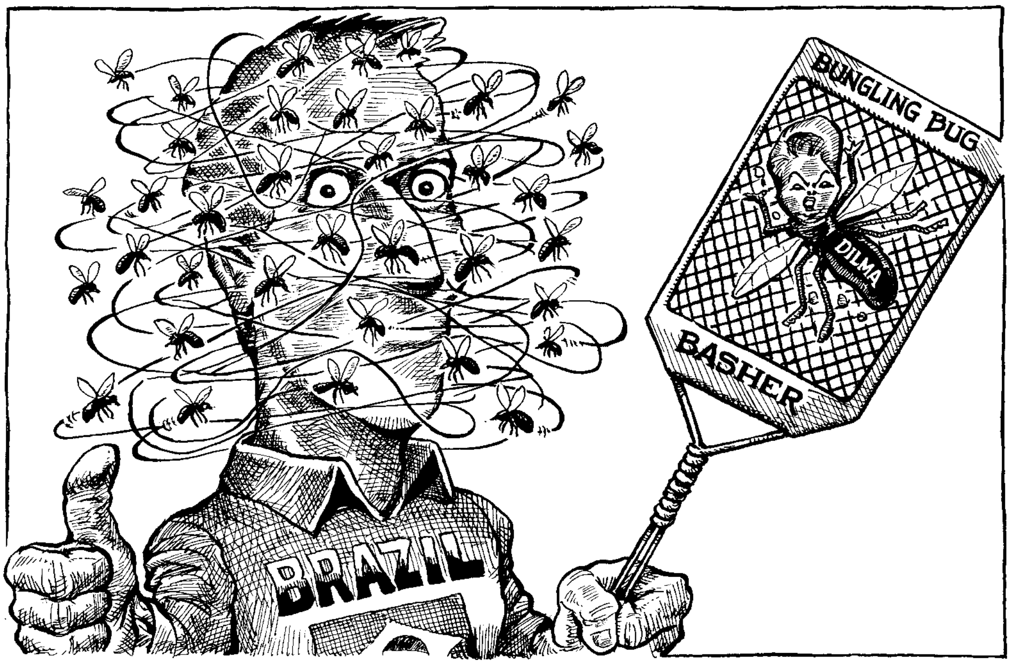
The merger of **Anheuser-Busch InBev** with **SABMiller** is expected to lead to 5,500 job losses, or 3% of the combined brewers' present workforce, according to official filings.

Not so sweet

Mondelez, one of the two companies to emerge from the splitting of Kraft Foods in 2012, said it could not reach an agreement with the owners of **Hershey** over its $23 billion takeover offer and had therefore dropped its bid for the confectioner.

Agrium and **Potash** confirmed they were talking about merging, the latest sign of consolidation in the agricultural-chemicals industry. A successful deal between the two Canadian fertiliser producers would help them grow into a global giant in the field.

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



Uberworld

The world's most valuable startup is leading the race to transform the future of transport

"LET'S Uber." Few companies offer something so popular that their name becomes a verb. But that is one of the many achievements of Uber, a company founded in 2009 which is now the world's most valuable startup, worth around $70 billion. Its app can summon a car in moments in more than 425 cities around the world, to the fury of taxi drivers everywhere. But Uber's ambitions, and the expectations underpinning its valuation, extend much further: using self-driving vehicles, it wants to make ride-hailing so cheap and convenient that people forgo car ownership altogether. Not satisfied with shaking up the $100-billion-a-year taxi business, it has its eye on the far bigger market for personal transport, worth as much as $10 trillion a year globally.

Uber is not alone in this ambition. Companies big and small have recognised the transformative potential of electric, self-driving cars, summoned on demand. Technology firms including Apple, Google and Tesla are investing heavily in autonomous vehicles; from Ford to Volvo, incumbent carmakers are racing to catch up. An epic struggle looms. It will transform daily life as profoundly as cars did in the 20th century: reinventing transport and reshaping cities, while also dramatically reducing road deaths and pollution.

The wheels of change

In the short term Uber is in pole position to lead the revolution because of its dominance of chauffeured ride-hailing, a part of the transport market that will see some of the fastest growth. Today ride-hailing accounts for less than 4% of all kilometres driven globally, but that will rise to more than 25% by 2030, according to Morgan Stanley, a bank. The ability to summon a car using a smartphone does not just make it easy for individuals to book a cheaper taxi. Ride-sharing services like UberPool, which put travellers heading in the same direction into one vehicle, blur the boundaries between private and public transport. Helsinki and other cities have been experimenting with on-demand bus services and apps that enable customers to plan and book journeys combining trains and buses with walking and private ride-sharing services. Get it right, and public-transport networks will be extended to cover the "last mile" that takes people right to their doorsteps. This will extend the market for ride-hailing well beyond the wealthy urbanites who are its main users today.

But in the longer term autonomous vehicles will drive the reinvention of transport. The first examples have already hit the road. Google is testing autonomous cars on streets near its headquarters in Mountain View. A startup called nuTonomy recently launched a self-driving taxi service in Singapore. Tesla's electric cars are packed full of driver-assistance technology. And within the next few weeks Uber itself will offer riders in Pittsburgh the chance to hail an autonomous car (though a human will be on hand to take back the wheel if needed).

Self-driving cars will reinforce trends unleashed by ride-hailing, making it cheaper and more accessible. The disabled, the old and the young will find it easier to go where they want. Many more people will opt out of car ownership altogether. An OECD study that modelled the use of self-driving cars in Lisbon found that shared autonomous vehicles could reduce the number of cars needed by 80-90%. As car ownership declines, the enormous amount of space devoted to parking—as much as a quarter of the area of some American cities—will be available for parks and housing instead.

It is not clear which companies will dominate this world or how profitable it will be. Uber will not win in its current form: a ride-hailing business which depends on human drivers cannot compete on roads full of self-driving cars. But this existential threat is spurring the firm's innovation (see page 17). With its strong brand and large customer base, Uber aims to establish itself as the leading provider of transport services in a self-driving world. It is also branching out into new areas, such as food delivery and long-distance cargo haulage using autonomous trucks. There is logic in this ambition. Carmakers lack Uber's experience as a service provider, or its deep knowledge of demand patterns and customer behaviour.

But firms that pioneer new technological trends do not always manage to stay on top. Think of Nokia and BlackBerry in smartphones, Kodak in digital cameras or MySpace in social networking. Much will depend on which firm best handles the regulators. Technology companies have a history of trying new things first and asking for permission later. Uber's success in ride-hailing owes much to this recipe, yet when it comes to autonomous vehicles, the combination of vague rules and imperfect technology can have deadly consequences.

Even for the winners, it is not clear how great the rewards will be. As more firms pile into ride-sharing, and autonomous vehicles become part of the mix, the business may prove to be less lucrative than expected. By matching riders with drivers, Uber can offer transport services without owning a single vehicle, and keep the lion's share of the profits. But if its service becomes an integral part of urban transport infrastructure, as it hopes, Uber could end up being regulated, more highly taxed, broken up or all of the above. In a self-driving world, Uber might also have to own and operate its own fleet, undermining its "asset-light" model. The would-be high-margin digital disrupter would then look more like a low-margin airline.

The great road race

For now Uber is the firm to beat in the race to transform the future of personal transport. Unlike Apple or Google, it is singularly focused on transport; unlike incumbent carmakers, it does not have a legacy car-manufacturing business to protect. Its recent rapprochement with Didi, its main rival in China, has removed a major distraction, allowing it to devote its $9 billion war chest to developing new technology. Its vision of the future is plausible and compelling. It could yet prove a Moses company, never reaching its promised land—it might end up like Hoover, lending its name to a new product category without actually dominating it. But whether Uber itself wins or loses, we are all on the road to Uberworld. ■

Corporate taxation

Bruised Apple

The European Commission's assault on the technology giant is wrong

FOR many, there is no question who is the hero and who the villain in this week's tax confrontation between Brussels and Apple (see page 55). Gaming of cross-border tax rules has risen inexorably. Apple, with its abundance of intangible assets, which are easier to play around with, has been one of the cleverest at exploiting the gaps. A bill of €13 billion ($14.5 billion) plus interest, the amount that the European Commission says Ireland must recover from the firm for tax avoidance, would pay for all the country's health-care budget this year and barely dent Apple's $230 billion cash mountain.

But in tilting at Apple the commission is creating uncertainty among businesses, undermining the sovereignty of Europe's member states and breaking ranks with America, home to the tech giant, at a time when big economies are meant to be co-ordinating their anti-avoidance rules. Curbing tax gymnastics is a laudable aim. But the commission is setting about it in the most counterproductive way possible.

It says Apple's arrangements with Ireland, which resulted in low-single-digit tax rates, amounted to preferential treatment, thereby violating the EU's state-aid rules. Making this case involved some creative thinking. The commission relied on an expansive interpretation of the "transfer-pricing" principle that governs the price at which a multinational's units trade with each other.

Having shifted the goalposts in this way, the commission then applied its new thinking to deals first struck 25 years ago. Back then, there was no reason for Apple to think it might one day fall foul of the state-aid rules. The firm shook hands with a sovereign government, which continues to defend the arrangement to this day. Even if the plan had been legally suspect at the time, it makes as much sense for subsequent penalties to fall on the country that offered it as on the company that took it. Either way, firms that invest in Europe will be entitled to wonder what other deals reached with governments can be unwound retroactively. Ireland itself is bridling at interference in affairs that are typically the province of EU member states. It is considering whether to appeal; Apple has said it will.

Better together

By using new arguments to fire broadsides at deals done long ago, the commission is not helping the fight against egregious tax-dodging. Ireland and other obliging European states, such as Luxembourg and the Netherlands, have already succumbed to pressure to close several of the loopholes of the past. Last year the OECD, a group of rich countries, led the way on a set of guidelines designed to crack down on avoidance. By going it alone the commission risks stoking conflict, not co-operation. American politicians quickly branded the judgment a naked tax raid; in a white paper released before the commission's verdict, America's Treasury hinted ominously at retaliation.

Some see a bright side. Money paid by Apple and other American firms to European governments will not go into tax coffers back home; the realisation that European politicians might gain at their expense could, optimists say, at last spur American policymakers to reform their barmy tax code. American companies are driven to tax trickery by the combination of a high statutory tax rate (35%), a worldwide system of taxation, and provisions that allow firms to defer paying tax until profits are repatriated (resulting in more than $2 trillion of corporate cash being stashed abroad). Cutting the rate, taxing only profits made in America and ending deferral would encourage firms to bring money home—and greatly reduce the shenanigans that irk so many in Europe. Alas, it seems unlikely. The commission has lobbed a grenade; a tax war may result. ■

The British economy and Brexit

The right kind of budget

A to-do list for Britain's new chancellor, Philip Hammond

TWO months on from Britain's vote to leave the European Union, the economy has not plunged. The stockmarket has recovered strongly; retail spending remains solid. Yet it would be foolish to sound the all-clear (see page 49). Evidence abounds that businesses are holding off on investment as they wait for clarity about Britain's future relationship with the EU. The fall in the pound will soon put a squeeze on real take-home pay. And, on past form, a burst of export-led growth is unlikely to compensate.

Slower growth seems inevitable and the economy could yet fall into recession. The Bank of England has done what it can to prevent this, cutting the base rate of interest to near zero and launching another round of "quantitative easing" (bond-buying), alongside an array of "macroprudential" tools to ensure that lower borrowing costs filter through to firms and individuals. But now the limits of monetary policy are approaching. It is time for fiscal policy to play a bigger role.

That task will fall to Philip Hammond, the newish chancellor, in the autumn statement, a mini-budget which is usually presented to Parliament in November or December. Mr Hammond's job is complicated by the different directions in which Brexit pulls Britain's fiscal arithmetic. The vote represents a ▸▸

shock to supply, potentially lowering the rate of growth the economy can sustain, and to demand, as business investment is suspended. Fiscal stimulus cannot help much on the supply front, but it can—and should—fill in for the loss of demand.

Mr Hammond's best move would be to undo the most ill-judged bits of the fiscal strategy he inherited. He has already ditched the target set by his predecessor of reaching a budget surplus by 2020. That was easy: the target was a daft one and, even without Brexit, the government was unlikely to hit it. The next step should be to cancel fiscal tightening planned for 2017-18. Current policy calls for a reduction in the budget deficit, adjusted for the economic cycle, of 0.8% of GDP. That would be a tight squeeze on a strong economy; with Brexit looming, it looks wholly unwise. Further progress on deficit reduction should wait until the clouds from Brexit clear.

How to spend it

Instead there is a case for stimulus, focused on two areas: more public spending on infrastructure and a reversal of the planned cuts to in-work benefits for the low-paid. Investing in transport, housing and suchlike will boost Britain's long-term growth potential as well as propping up spending in the short term. And it is sorely needed. By global rankings, the quality of British infrastructure has slipped in recent years—hardly a surprise when public-sector net investment is down by a quarter since 2010-11. Overcrowding on trains travelling into London has doubled since 2009. Twice as many cars break down after encounters with pot-holes as did a decade ago. Congestion, as measured by the number of on-time journeys, is 3% worse than in 2011.

Mr Hammond might be tempted to take advantage of low borrowing costs to splurge on big, shiny projects. Several such schemes are on the horizon: airport expansion in south-east England; a high-speed railway between London and the north; a road tunnel, perhaps the world's longest, under the Pennines (see page 50). These would all help to get the economy going eventually. But in some cases they are years away from getting started. The priority should be smaller projects that generate fewer headlines but can begin immediately. Mr Hammond has several options: he could increase rewards for local councils that allow more housebuilding, or raise spending on local buses and roads, which have endured big cuts since 2010.

The second area of focus should be welfare, which under current plans is on the wrong side of the line between tough love and inequity. Tax and benefit changes planned for the next four years will squeeze the incomes of some of the poorest households by as much as 12%. Tempering those cuts would be good politics, given the acres of political centre-ground vacated by the leftward-rushing Labour Party. But it would also be sound economics: poor households spend a greater proportion than rich ones of any extra income they receive. Mr Hammond should end the cash-terms freeze on working-age benefits, which is supposed to last until 2020. He should also look at reversing the changes to tax credits (top-ups for low-paid folk).

The British economy has some hard years ahead. More drastic action may be needed when the country eventually leaves the EU. But it is long past time that the government loosened its over-tight spending plans, softened its regressive welfare reform and started investing more in infrastructure. If the prospect of Brexit at last forces the chancellor's hand, good. ■

Brazil's new president

A chance for a fresh start

How Michel Temer can make a success of his presidency

FUTURE generations of Brazilians will not look back on the last day of August as a proud moment in their history. The eviction from office of the hapless president, Dilma Rousseff, by a compromised congress on a flimsy pretext, though perfectly legal, was not the country's finest democratic hour (see page 37). But, with luck, tomorrow's Brazilians may also remember August 31st as the day the country began to deal seriously with the root causes of its economic and political dysfunction.

That hope rests with Michel Temer, the former vice-president, who has been acting president since May and was formally sworn in after Ms Rousseff's ousting. He is no saint. His Party of the Brazilian Democratic Movement is as tainted by the Petrobras scandal as is Ms Rousseff's Workers' Party (PT). The scheme to funnel billions of dollars from the state-controlled oil company to governing parties and politicians stoked the political fury that led to Ms Rousseff's impeachment, though it did not provide the legal grounds for it. But Mr Temer represents an improvement over the fallen president in two ways. Brazil's political and economic crises had rendered her impotent well before the senate deposed her; he is a more adept politician, with a firmer base of support in congress. And he understands Brazil's problems better than she does.

These are too numerous and deep-seated to be solved in the 28 months that he will serve in office. But although he lacks a popular mandate, he cannot be just a caretaker. GDP contracted by 3.8% year-on-year in the second quarter of 2016. By the end of the year, the economy will probably have shrunk by more than 7% since the start of 2015, its worst slump in decades. Mr Temer's presidency will be judged by his success in restoring growth and laying the groundwork for future prosperity.

Temer the trimmer

Brazil's main economic problem is that the state spends lavishly but unwisely, and taxes and regulates with a heavy hand. That keeps interest rates high and investors' confidence low. The most urgent task is to correct the disastrous fiscal course set by successive governments since the return of democracy in 1985, which became still more reckless under Ms Rousseff. Mr Temer's other big job is to embark on a redesign of the nutty electoral system.

He sounds like a fiscal reformer. His priorities are to freeze public spending in real terms and to raise the retirement age, reducing the growth of a pensions bill that cripples the government. But his behaviour has been less resolute than his rhetoric. During his short time in charge, he has given public-sector workers a big pay rise and bailed out bankrupt states. To sustain the economic confidence that began to return after Mr Temer took over in May, he must change course.

That means not only keeping his promises but going beyond them. He should break the ratchet that makes pensions and other benefits grow faster than the state's capacity to pay them. Under Ms Rousseff and her PT predecessor, Luiz Inácio Lula da Silva, non-interest spending grew twice as fast as GDP. Mr Temer should find plenty of fat to cut. That includes some 80 billion reais ($25 billion) in tax breaks for industry.

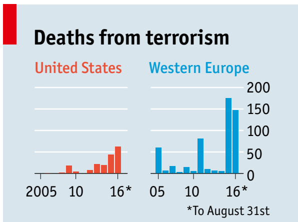
These are the sorts of decisions that past presidents, putting their careers before their countrymen, have ducked. The new president and his economic team, including the finance minister, Henrique Meirelles, must govern more like technocrats. Mr Temer is right to rule himself out as a candidate in the next presidential election, to be held in 2018; he must avoid any suspicion that he is interfering in the course of the Petrobras investigation. Mr Meirelles, who is thought to have presidential ambitions, must not be distracted by them.

Mr Temer's small stock of political capital limits what he can do. An overhaul of taxes and the antiquated labour code will have to wait for the next president. But popular anger at the political class gives him scope to reform the political system. Today's congressmen belong to dozens of parties and compete for votes across entire states. This makes elections expensive, parties weak and politicians, with little connection to constituents, more corruptible. A vote threshold for parties to enter congress and penalties for politicians who switch parties would make the political class more accountable. It would be a gift to Mr Temer's successor. If that happens, August 31st may turn out to be not such a bad day for democracy after all. ■

Counter-terrorism

Scared? Make women disrobe

A French court was right to overturn the burkini ban, but that is not the only foolish response to terrorism



A TERRORIST drove a lorry into a crowd on Bastille Day, killing 86 people and injuring hundreds. This atrocity took place near a beach. So a number of French seaside towns decided to ban Islamic swimwear in public (see page 45). This is an idiotic policy, and a French court was right to overturn it. Yet Nicolas Sarkozy, a former French president who launched his campaign to regain the Elysée last week, wants to change the constitution and impose a nationwide ban on burkinis. Why?

As a measure to prevent terrorism, such a ban would be useless. Muslim women who wear modest swimsuits do so because they like swimming but would prefer not to expose lots of flesh. They are not hiding weapons under their burkinis. More important, giving officials the power to order women to disrobe is an affront to human dignity. Does anyone seriously imagine that this power would not be abused? It is as if Mr Sarkozy wants to turn a drunken rugby chant into government policy. A burkini ban would also alienate moderate Muslims, whose co-operation is desperately needed if France is to gather intelligence and foil actual terrorist plots. The notion that the burkini is a form of "enslavement of women", as Manuel Valls, France's prime minister, put it, and so offensive that it is likely to cause disorder, is preposterous.

Strip-searching, without the searching

Alas, the burkini ban is not the only noxious response to jihadism that Western leaders are mulling. Mr Sarkozy wants all suspected Islamist militants either to be put into detention camps or made to wear electronic tags, regardless of whether they have committed a crime. He would also ban headscarves and Muslim prayer from public places. He claims to be defending *laïcité* (secularism). *Liberté*, apparently, can go hang.

The prospect of a contest between Mr Sarkozy and Marine Le Pen to decide who can bait Muslims more in the run-up to next year's French presidential election is distressing. Meanwhile, on the other side of the Atlantic, Donald Trump has called for a ban on immigration to America by foreigners from countries racked by terrorism, urged the murder of terrorists' families and vowed to deploy forms of torture "tougher than waterboarding".

Politicians make such promises because they think voters want to hear them. Some clearly do, partly because they have an exaggerated idea of the danger that terrorism poses. A recent poll finds that 77% of Americans who follow the news believe that Islamic State (IS) is a serious threat to "the existence or survival of the US". Mr Trump agrees. If America doesn't get tough on terrorism soon, he has said, "we're not going to have a country any more—there will be nothing left."

Nonsense. For America (and most other countries) terrorism is a real threat, but not an existential one (see page 53). In the seven months that included the San Bernardino and Orlando shootings, Americans were nearly 300 times more likely to die in a car crash than a terror attack. Even in the past year, a French citizen was three times more likely to be the victim of an ordinary murderer than of a terrorist. Groups such as IS aim to spread fear. Using hyperbolic language about their power helps them achieve this aim. Ill-judged "security theatre", such as sending heavily armed soldiers to patrol French beaches, may make people feel more anxious than safe.

IS will eventually be evicted from the territory it controls in Iraq and Syria. The end of the "caliphate" will reduce its power to inspire terrorists in the rest of the world, but not eliminate it. Western security services have proved (mostly) effective at preventing large, complex attacks. Stopping lone wolves is much harder: anyone can rent a lorry and crash it into a crowd. So the spooks will have to remain vigilant.

But it is no disrespect to IS's victims to suggest that counter-terrorism policy should be measured and judicious. The aim should be to stop the largest number of attacks with the minimum intrusion into people's lives. That means spying on suspects, but not locking them up without charge or harassing the communities from which they come. Over-reacting, as Barack Obama put it, can undercut "the essence of who we are". ■

SAMSUNG

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The Origin of the Next TV

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Low-grade China

There is a big "if" in your conclusion that debt in China will remain under control, allowing the country to rein in its deficits ("Augmented reality", August 20th). You are right that much of China's deficit stems from investments in transport infrastructure. You are wrong, however, in assuming that those investments have resulted in "decent" assets that contribute positively to the economy. A new study in the *Oxford Review of Economic Policy* (autumn 2016) shows the exact opposite to be true.

Over half of the investments in transport infrastructure in China are of such low quality that they destroy economic value instead of generating it—the costs of that spending are larger than the benefits they generate. Unless China shifts to fewer and higher-quality infrastructure investments the country is headed for an infrastructure-led national financial and economic crisis, which is likely to spread to the international economy.

BENT FLYVBJERG
Professor
Said Business School
University of Oxford

Uniting the centre-left

Bagehot (August 20th) is right that "tribalism on both sides" killed off Paddy Ashdown's project to ally the Liberal Democrats with Labour centrists in the 1990s. Having been somewhat involved in those talks at the time, I can assure you that the real cause of the breakdown was Tony Blair's refusal to support the proposals outlined by Roy Jenkins to bring in proportional representation for the House of Commons.

Mr Ashdown's new grand design will also fail unless the larger part of Labour comes around to supporting electoral reform. An elaborate policy programme from More United, a political group, will only confuse the issue. A progressive movement that stuck just to two cardinal commitments, re-entry to the European Union and fair votes for the Commons, would sweep the tribalists away.

ANDREW DUFF
Visiting fellow
European Policy Centre
Brussels

Assisted suicide is wrong

Regarding your article on the right to die, laws that make assisted suicide illegal are often perceived as an obstacle to personal autonomy ("What is unbearable?", August 6th). For those of us doctors who have witnessed hundreds of deaths, those laws seem necessary for at least two reasons. They prevent unscrupulous doctors from convincing their most bothersome patients to ask for assisted suicide and they keep sick people from the devastating feeling that they should kill themselves to stop being a burden.

For some strange reason none of the hundreds of terminally ill patients I have cared for has admitted to be living an unbearable life. Yet suicide is the first thing some perfectly healthy scriptwriters and novelists think about when the topic is an incurable disease. Easier inflicted on others than on themselves.

JOSEPH MASDEU
Chair in neurological sciences
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Time on their hands

Bertrand Russell's essay "In Praise of Idleness" maintains that, "in countries which do not enjoy Mediterranean sunshine idleness is more difficult, and a great public propaganda will be required to inaugurate it". Your characterisation of the Spanish "long lunch" as "an anomaly compounding the problem" of being in the wrong time zone is propaganda in the opposite direction ("Out of sync with the sun", August 13th).

The causal link between working hours and work efficiency is not at all obvious. In fact, the available evidence suggests the contrary: the longer hours you work, the less productive you become. We the peoples of the Mediterranean shall gather evidence in our great public propaganda, and we shall prevail. If only we could leave the lunch table.

EKIN CAN GENC
Antalya, Turkey

Spanish time zones are anomalous? A few winters ago I took a day trip from Kirkenes in the north of Norway over the border to Nikel in Russia, a distance of 55km. When we crossed the border the time in Norway was 11am but in Russia it was 2pm, a time difference of three hours. We were late for lunch when we got to Nikel and early for dinner when we arrived back to Kirkenes.

MICHAEL FERGUS
Oslo

The dogs of war

"Furry fashionable" asked how Taiwan will defend itself if its young people continue buying dogs instead of having children (August 6th). Herman Melville might have the answer. In "The Encantadas", Melville recounted the tale of the Dog King, a Creole adventurer who became supreme lord of Charles Island in the Galápagos. After taking possession of the island, he dismissed his human bodyguard and relied, for the control and defence of the island, on a "cavalry company of large grim dogs". For a time their "terrific bayings prove[d] quite as serviceable as bayonets in keeping down the surgings of revolt". However, Taiwan should be wary of following these defensive policies. The dog army was eventually thrown into the sea.

MATTHEW HAMBLIN
London

The Trump effect

Lexington suggests there will be a reckoning between Republicans and Democrats in Congress after the presidential election (August 6th). There will be a reckoning, all right, but it will be between Republicans and Republicans. Win or lose, the big-tent alliance between conservatives in the base and nativist voters that has been at the core of the party for the past 40 years is irreparably broken. No one in the party wants to go through this again. Either the conservative wing will reassert control and drive the nativists out or conservatives will abandon the party and seek other accommodation. Either way, the real moment of truth will come with the 2018 mid-terms.

CHRIS TRUAX
Editor
HoldingOurNosesForHillary.com
San Diego

Donald Trump reminds me of some monstrous figure out of Lewis Carroll's writings. An amalgam of the Red Queen ("Why, sometimes I've believed as many as six impossible things before breakfast!), Humpty Dumpty ("When I use a word it means just what I choose it to mean, neither more nor less!"), and the Bellman in "The Hunting of the Snark" ("What I tell you three times is true!").

IAN MCDONALD
Georgetown, Guyana

I very much enjoy reading your analysis of the election. However, please keep in mind that all politicians are weasels. Hillary Clinton and Donald Trump are politicians. Therefore, we voters will be forced to choose between the lesser of two weasels.

STEWART DENENBERG
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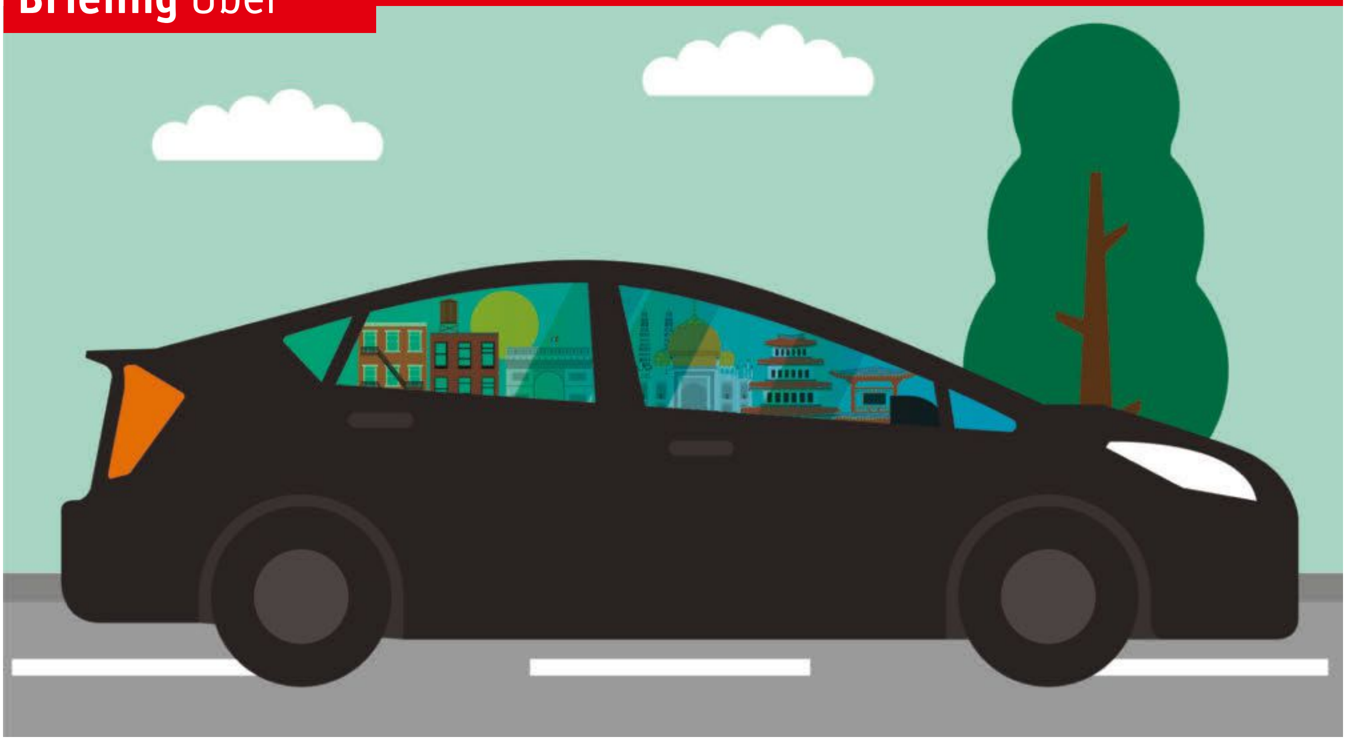


From zero to seventy (billion)

SAN FRANCISCO

The accelerated life and times of the world's most valuable startup

SEVERAL of America's great industrialists built empires in Pittsburgh, including Andrew Carnegie, a steel magnate. Now the city is attracting the attention of a new, aspiring robber baron. Last year the ride-hailing firm Uber swooped down on a robotics research centre run by Carnegie Mellon University in search of autonomous-vehicle expertise. It has been testing self-driving cars on Pittsburgh's roads for months, and will soon begin offering customers the chance to request rides in one.

Since the launch of its first smartphone app, UberCab, in 2010, the startup has attracted $18 billion in equity and debt. Today it carries a valuation of close to $70 billion, making it by far the largest of the startup "unicorns" worth over $1 billion (see chart 1 on next page). No technology firm in history has raised more money from private investors before going public. Its deep-pocketed backers include Saudi Arabia's sovereign-wealth fund, mutual funds, Silicon Valley venture capitalists and a crowd of other firms. They are stalking the next big win in the technology business at a time when returns from other assets are widely disappointing.

Uber operates in more than 425 cities in 72 countries and has around 30m monthly users. In 2016 it will probably have around $4 billion in net revenues, more than double the previous year's. Originally dedicated to connecting customers with limos and other ritzy rides, since 2012 it has offered a peer-to-peer service called Uberx that lets drivers of all sorts of cars offer rides to passengers using its app. This service now accounts for the bulk of the firm's revenues. The company also offers an UberPool service that allows several passengers travelling in the same direction to share a ride. It does not own its car fleet, but takes a cut of the fare in return for providing the platform that allows the drivers to work—typically 25%, with the rest going to the driver.

A runaway American dream

The company combines great name recognition with huge potential for growth. Like Facebook and Google before it, it has its own verb ("Let's Uber there"). Speaking to *The Economist*, Travis Kalanick, the company's co-founder and boss, says his goal is not simply to disrupt the taxi market but to make ride-sharing so cheap and convenient that using Uber becomes an alternative to owning a car. Meanwhile, he is pushing into new areas, such as delivering food and packages. Last month Uber acquired Otto, a newborn autonomous-lorry company, for around $600m and 20% of Uber's future profits from trucking.

If Uber can pull all this off, it could be one of the biggest companies in the world—one which plays a critical role in the lives of consumers and the fabric of cities. The potential for profit is enormous. Worldwide spending on internet advertising, the business that sustains internet giants like Google and Facebook, will be $175 billion this year—larger than the taxi market, which is estimated at roughly $100 billion. But the global market for personal mobility is worth as much as $10 trillion, according to Adam Jonas of Morgan Stanley, a bank.

These prospects go some way to explaining a valuation higher than the market value of 87% of firms in the S&P 500 and more than a third higher than that of General Motors, which had a gargantuan $152 billion in sales last year. Unsurprisingly, a valuation of around 17 times the loss-making company's 2016 revenues spurs a certain amount of scepticism. Such a figure can be justified only by lots of future growth, which will cost yet more money. But when Uber goes public, perhaps as soon as next year, in order to provide an exit for current investors, will its new shareholders be willing to tolerate continuing losses in the name of growth?

There are other questions, too. Are the barriers to entry in Uber's business high enough to defend it against rivals such as Lyft in America, Ola in India and Grab in South-East Asia, and from future competition from the likes of Alphabet's Google? Will regulation hamstring its growth? And perhaps most crucially, how will it manage the transition to driverlessness? The firm's long-term success lies in changing the way people and goods get moved around—exactly the area that autonomous vehicles ▸▸

will disrupt. The company feels a pressing need to navigate this technological change before the carmakers and rival technology companies provide competitive visions of the future of transport, and of who will profit from it.

Two of today's digital giants provide a useful guide to Uber's position and plans. Its executives never have Amazon far from their minds as they plot their company's future, says Bill Gurley, a venture capitalist at Benchmark Capital, who invested in Uber and sits on its board. Amazon has favoured relentless growth over the pursuit of profits for much of its history, keeping prices low to win loyalty and grab market share. Uber is trying a similar tack by subsidising drivers to keep fares down, by rapidly expanding into new cities and by launching new services, such as the delivery of food and other items.

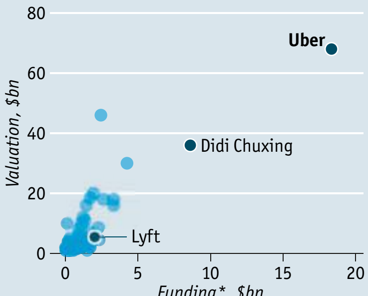
Investors like to see the company in terms of Facebook. When the social network accepted an investment from Microsoft that valued it at $15 billion in 2007, a time when it had not shown any real propensity to make money, this was decried as folly. When it filed to go public at a valuation of around $100 billion in 2012, accusations of madness came back, based on worries about the company's ability to adapt to the mobile phone. Today Facebook has a market value of more than $360 billion. A fear of missing out on the internet's next Facebook-sized hit is a big factor in the flood of capital into Uber's coffers.

Investors' bullishness is bolstered by Uber's position at the intersection of three linked disruptive trends. First is the emergence of asset-light business models. The cost of expanding is far lower for a startup that does not own its own cars or consider its drivers employees. Second is the shift to the sharing economy, which underlies the success of peer-to-peer services; a system that lets people do as much or as little as they like attracts workers. The third is that consumers, especially young consumers, are increasingly happy to pay for access to things, rather than own them outright.

The average cost per mile of UberX is

The price you've got to pay 1

Worldwide startups with a current valuation of at least $1bn, at August 30th 2016

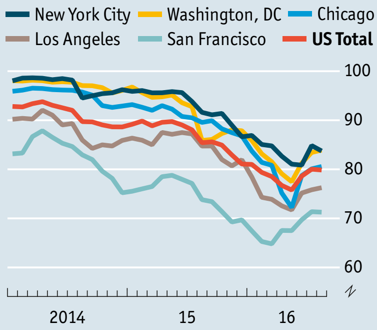


Sources: CB Insight; company reports

*Including debt and equity

Take all the action you can meet 2

Uber market share v Lyft, %



Source: 7Park Data

probably around $1.50 (€0.84/km). It already costs more than that to own a car in some places. In New York City, car ownership works out at around $3 a mile. All told, about 14% of people in the urban centres of America's top 20 metropolitan statistical areas (MSAs) may find it cheaper to use UberX at current rates than to own a car, according to Rod Lache of Deutsche Bank. The more Uber can bring costs down, the more widely it will compete with car ownership. Mr Lache reckons that autonomous cars might bring the price per mile down to 89 cents or less—below the average cost per mile for car ownership across all 20 top American MSAs.

From the fire roads to the interstate

Cost is not the only reason someone would give up a car; convenience and time matter, too. Like Amazon, though, Uber understands that low prices hook customers and is trying to push them down more. In San Francisco the price of an UberX ride is half what it was two years ago. An UberPool costs around half of an UberX ride.

Even without an interest in forming habits, though, Uber would have little choice about low prices—because it has competition. The switching costs for both passengers and drivers are relatively low, which means new entrants can buy market share by subsidising trips and earnings. The same exuberance that has driven up Uber's valuation has also given its rivals the resources with which to attack it.

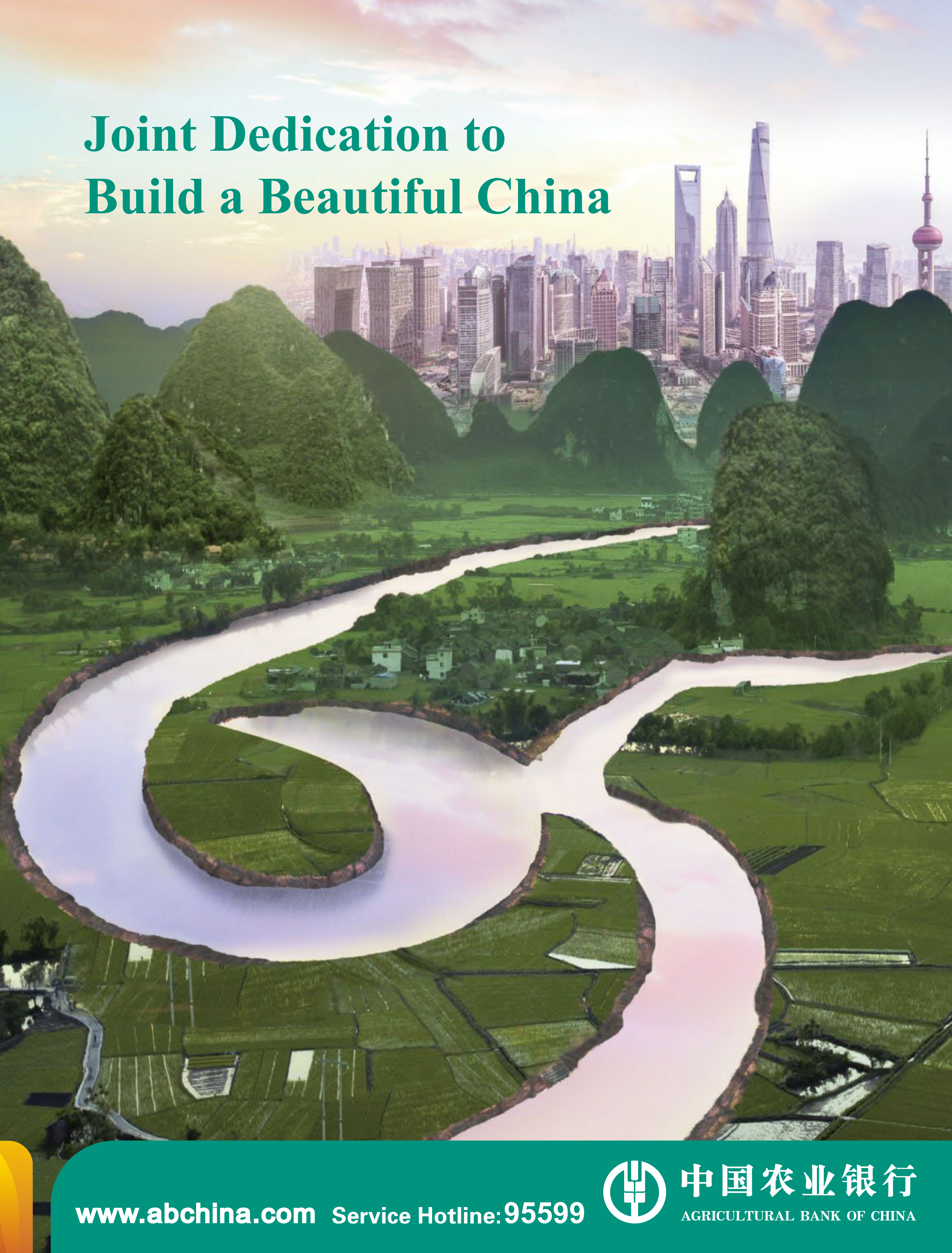
Lyft, with 20% of the American market to Uber's 80%, is spending an estimated $50m a month to increase its share, and in many places it has been succeeding (see chart 2). Uber has had to pay out to avoid losing passengers and drivers in key markets. New companies, hearing of gold in the ride-hailing hills, have rushed in; two startups, Juno and Via, have toeholds in New York. Being the biggest company in a market helps a lot, because customers want short waiting times and drivers want frequent fares. But fighting off competitors still costs money. After claiming earlier this year that its developed-market business had become profitable, Uber lost an estimated $100m in America in the second quarter.

Competition at home and abroad will affect Uber's profit margins in the medium term. Thibaud Simphal, the boss of Uber's French operations, admits that ride-hailing could be "a high-volume, low-margin business. It's transportation. It's like retail." For the time being, investors are willing to accept these low margins as Uber pursues growth above all else. But their patience may wear thin if the intense competition drags on. Amazon built up its business at a time when few competitors shared its vision of the size of the e-commerce opportunity. Uber does not operate in a world of low expectations.

One wild card is whether Lyft remains an independent company. There have been reports it has been seeking a buyer. In 2014 Uber might have been that buyer, something that has not been previously reported; negotiations fell apart over price. Mr Kalanick insists he does not regret the outcome: "It's a really powerful thing for a company to compete. It makes you fierce about serving your customer." Having a rival also helps deflect regulators' scrutiny. Yet many of Uber's investors wish the two had gone forward with a deal, so that Uber would not have to keep battling for share.

If the competition can be won with money and determination, Uber has to be well-positioned. It was not the first firm to recognise the potential of peer-to-peer ride-sharing: Sidecar, a now-defunct start-up in San Francisco, got the ball rolling. Lyft came next. But Mr Kalanick used the momentum achieved by raising a lot of capital and expanding rapidly to great effect. Uber's huge cash pile now acts as an "almost unassailable barrier" to new entrants, says Sunil Paul, the founder of Sidecar. And even with $9 billion, Mr Kalanick does not rule out the possibility of asking investors for more: "If the money is there, that means my competitors will raise it, and that means I need to as well."

However dominant Uber's position may be, Mr Kalanick will not let up. "[He] always sees himself as an underdog," says Thuan Pham, Uber's chief technology officer. Uber is not Mr Kalanick's first startup; that was Scour, a file-sharing firm which filed for bankruptcy in 2000 after being sued by media companies for $250 billion for copyright infringement. He sold his second startup to Akamai, an internet firm, for a modest $15m. Those experiences left him obsessed with details and intensely focused on improvement. He enforces a feedback system called T3B3 (top-three, bottom-three skills), requiring his deputies to give him brutally honest feedback. "He changes himself faster than we can change our algorithms," says Mr Pham. In the T3B3 process he shared his observation that Mr Kalanick should thank people more; now,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apparently, he does.

Uber has also shown a capacity for change. It launched UberX when many employees at the company thought it should not risk disrupting its black-car service by offering a cheaper option. And this August, after years spent ploughing huge amounts of money into its business in China, it announced that it was merging its Chinese business with that of a local rival, Didi Chuxing, in return for a fifth of the new firm, worth around $7 billion today.

Investors were thrilled. They had worried that Uber would continue to lose billions of dollars chasing its Chinese dream. Mr Kalanick is extremely secretive about Uber's financial data, but in the first two quarters of 2016, with $2.1 billion in revenue, the company lost at least $1.3 billion, according to reports, and there are good reasons to think that a lot of that was lost in China. Now Uber can share in the growth of the Chinese market without spending another dime.

Having sorted China out, Uber is able to concentrate on promising pickings in other developing markets where governments may not be quite as determined as China's was to see a local firm win out. In India, South-East Asia and Latin America rates of car ownership are low. Just as consumers in emerging markets leapfrogged the desktop internet and went straight to mobile devices, they could choose to bypass buying a car and move around via ride-hailing instead. Mr Jonas of Morgan Stanley reckons that by 2030 around 25% of miles travelled in India will be on ride-hailing and ride-sharing services. Fares in these markets will be lower—in Mumbai a commuter's hour-and-a-half Uber costs 500 rupees ($7.50)—but the size of the population means there will be a lot of transactions.

At the moment Uber is the underdog in India, lagging Ola, its local rival. Its huge cash resources mean that it is still a competitor, though. In Mexico and Brazil, it is the leader. And as a global brand it will be best placed to serve the small but disproportionately lucrative global business clientele. To distinguish itself from its competitors, Uber is investing heavily in developing its own mapping capabilities by buying assets, including the mapping startup deCarta, and hoovering up talent from Google. (Uber dreams "big" but "not as broad" as Google, says Brian McClendon, a high-profile hire from Google who now runs Uber's mapping team.)

Developing its own maps enables Uber to offer more precise estimates for pickups and drop-offs to users and better routes for drivers—improvements which are particularly important for carpooling and for autonomous vehicles. These are capabilities that rivals in emerging markets would be very hard put to match.

In addition to competitors, Uber also needs to contend with regulators and policymakers. Most of Uber's bookings are generated in just 20 cities. Many dense, potentially lucrative urban areas in countries including Germany, Italy and Spain are out of reach for the time being because of regulatory problems. It is unclear how soon and how favourably these will be resolved, if at all.

Steppin' out over the line

How Uber fares with regulators will depend to some extent on how it manages its relationship with the public. If it succeeds in its vision of becoming a major provider of transport services for both passengers and goods all over the planet, it will have a larger presence in the physical world than any technology company in history. The public will have an opinion about it. Today competition authorities see Uber in a positive light, because it brings more transport options to city-dwellers. But when it puts

many taxi companies out of business and becomes an essential part of a city's infrastructure, there will be calls to regulate it more strongly. Those calls will get louder if, or when, Uber starts to swap growth for profits.

Uber's relationship with its drivers could hit its image and its pockets. Drivers in California, Massachusetts and New York have sued the company, claiming that they are employees, not freelancers, and are thus entitled to benefits. A judge in California recently allowed one of these cases to proceed, bringing fresh uncertainty over Uber's financial obligations. Some drivers say that once they cover expenses, they make less than the minimum wage. "I feel betrayed by Uber," says Omer Abdelnur, who has driven for Uber for three years in San Francisco; he has watched his earnings decline by around 70%, according to his estimates. (Uber says fares have dropped, but wages have stayed level because the volume of trips is up.)

According to one insider, the public-relations nightmare of drivers' low wages and lack of benefits (compared with techies' high salaries) has helped to keep Apple and Google out of ride-hailing so far. But this does not necessarily apply to all business models: later this year Waze, a mapping app owned by Alphabet, will reportedly launch a service designed to let San Francisco commuters share rides. And it certainly won't apply when the cars become driverless.

Mr Kalanick acknowledges that autonomy poses an "existential" risk to Uber. If other companies produce safe software solutions earlier, they could launch ride-hailing or ride-sharing services that undercut and possibly destroy his company. In an autonomous world, the competition may expand to include carmakers like GM, Ford and Tesla as well as tech companies like Google and Apple—which have mountains of cash to spend on fleets, if they want to. If the fleet model proves the way to go, Uber would have to give up its asset-light approach and join in.

There are reasons to be optimistic about Uber's prospects in navigating this technological change. Because transport is its whole business, it will work harder to ensure it is in the lead. Alphabet, Google's parent company, has more wonky projects than there are letters. Just as the shift to mobile concentrated Facebook's attention and required a great deal of discipline, the shift to autonomy has created an urgency and focus at Uber. At the same time, it should be able to incorporate autonomy piecemeal as it is phased in at different paces, and with different rules, in different jurisdictions. Such a transition will be hard for an all-autonomous approach.

That said, Uber has a reputation for pushing into new markets before regulations are in place and working out rules later; there are "lots of places where there aren't regulations at all, so you can just roll out", says Mr Kalanick. That may not be such a good approach when it comes to autonomy. Governments that have not thought through laws to govern autonomous vehicles as quickly as they might are unlikely to take kindly to self-driving cars barrelling down roads in the interregnum.

The shift to autonomous vehicles may improve riders' lives, but it could also spark a backlash against new technologies that put chauffeurs and truck drivers out of work. "We have a lot of attention as it is. I don't even know how we could get more," says Mr Kalanick. But if there is a lesson to be taken from Mr Carnegie's experience of empire-building in Pittsburgh, it is that the public rarely looks kindly on those who amass big fortunes if they do not contribute some of their winnings in return. Offering cheap rides is not going to be enough to count on the public's good graces. ■

Also in this section

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Uzbekistan's president

An ailing despot

As their tyrant nears his end, the people of Uzbekistan hold their breath

WHETHER Islam Karimov, who has ruled Uzbekistan with astounding brutality for the past 27 years, is dead or alive, his era is almost certainly drawing to a close. Two questions now hover over his hapless people. Who will succeed him? And will they get a better deal? The one they have suffered under for so long could hardly be worse. Of the five post-Soviet regimes in Central Asia, Uzbekistan's is widely regarded as the nastiest, its leader the most mercilessly paranoid.

News of Mr Karimov's death went viral among Central Asia watchers on Twitter on August 29th, when it was reported by Ferghana News, an independent Moscow-based agency that focuses on Central Asia, citing unidentified sources. Rumours of the 78-year-old president's imminent demise have circulated for years in Tashkent, the capital, but this time they were more solid. In its first official announcement concerning the president's health, the secretive regime revealed that Mr Karimov was in hospital with an undisclosed ailment. His daughter, Lola Karimova-Tillyaeva, then took to Instagram, admitting that her father had suffered a stroke. His condition, she said, was stable, his prognosis unknown. Celebrations for independence day on September 1st were cancelled. The government has not yet reacted to reports of the president's death.

If he is dead, what next? Mr Karimov has not publicly planned for a transition from his rule, which began in 1989 when the Kremlin appointed him as communist boss of Uzbekistan. After the Soviet Union collapsed in 1991, he became president of an independent state. Mr Karimov has clung to power by rigging elections—last year he was re-elected with supposedly 90% of the vote—and by ruthlessly crushing dissent. In 2005 his security forces gunned down demonstrators in the turbulent city of Andijan. The official tally of victims was 187; independent observers put the figure at between 300 and 1,000.

Torture is "endemic in the criminal-justice system", says Human Rights Watch, a New York-based monitor, which describes the country's record under Mr Karimov as "atrocious". Tales of prisoners being boiled alive surfaced in 2002. Political opposition and independent media are banned. Some 10,000 political prisoners languish in jails. Though most Uzbekistanis are secular-minded and practise an easy-going brand of Islam, extremism is festering thanks to the repression of any form of religious opposition. Hundreds of Uzbeks are thought to be fighting for Islamic State in Syria and Iraq. A citizen of Uzbekistan is among those suspected of attacking Istanbul airport in June.

Uzbekistan's clans have been jockeying over the succession for years, eager to preserve the economic spoils amassed during Mr Karimov's long rule. Unless it has been secretly settled already, a power struggle is likely to intensify. Outside powers will also be manoeuvring. Russia, the former colonial master, will be eager to assert its interest in what the Kremlin sees as its backyard. China, with its more mercantile approach, will want to secure its gas imports. And the United States will continue to woo Uzbekistan as an ally in the war against terrorism, mindful of the country's border with Afghanistan.

The president's eldest daughter, Gulnara Karimova, was once groomed to inherit the crown, but a few years ago she had a spectacular fall from grace, leaving the family tainted by scandal. In 2014 she was put under house arrest in Tashkent and may be nervously awaiting her fate in a post-Karimov era. The presidency may yet be kept in the family through the president's younger daughter, Lola, a sworn enemy of Gulnara, but she and her businessman husband, Timur Tillyaev, are not thought to be part of the ruling circle.

Spooks and stalwarts

Two long-serving insiders probably have better chances: Shavkat Mirziyoyev, the prime minister, and Rustam Azimov, his deputy, though some say Mr Azimov has been arrested. Others say that Rustam Inoyatov, head of the National Security Service, the country's most powerful and most fearsome institution, will be the final arbiter and that he may arrange for a dark horse to emerge.

Whoever succeeds him, Mr Karimov will bequeath a troubled legacy. Though Uzbekistan is the most populous of the "stans", with 31m people and plenty of ▸▸

minerals, and was once widely considered the most hopeful, it has become an economic basket-case, riddled with corruption and run along Soviet lines. A black market flourishes. Foreign investors are deterred by a history of assets grabbed. Vested interests in Tashkent rake in the cash from exports of gas, gold and cotton (reaped by a million forced labourers every year), while ordinary Uzbeks struggle to get by. Many depend on remittances from migrants to Russia, but these are dwindling as recession bites there, too.

Whoever succeeds Mr Karimov has an unenviable choice. He (or conceivably she) could use the same brutal methods to stem the torrent of disaffection that may burst forth after his demise, or he could loosen up a little and risk being swept away in a deluge of popular anger. Many analysts are pessimistic. "The system that Karimov built can continue after him, self-replicating regardless of who sits at the top," says Daniil Kislov, editor of Ferghana News. "There will not be a thaw." ■

Australia and the Pacific

Foam flecked

CANBERRA AND WELLINGTON

It is not so easy being the biggest fish in the sea

AUSTRALIA recently announced that it would develop a new white paper on foreign policy—its first since 2003—reflecting recognition of both a sense of drift in its traditional partnerships and an array of strategic challenges that did not exist 13 years ago. Nowhere is this more evident than in the South Pacific, an expansive, sparsely populated region that Australia has long considered its own backyard. "Our relationships in the South Pacific have drifted off course," says Michael Wesley, a national-security expert at the Australian National University. "There's no real sense of an Australian agenda of what we want to achieve."

The most obvious test in the Pacific is dealing with China. Since convening the first China-Pacific Island Countries Development Forum in 2006, China has disbursed nearly $1.8 billion in aid and investment to Pacific countries, building roads and hospitals and opening mines. More is planned as part of the "Maritime Silk Road" strategy.

Debate rages in Australia about how worrying this is. China has no territorial claims in the South Pacific, unlike in the East and South China Seas. Chinese naval visits to the region are handled cautiously, and Chinese diplomats are wary of antagonising Australia and New Zealand. China's activity in the area is seen by many as part of its global hunt for resources, alongside an innocuous desire to raise its diplomatic standing.

But as China's special envoy to the Pacific islands himself points out, if resources were the only objective, the better strategy would be to abandon the Pacific and focus exclusively on Australia. China clearly has broader objectives. On occasion its officials give vent to their Pacific counterparts about American assertiveness and Australasian complicity. On a visit to Fiji in 2012, Wu Bangguo, a senior functionary, saluted the principle of non-interference, encouraged Fiji to adopt a "Look North" policy and complained about the "bullying" of small countries by big ones.

The audience would have been receptive. Frank Bainimarama, Fiji's prime minister, who seized power in a coup in 2006 but has since been elected, is a thorn in Australia's flank. He will not attend the upcoming Pacific Islands Forum, which includes Australia and New Zealand, and has established a rival regional organisation, the Pacific Islands Development Forum, which excludes them. He has also snubbed Australian efforts to broker talks on reconfiguring the regional architecture. Big, rich countries often have prickly relations with their smaller, poorer neighbours. Nowhere is that plainer than in the Solomon Islands, where Australia has endured accusations of neo-colonialism while running a military and police operation for the past 13 years. (Australia was actually the colonial administrator of both Papua New Guinea, or PNG, and Nauru.)

Talk to a Pacific-island official and you will invariably hear two things in quick succession. First, a paean to the strength of his country's relationship with Australia, the close personal friendship he has with this or the other Australian politician and the deep esteem in which his people hold the Australian people. Then comes the catalogue of grievances: we give Australians visas on arrival but they don't do the same for us; Australian politicians just turn up in our country and expect to meet high-ranking government officials; when political disagreements surface, the Australian government, as one diplomat complains, "uses aid as a whip".

Australia's refugee policy has only deepened such feelings. For most of the past 15 years Australia has sent asylum seekers who arrive "spontaneously"—by boat and without a visa—to detention centres it runs in PNG and Nauru. There hundreds have stayed, often for years, as Australia tries to entice third countries into accepting them or the migrants into giving up and going home. Fiji's foreign minister calls that policy "inconsiderate, prescriptive, high-handed and arrogant".

PNG has accepted several dozen refugees; Australia may have hoped it and other Pacific countries would accept more, but that prospect has stirred ill will. A provincial governor in PNG complained on an Australian radio programme that accepting refugees in exchange for Australian cash is "basically forcing ourselves to grovel at the feet of Australian neo-colonialism". In mid-August Australia announced that it would close the camp in PNG, but did not say when or where the refugees would go.

The longer the saga drags on, the more leverage Australia loses in the region. PNG is growing characteristically unruly as elections approach, this time over allegations of corruption directed at Peter O'Neill, the country's prime minister. Australia's response has been unusually subdued, which many attribute to its desire to keep the government of PNG onside. For similar reasons Australia has found it difficult to confront Nauru's government as it sacks senior judges and suspends opposition MPs. Australia's lofty rhetoric about transparency and good governance looks hypocritical to the entire region, thanks to the secrecy and backroom dealings surrounding its refugee policy.

This state of affairs would seem to leave the Pacific open to wooing by a rival suitor, skilled at persuasion and the rosy-fingered arts of soft power. Fortunately for Australia, its rival is China. Countries that initially welcomed Chinese loans for infrastructure projects, coming as they do without political conditions, have grown nervous at the scale of their debt. The sight of Chinese workers building roads while domestic economies wobble has stirred popular resentment, as have Chinese purchases of local assets and businesses. China's efforts to whip up support among Pacific nations for its position on the South China Sea have failed: only Vanuatu, long in China's camp, has rallied to its side, while Fiji and PNG have remained steadfastly neutral. Still, Australia is clearly rattled: a white paper on defence published earlier this year declares an intention to "work with Pacific Island countries" to "limit the influence of any actor from outside the region with interests inimical to our own". ■

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Marriage in Japan

I don't

TOKYO

Most Japanese want to be married, but are finding it hard

SEIKO, a 35-year-old journalist in Tokyo, is what the Japanese refer to as "New Year Noodles". The year ends on December 31st, and, by analogy, the period when a Japanese woman is deemed a desirable marriage prospect ends after 31. It could have been worse: the slang term used to be "Christmas cake" because a woman's best-before date was considered to be 25.

Soon a new expression may be needed: men and women in Japan are marrying later, or sometimes not at all. Since 1970 the average age of first marriage has risen by 4.2 and 5.2 years for men and women respectively, to 31.1 and 29.4. The proportion of Japanese who had never married by the age of 50 rose from 5% in 1970 to 16% in 2010 (see chart).

Something similar is happening in other rich countries, but Japan leads the way in Asia. (The proportion of South Koreans who have never married by 50 is 4%, for example.) And whereas, in the West, the decline of marriage has been accompanied by a big rise in the number of unmarried couples living together, only around 1.6% of Japanese couples cohabit in this way. So in Japan fewer marriages means fewer babies—a calamity for a country with a shrinking and ageing population. Only 2% of Japanese children are born outside marriage, compared with over 40% in Britain and America.

Some of the reasons for the flight from marriage in Japan are the same as in other rich countries. Women are better educated, pursue careers, can support themselves financially and don't see the traditional family as the only way to lead a fulfilling life. Some of the details are different in Japan, however. Couples are expected to have children shortly after getting married, so women who want to delay childbearing have a strong incentive to delay marriage. Even so, a large majority of Japanese still want to get married eventually: 86% of men and 89% of women, according to a survey published in 2010 by the National Institute of Population and Social Security Research, a government agency.

Economics is a big part of the problem. Women seek men with financial security. Men want to be able to provide it. This is hard, however, when more and more young ones are stuck in temporary or part-time jobs. "I don't want my wife and children to miss out on experiences because we can't afford them," says Junki Igata, a 24-year-old trainee at an international hotel chain, who says he will put off marriage until his mid- or late thirties. Men in part-time jobs are less likely to be married than full-timers.

The opposite holds for women: there are more unmarried women among full-time professionals than part-time ones. The problem for them is the persistence of a traditional view of marital responsibilities, which makes it especially hard for a Japanese woman to juggle a full-time career with children. Her husband will often want her to give up work. (Seiko's boyfriend asked her to do so after only three months together; she refused.) Also, domestic chores are unevenly shared in Japanese marriages: men do only an hour and seven minutes of housework and child care a day, compared with around three hours in America and two-and-a-half hours in France.

People are finding it harder to meet, too. The days of *omiai*, or arranged marriage, are more or less gone. University students spend their free time joining clubs to bolster their CVs as good jobs become scarcer. Workers toil for long hours. Some reckon men in particular have become shyer (or lazier) about approaching prospective mates.

High expectations pose another barrier. Takako Okiie, a "concierge" at Partner Agent, a sleek matchmaking agency manned by perfectly made-up women, says clients are often all "me, me, me". They want a dream partner (Ms Okiie says it takes 18 months to knock this out of them) or, at the very least, what Japan refers to as the "three averages": average income, average looks, average education.

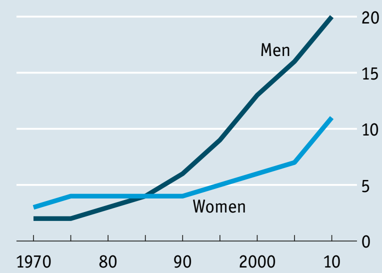
The difficulty young Japanese have in pairing up is one reason why the fertility rate has plunged. The number of children a Japanese woman can expect to have in her lifetime is now 1.42, down from 2.13 in 1970. Little wonder the population is shrinking.

Some fret about a rise in the number of isolated people and "parasite singles": people who live with and depend on their parents well into adulthood. The state can provide economic support, but the sort of civic groups and community associations that help people feel integrated into society have weakened in Japan as elsewhere. The once-tight connection between workers and their company has loosened too with the decline of jobs for life. "I worry about what will happen when these people's parents die," says Masahiro Yamada, ▸▸

On the shelf

Japan

50-year-olds who have never been married, %



Source: Ministry of Health, Labour and Welfare

An ever-rarer sight

a sociologist at Chuo University who coined the term "parasite single".

Not many singletons have boyfriends or girlfriends, even if they are neither *otaku* (men who are obsessed with *anime* or computer games) nor *hikikomori* (those who lock themselves away in their rooms). Mr Yamada reckons that if people aren't marrying and aren't dating, they must be doing something to satisfy their need for intimacy. He is researching whether they are opting for sexual and romantic alternatives such as prostitutes, romantic video games, celebrity obsessions, pornography or pets.

Shinzo Abe, the prime minister, is concerned. His government wants women to have more babies. It would also like marriage to remain the basis of family life. It has paid subsidies to towns that organise dating events, tried to create more nursery places and this week announced a bid to scrap a spousal tax break that discourages married women from earning more than 1.03m yen ($10,000) a year.

Such tinkering may help at the margins. So too would shorter working hours and—more important—an acceptance by Japanese men that they can't get married on the terms their fathers did. Governments are mostly powerless to direct such cultural change, however. Japanese men and women will either have to figure out ways to live together—or remain alone. ■

Surrogacy in India

The end of paid labour?

ANAND

The government wants to ban payments to surrogate mothers

KOKILA, a young but weatherbeaten mother, reclines in a swivel chair, laughing at a silly question. How hard is her work as a surrogate seven months pregnant with another woman's child? "It's relaxing," Kokila says in a mix of Gujarati and Hindi, "Much easier than working the fields." As a manual labourer, she is used to earning 100 rupees a day ($1.50). She stands to earn 450,000 rupees at the end of her months spent chatting with other expectant surrogates.

Upstairs, in another part of the clinic, Bharti Dali and her husband speak of their joy at meeting their second daughter ten days ago, thanks to another surrogate staying at the clinic. They named her Saina, just like their first daughter, who died in a car accident at the age of 18. They regard the new Saina as a miracle. What both Saina's parents and Kokila have done, however, would be illegal under a new draft law, unveiled on August 24th, which would ban paid surrogacy entirely.

Commercial surrogacy came to India in 2002 and went transnational within a year, when a British couple "commissioned" a pregnancy. Fertility clinics around the country piled into the trade, arranging surrogacies for foreign and Indian clients alike. The industry was big—a common estimate put its turnover at $2 billion a year—but unregulated and chaotic. It contracted sharply last November, however, when the government moved suddenly to block foreign nationals from hiring surrogates. The proposed law would kill the business off almost entirely.

The news is a blow to Anand, the centre of Indian surrogacy thanks to the Akanksha clinic, run by Nayana Patel. Counting healthy twins delivered on August 30th, Dr Patel has brought 1,122 babies into the world by surrogacy. Parents pay her roughly 1.8m rupees ($27,000) for a single baby, of which about 400,000 rupees typically go to the surrogate. Her new glass and steel clinic looks like a plush spaceship, plopped down amid green potato fields. It was built to attract foreign would-be parents, though now there are none: the last foreign babies were born in July.

Left-wing and feminist activists in India have decried commercial surrogacy as exploitation for years. Carrying a child poses a risk to any mother's health, and surrogates are often implanted with several of a client's embryos at once, to maximise the chance of a viable pregnancy. Most deliver by caesarean section, and the vast majority are poor or illiterate women who may have only a weak grasp of their contractual rights. Commercial surrogacy is illegal in most countries.

Dr Patel rejects the notion that she and her clients are exploiting anyone. The women paid to stay in her on-site dormitory seem pleased with and proud of their work. Kokila says she is lucky to have begun her surrogacy before any ban takes effect: her pay will go a long way towards bringing up her own two children.

Sushma Swaraj, India's foreign minister, complains about decadent celebrities who already have children yet seek more babies through surrogacy. The complaint is aimed at Aamir Khan and Shah Rukh Khan, film stars who have gently criticised the government for its illiberal tendencies. What "started as a necessity, has become a hobby of sorts," Ms Swaraj claims. That, she argues, justifies a host of restrictions: only childless, heterosexual Indian couples, married for five years or more, the wife aged 23-50 and the husband 26-55, will be allowed to use the procedure if the government's plan is adopted. Moreover, surrogacy must be "altruistic", ie unpaid, with only a "close relative" of the mother eligible to be the surrogate. Dr Patel estimates that only 25 of her clinic's 1,122 babies would have passed muster. Ms Dali, who is over 50, would be among those barred from turning to a surrogate under any circumstances. ■

Wombs for rent

Banyan | Agreeing to agree

South-East Asian summitry is the apogee of form over substance. That may be no bad thing

FOR world leaders, the prospect of a day spent milling around a gleaming new conference centre in Hangzhou, China, at the G20 summit this week, with nothing to show for it but an anodyne communiqué, must be depressing enough. Worse is the knowledge that many of them will then head straight for the East Asia Summit, an annual jamboree hosted by the ten-member Association of South-East Asian Nations, or ASEAN, to be held this year in Vientiane, the capital of Laos. Whatever skills President Xi Jinping of China may display in concealing an absence of purpose at the G20 were surely learned from South-East Asia. When it comes to elevating form over substance, and confusing a proliferation of meetings and acronyms for a deepening of ties, ASEAN is the Zen master.

Laos has what may be the world's most closed political system after North Korea. The last ASEAN summit held there, in 2004, led to the construction of sleepy Vientiane's first high-rise. As for the few visiting media, the communist official appointed as spokesman for the occasion responded to most questions by blinking. This time the presidents of America and Russia, the prime ministers of China, India and Japan and 5,000-odd other foreign officials and journalists are about to descend on a city that is no bigger than the obscure Thai provincial capital on the opposite bank of the Mekong river.

At a meeting of ASEAN's foreign ministers in Vientiane in July (the AMM, since you ask), fluttering welcome flags lined the streets leading to the convention centre—the cathedral of summitry, often bearing signs of hasty completion. The youngish new foreign minister displayed a suavity that was absent a dozen years ago. Yet no one had warned the chatty student volunteers about the boisterous foreign press. They were left speechless when South Korean journalists got into a shoving match with a North Korean minister's bodyguards.

In the new cathedrals, the "ASEAN way" prevails. Like many other dogmas, this one is tautologous. At its squidgy centre sits the hallowed principle of "consensus". A consensus about what? You do not begin to grasp the way until you grasp that the first, overarching consensus is to have a consensus, usually in the form of a post-summit joint statement. The consensus can, as a Singaporean diplomat, Bilahari Kausikan, puts it, be goals that everyone knows are unattainable. Or it can be extraordinarily bland.

If there is any excitement, it tends to come from outside the cathedral. At the East Asia Summit in Pattaya in Thailand seven years ago, protesters invaded the convention centre; the Chinese, Japanese and South Korean leaders had to be airlifted to safety and the summit cancelled. Banyan found the Thai finance minister on the beach, the trousers of his impeccable suit rolled up, helping foreign dignitaries into rubber dinghies.

Some romantics put this agreement not to disagree down to a beguiling regional culture of pacifism, fine manners and face-saving. Sorry, lah! South-East Asia has had more than its share of modern horrors, including genocides (eg, Cambodia), civil wars (Vietnam and, still, Myanmar), race riots (Malaysia, Singapore), coups (Thailand) and pogroms (Indonesia, Myanmar again). Visceral ethnic, religious and linguistic antagonisms still lurk just beneath the surface in even the most peaceable-seeming of South-East Asian societies.

And that is the point. A modicum of cohesion, order and civility became—Mr Kausikan again—central to a grouping in which none of those qualities could be taken for granted. Formal voting would only create winners and losers, risking rupture. So bloodless consensus-building it is. From this follows another hallowed principle, that of non-interference. That is how, for years, Myanmar's oppressive generals were allowed to run their country into the ground with not a peep from fellow members of ASEAN.

Prioritising form over substance has clear drawbacks, including a tendency towards pomposity—as when ASEAN declared itself a nuclear-free zone. But members remember ASEAN's provenance. The five founders in 1967 (Indonesia, Malaysia, the Philippines, Singapore and Thailand) had their differences; Indonesia had just waged an undeclared war against Malaysia. But they came together to confront the threat of Soviet-backed communism emanating from Vietnam.

The cold war is long over, and ASEAN has expanded to include communist or formerly communist countries—Vietnam, Cambodia and Laos. But, more than ever, cohesion is called for, thanks to a new great-power contest between China and America being played out in the South China Sea. At an AMM in Phnom Penh in 2012, China sought to apply pressure through Cambodia, a near-client state, to have even the tamest reference to growing Chinese assertiveness in the sea excluded. After fierce bickering behind the scenes, no joint communiqué was issued—a first.

It was, says a senior ASEAN diplomat, a "near-death experience". At best, it threatened to make a mockery of the hallowed "ASEAN centrality"; at worst, it might have blown the club apart. Since then, and despite redoubled lobbying by China following an international tribunal's sweeping judgment against its maritime claims, even tiny Laos, beholden to China but resenting it, will strive to avoid a repeat.

The bland leading the bland

For now, it suits the great powers to court ASEAN, taking part in its forums and indulging its notions of centrality. Even China would hate to be blamed for the club's demise. And so ASEAN summits continue to proliferate.

That is no disaster. For all their imperfections, they are the only game in Asia, a region with a heap of problems and a dearth of structures. They provide a rare opportunity for global leaders to build trust in bilateral meetings on the sidelines. And, for ASEAN, a scintilla of influence is preferable to none at all. ■

Also in this section

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Xinjiang

The race card

The leader of a troubled western province has been replaced. He will not be missed by its ethnic Uighurs

WHEN he took over in 2010 as the Communist Party chief of the western province of Xinjiang, Zhang Chunxian was portrayed by state media as a young, media-savvy official with a mission: to crack down hard on its separatists but also to foster "brotherly affection" between ethnic groups in the poor, violence-torn region. On August 29th Mr Zhang was moved to a new, as yet undisclosed, job, having claimed some success in his fight against Islamist "extremism". The region's ethnic divide, however, remains bitter.

Uighurs, a mostly Muslim ethnic-Turkic people who make up nearly half of Xinjiang's residents, have particular reason to grumble. Mr Zhang was sent to Xinjiang partly, officials said at the time, to improve the lot of people living in poorer, Uighur-dominated, areas (he is pictured, arm raised, meeting some of them last year). A few months earlier an explosion of rioting between Uighurs and ethnic Han Chinese, who form more than 90% of China's population, had left around 200 people dead in the provincial capital, Urumqi (see map). Officials believed that poverty and unemployment among Uighurs was fuelling unrest. Mr Zhang, however, did little to boost Uighurs' morale (or, possibly, to impress leaders in Beijing—some analysts speculate that he may now be sidelined). Restrictions in some areas on displays of Muslim faith, such as observing Ramadan or wearing face veils, made many even angrier.

So too did the security clampdown that Mr Zhang maintained after taking over from his hardline predecessor. In spite of it, the violence continued. A spate of attacks in 2014 included some of the bloodiest in years blamed on Uighur militants: 33 slain in March that year by knife-wielding assailants at a railway station in Kunming in the south-western province of Yunnan; 43 killed in April, including four attackers, at a street market in Urumqi; more than 100 shot by police or killed by attackers in July near Kashgar in southern Xinjiang. Since 2014, there appears to have been a considerable decline in large-scale violence. But it is possible that smaller-scale incidents go unreported. Despite his unusually relaxed manner with journalists, Mr Zhang did not make it easy for foreign ones to visit Xinjiang. Police kept them away from trouble-spots (in his previous role as Tibet's party chief, Chen Quanguo, Mr Zhang's successor, was even less keen on them).

One tool that Mr Zhang used to keep tabs on Uighurs was the inaptly named *bianmin*, or "convenient for the people" card. This was, in effect, a new kind of internal passport, required for use by people from Xinjiang who were living away from their home district in other parts of the province. The card bore contact details of named officials in the bearer's hometown. This enabled someone inspecting it to alert the authorities quickly, and ensure a rapid response, if a troublemaker was found. Uighurs often had to show the card at security checkpoints, when they boarded long-distance transport or when they checked in at hotels. Han Chinese rarely had to produce one. Uighurs called it the *yeshil kart*, or "green card", because it made them feel like immigrants in their own country.

In May, two years after introducing it, Xinjiang's government abolished the card. Official media said one reason was that its use had given rise to bribery. Uighurs often had to pay large backhanders to get hold of one. But ordinary identity cards are still often used to monitor the movement of out-of-town Uighurs. As a result of tighter controls on internal migration, the number of Uighurs from the south of the province working in Urumqi, in the north, has fallen sharply in recent years. Street stalls in the city, at which many such migrants once worked, are now conspicuously rarer.

For years after the rioting in 2009, the authorities made it nearly impossible for many Uighurs to obtain foreign passports. They feared that those who travelled abroad might be infected by international ▸▸

jihadism. In recent months, however, the authorities have made it easier for some Uighurs (usually better-off and better-connected ones) to get them. As with the repeal of the *bianmin* card, however, this does not mean that the authorities are ready to relax their grip on the region. On August 30th an attack on the Chinese embassy in Bishkek, the capital of Kyrgyzstan, which borders on Xinjiang, will have compounded their anxieties about global terror. Three Kyrgyz staff were injured when an unidentified suicide-bomber blew himself up outside the compound.

More likely is that Xinjiang's government is more confident in its other methods of control. These include the fencing in of Uighur neighbourhoods in Urumqi's south, with checkpoints at the entrances. Police visit homes to identify any newcomers. A QR code is attached to the door of each apartment. An officer scanning this can view photos of authorised residents. Now that the bars of the cage are stronger, the government feels it can give the prisoners a little more room. ■

Social media

Posers for the party

BEIJING

How an online forum catches censors unawares

IN CHINA, the battle to control information is largely waged online. The Communist Party blocks most foreign social media, routinely censors dissenting views and punishes those who repeatedly speak out. It employs around 2m people to police the internet and bombard users with positive messages about the regime. Yet criticism of the party still bubbles up. Even as the authorities try to tighten controls, netizens devise new ways of airing their views more freely. Zhihu, a question-and-answer site on which people mostly ponder mundane topics such as fitness or films, has emerged as a surprising springboard for political discussion.

Internet users everywhere migrate between social-media platforms as preferences change. But in China a site's popularity is determined as much by users' pursuit of freedom as it is by their love of fashion. Weibo, a Twitter-like microblogging site, gained a colossal following after it was launched in 2009 (Twitter itself is blocked). Many users relished the opportunity to air sensitive views and link up with like-minded people. It has since been eclipsed by the rise of WeChat, a messaging app which the authorities find less threatening, and so censor less.

Zhihu, meaning "Do you know?" in classical Chinese, started in 2011 as a copycat of Quora, an American site. It is now China's most popular question-and-answer portal, with 100m monthly active users (compared with Weibo's 261m and WeChat's 800m). It has evaded some of the strictures suffered by other forums because it is neither a news site nor a means of exchanging salacious videos (a new preoccupation for regulators, who recently called for 24-hour monitoring of live-streaming sites). Zhihu targets young urban professionals, who in China tend to be more willing than others to comment on sensitive topics. In January Zhihu users expressed doubts about the reliability of a televised confession made by a bookseller from Hong Kong, Gui Minhai, who is being detained by Chinese police for selling gossipy books about the country's leaders.

Though Zhihu does not provide news coverage, questions raised on it sometimes generate news stories. In May former university classmates of a 29-year-old environmentalist, Lei Yang, posted an account on Zhihu of Mr Lei's death in police custody, raising several queries that challenged the official explanation. "We demand to know more. We demand that our questions be answered," they wrote. News of this spread rapidly on other social media, forcing state media to look into the story. Two officers were eventually arrested for "neglect of duty" in their handling of the case—an apparent concession by the authorities to the public's outrage.

Sometimes it is the answers on the site that create an online sensation. Early this year a 21-year-old man with terminal cancer responded to the question "What is humanity's greatest evil?" with the answer "Baidu", the name of China's biggest search engine. He accused it of profiting from distorted information after his search on Baidu for a cure led him to fork out for expensive and dodgy medical treatment from an institution that had paid to raise its search ranking (he subsequently died). The regulator has since ordered Baidu to give less weight in its search results to the amount advertisers pay.

For its part, Zhihu uses an algorithm that rewards answers from experts, ranking them higher than posts by amateurs. Experts often correct and comment on each other's responses, too. This enhances the site's credibility. When news emerged last year that new running tracks in several Chinese schools were made from toxic materials, a heavyweight academic posted extensive information on Zhihu about how such tracks could harm pupils. By providing authoritative insights into topical issues, Zhihu is helping to shape political debate, says Ma Tianjie, a blogger in Beijing.

Zhihu is still vigilant. Like other Chinese portals, it warns users against "endangering national security" and "spreading rumours". Sometimes it removes questions, such as one in December asking about the arrest of labour-rights activists in the southern province of Guangdong. More often, controversial answers are deleted, leaving anodyne responses to questions such as: "Is [the prime minister] Li Keqiang doing the right thing to avoid the 'middle income' trap?" A page on Zhihu run by the US embassy in Beijing (at the invitation of the site's owners) was taken down in May. A WeChat account run by the Communist Youth League accused the page of waging a "public-opinion war" and trying to "destroy China".

Caution may not protect Zhihu forever. Another Chinese question-and-answer site, Fenda, on which celebrities answer questions for cash, has been offline since early August. What it described as a temporary closure to allow it to carry out an upgrade has lengthened into weeks, prompting speculation that the site has been closed for good. It may be an early target of a new government campaign, made public this week, against sites that promote "Western lifestyles" or hype celebrity gossip. Fenda won notoriety in May after Wang Sicong, the son of one of China's richest men, responded to the question "What is your favourite sexual position?" His answer, that he would do whatever gave his partner pleasure, may not have been discreet enough. ■

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The Senate

Downballot blues

COLUMBUS, OHIO

Donald Trump has made a tricky set of Senate races harder for the Republicans

ON ROB PORTMAN'S website, trump is a verb, as in "With this president, politics trumps good policy", but never a name. Of his party's presidential nominee—with whom Mr Portman, a lean and businesslike first-term senator for Ohio and former trade envoy for President George Bush, will share the ballot on November 8th—there is no mention.

Like most Republican senators up for re-election in swing states, Mr Portman has endorsed Donald Trump, mainly because disowning him would have risked aggravating too many Trump voters. Mr Trump won 36% of the vote in Ohio's Republican primary and his disgruntled supporters, congregated in Ohio's south-eastern rustbelt, are not in a mood to forgive a snub. Yet in order not to offend the mainstream conservatives and swing voters who tend to matter more in Ohio, a rare authentically purple state, Mr Portman is keeping his party's champion at arm's length.

He declined to speak at the Republican convention in July, though it was held, partly at Mr Portman's urging, in Cleveland, Ohio. He has not appeared with and, if he can help it, does not talk about Mr Trump. His campaign team, one of the richest and most technologically adept assembled for any Senate race, has little to do with Mr Trump's more modest Ohioan effort. Even when he, like Mr Trump, promises to "end Obama's war on coal", which goes down well in Ohio's coal country, where the Republican nominee is popular, Mr Portman rarely mentions him.

It is an awkward balancing act: Mr Portman's opponent, Ted Strickland, a former governor of Ohio, has largely dedicated his campaign to accusing Mr Portman of hypocrisy. Recent electoral history also suggests Mr Portman should fail. As partisanship has become entrenched, America has seen a steep decline in split-ticket voting—over 80% of current senators represent the party their state plumped for in the 2012 presidential election—and Mr Trump is trailing in Ohio by four percentage points. Yet Mr Portman is up by seven, and his lead looks so solid that backers of both senatorial candidates' campaigns have in recent days announced plans to scale back spending on a race that has already consumed over $50m. They appear to think the Republican incumbent has it in the bag.

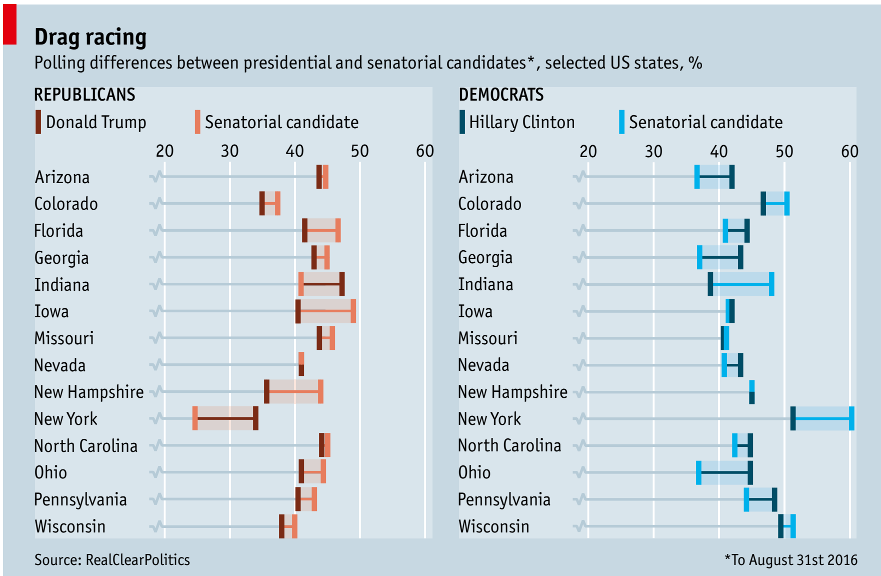
Duck and cover

The bad news for Republicans is that Mr Portman's strong showing is to some degree exceptional. With 24 Republican senators up for re-election, and only ten Democratic ones, the party was always assured a tough battle to retain control of the Senate in November. To regain the majority they lost in 2014, the Democrats need a net gain of five seats, or, because the vice-president has a casting vote in the Senate, four if they hang onto the White House. Because eight of the Republican re-election battles are in swing or mainly Democratic states, that looked perfectly doable even before the Republicans put an intemperate bigot, with a sketchy state-level campaign effort, at the top of their ticket. And, sure enough, as Mr Trump's numbers have collapsed in recent weeks, amid many blunders, the Republicans' grip on the Senate has started to look even shakier.

The Democrats are currently on track to pick up seats in Wisconsin and in Illinois—despite its junior senator, Mark Kirk, having issued the most forceful rebuke to Mr Trump of any Republican campaigning for re-election. They look well-placed in Indiana, where Evan Bayh, a well-known former Democratic senator and governor, is campaigning to succeed the retiring Republican incumbent, Dan Coats. They also look likely to hold their own seats, except perhaps in Nevada, where their candidate, Catherine Cortez Masto, a former attorney-general, is in a tough fight to succeed a retiring Democrat, Harry Reid. This seems to leave the Democrats needing at least three additional gains.

Probably, they will not get them in Arizona and Florida, whose incumbent senators, John McCain and Marco Rubio, easily survived what might have been troublesome primaries on August 30th. But the Democrats could win in New Hampshire, North Carolina and Pennsylvania, where moderate Republican incumbents are all seeing their prospects wilt with Mr Trump.

North Carolina, where Mr Trump is narrowly trailing Hillary Clinton, looks hardest to call: Senator Richard Burr has a narrow lead there over his unheralded ▸▸



Democratic challenger, Deborah Ross. But New Hampshire and Pennsylvania, where the tycoon is eight-to-nine points behind, look bad for the Republicans. Their candidates and incumbent senators, Kelly Ayotte and Pat Toomey, have both seen narrow leads evaporate in recent weeks. This is though both have refused to endorse Mr Trump (even if Ms Ayotte, awkwardly, says she will vote for him). It is also despite the fact that Mr Toomey appears to be a stronger candidate, running a much better campaign, than his opponent, Kathleen McGinty, a former bureaucrat, who has never held elected office.

The fact that he and Ms Ayotte are even competitive, given the scale of Mr Trump's collapse in their states, is a tribute to their efforts. Yet the big disparities between their numbers and Mr Trump's do not look tenable. According to one of Mr Toomey's advisers, "If the gap's at five points, we're good; if it's at ten, we can do it; if it's 15, it gets hard". More likely, it is thought, partly based on Mr Portman's success in Ohio, a reversion to ticket-splitting could help embattled Republican candidates survive at best a five-point defeat for Mr Trump in their states.

The better news for Republicans is that, due to Mrs Clinton's unpopularity, Mr Trump is not losing by a bigger margin in many swing states. And while it is possible that, if he continues to struggle, poor turnout among Republican voters could end up dragging all the party's candidates south, the relative strength of their candidates does make a return to ticket-splitting look likely. A tramp through the prosperous Columbus suburb of Upper Arlington, knocking on doors with some of Mr Portman's campaigners, illustrated that.

The householders they contacted, after having identified them as swing voters via the natty software they carried on their smartphones, said they would vote for Mr Portman come what may. Mostly women, who were typically dressed, for an afternoon at home, in smart blue blazers and silk scarves, they spoke approvingly of the junior senator as "sensible", "flexible", "fair", "a good listener" and "not a bully". None, it was therefore unsurprising to hear, liked Mr Trump. Half said they would not vote for him; the rest said that they probably would, but they were embarrassed to admit it. "Let's just say I wouldn't want to put his yard-sign in front of my house," said Melanie Brown, the director of a historical society.

With ten weeks of campaigning still to go, much could change. If Mr Trump bombs in North Carolina, so may Mr Burr. It will also be interesting to see whether Mr Rubio, having breezed through his primary, can maintain the hypothetical lead he had previously enjoyed in the polls; his Democratic opponent, Patrick Murphy, a 33-year-old congressman, does not look imposing. As things stand, in short, Mr Trump's recent troubles have made a tough fight for the Republicans to retain the Senate a bit tougher. But they have not changed its complexion as much as might have been expected. Most prognosticators have long been predicting the Democrats will pick up between three and six Senate seats; they have not revised that view.

That the Republicans are bearing up at least partly due to the strength of their candidates, and to the resilience of their supporters, offers some reassurance to a party in need of it. While geeing themselves up with that, Republicans can also reflect on another big fillip. At the next round of Senate elections, in 2018, the starting positions of the two parties will be neatly reversed; 25 Democratic senators will then be up for re-election and only eight Republicans. So if the Republicans do lose control of the Senate in November, they will probably get it back then. ■

Bounty hunting

Delivery men

COEUR D'ALENE, IDAHO

Bounty-hunters are arguing about whether they should be regulated

THE gigs are irregular but, thanks in part to mostly lax regulations, good money can still be made by bounty-hunting, says Rob "Daddy Rat" Hoyt, a trucker in Post Falls, Idaho with an "icing on the cake" sideline snatching fugitives. All but four states allow private citizens to bounty hunt. Nearly a third, Idaho included, don't bother licensing armed "fugitive-recovery agents", as they are also known. Bondsmen typically pay bounty-hunters expenses plus 10% to 20% of the value of a bond on someone who fails to appear in court. Some bonds run into six figures.

It is not work for the faint of heart—plenty of fugitives try to fight off pursuers. So many bounty hunters lift weights and practise a martial art or wrestling, the better to snap on handcuffs and, on some fugitives, ankle cuffs, lest they try to kick out a backseat window on the drive to jail. Tools of the trade include ballistic vests, pepper spray, Tasers, handguns and, for some jobs, a shotgun loaded with a beanbag that "folds you up like a newspaper", says Mike "Animal" Zook, an affable bounty-hunter in Spirit Lake, Idaho. Though built like a bear, he has been clubbed and, on four jobs, stabbed. The pain didn't really kick in until the adrenalin wore off. It's "definitely not easy money", says Rex Taylor, a bounty-hunter in nearby Coeur d'Alene who ▸▸

Mrs 10%

also runs All Freedom Bail Bonds.

Bounty-hunting affords plenty of free time, and the mostly hands-off approach (especially in conservative Idaho and neighbouring Montana and Wyoming) has opened the profession to many, Mr Taylor says. To help them get a start, the National Association of Fugitive Recovery Agents (NAFRA) in Delaware refers rookies to old hands seeking an apprentice. Like many such groups, NAFRA favours more regulation. No capture means no pay, so some overzealous agents end up on the news, says Chuck Jordan, NAFRA's boss. Tired of managing the bad PR, he is pushing for federal rules on training and background checks to weed out current or hopeful bounty-hunters who, for example, "have perhaps murdered someone".

Bounty-hunters generally resist calls for more rules. Thanks in part to a Supreme Court decision of 1873, if a fugitive is known to be in a house "we have every right to break down that door" without a warrant, notes Michael O'Halloran of Wyoming Fugitive Investigations in Cheyenne. The police have little time for such work because of the long stakeouts that are occasionally needed. Proposed restrictions, Mr O'Halloran says, could keep bounty-hunters from getting the job done. The National Association of Bail Enforcement Agents, now part of NAFRA, has estimated that nearly 90% of bail-jumpers get nabbed.

That success rate has a lot to do with technology for "skip tracing", the term of art for locating a man on the lam. Knowing that a certain fugitive had a weakness for 7-Eleven's Slurpees, Mr Zook got access to security video recorded by the firm and used face-recognition software to learn when and at which outlet he was most likely to swing by. He caught the man as he emerged from an Idaho 7-Eleven with the frosty drink in hand. Online services like Skip Smasher and Bond Tracker search numerous databases for clues to a person's whereabouts, with the latter even reporting the place and time an ATM is used.

Such resources are making bounty-hunting easier than during its frontier heyday in the Old West, but success still requires ingenuity. Bounty-hunters sometimes fool a fugitive's child or partner to reveal his hideout, and generally prefer to seize them when they are asleep or otherwise unprepared. Kathy Wilson, a former prison guard who now captures fugitives for Big Sky Bail Bonds in Kalispell, Montana, prefers to nab them leaving a supermarket with arms full, or in casinos where firearms are banned. Trickery is common, too. Agents with Wyoming Fugitive Investigations sometimes pretend to deliver a TV won in a competition, or don a FedEx uniform and knock on the door holding an empty box. "Everybody wants a package," Mr O'Halloran notes. ■

Zika in Florida

Boots on the ground

CLEARWATER AND TAMPA

Into combat with Florida's mosquito-busters

THE coalition that wages Florida's eternal battle against mosquitoes is both fearsome and eclectic. Helicopters and fleets of trucks are used to nix larvae and kill insects on the wing; traps baited with dry ice help to monitor them. There are animate weapons, too. Flocks of sentinel chickens, on which some mosquitoes like to munch, are maintained at strategic locations. Then there are mosquitofish, bug-eyed relatives of the guppy that are deployed in barrels and fountains.

Tropical yet wealthy, Florida is "king of the hill" in the mosquito-control world, says Ron Montgomery, Hillsborough County's veteran mosquito-buster-in-chief. His team of zappers, and those across Tampa Bay in Pinellas County, are on a new front line of the struggle against *Aedes aegypti*, one of the species that carries the Zika virus. Local transmission—whereby patients contract the virus in America, rather than bringing it home with them—has mostly been confined to the artsy Wynwood district of Miami and the fleshpot of Miami Beach. But one of Florida's 46 such cases (so far) was found in Pinellas, in a woman said to have worked in Hillsborough. "Our job is to kill mosquitoes," Mr Montgomery says at his bunker-like HQ on the outskirts of Tampa. "And we take it very seriously."

Naturally, politicians are the face of this counter-insurgency. Mosquitoes and politics have long been entwined in Florida—some counties elect dedicated mosquito commissioners—but this year, Zika and the bugs that convey it have infected races across the ballot. Amid an epidemic of hyperactive credit-seeking and partisan blame, everyone criticises Congress for failing to pass emergency funding before its summer recess (the Centres for Disease Control's director said this week that the available money had almost run out). Democrats assail Rick Scott, Florida's Republican governor, for previous state budget cuts. Patrick Murphy, victor in their senatorial primary on August 30th, lambasts Marco Rubio, his confirmed Republican opponent in November. Some Tampa-area politicians are agitating for the release of genetically modified mosquitoes, currently slated for a trial in the Keys, which might cut the Zika-spreading population.

As in an actual war, however, the political grandstanding is a sideshow. The real combatants are the mosquito-control operatives, whose tools include their own bodies. As Rob Krueger of the Pinellas squad recounts, one form of surveillance involves standing in a buzzy spot and seeing how many mosquitoes land on him in a minute. "You end up with a lot of mosquito bites," he says as his boss, Jason Stuck, brings in the eggs from a reserve battalion of chickens. West Nile virus, eastern equine encephalitis: other diseases are carried by Florida's numerous mosquito species, but Zika is the focus of anxiety because of its impact on tourism—partial travel advisories for the affected bits of Miami remain in force—plus the microcephaly it can cause in infants.

And, unfortunately, *Aedes aegypti* is a hard target. True, it cannot fly very far, meaning that, once a suspect cluster is located, it can be isolated; from a mobility point of view, says Mr Krueger, "It's the people who are the problem," especially since Zika is often asymptomatic. But the mosquito lives in crowded places, laying hardy eggs in small bodies of water such as flower pots, bird-baths or the filters of swimming pools: "Pop that sucker open," says Mr Krueger, "and there's sometimes *aegyptae* in there." Since it prefers people to birds, the chickens are no use; for Zika, "our sentinel system is basically the human being". Those habits mean that spraying from the air, or from trucks, is not enough.

This fight, he says as a helicopter returns from a mission over the marshes, requires "boots on the ground"; he and his colleagues must go "door-to-door" with handheld squirters in a pesticidal version of urban warfare. "It's like a game of cat and mouse out there," he reckons. Summer is always busy, but Zika has made this one frantic. The Pinellas team recently took almost a month's worth of calls in a day. The crew is working 14-hour shifts to keep up.

On a call-out at a retirement community in Clearwater, Mr Krueger extracted and examined water from swamps and ponds that had troubled the manageress. He caught a reassuring water spider in the swamp, of a kind that eats mosquito larvae, but patiently explained that the real worry is smaller receptacles such as the crevices in bromeliad plants, which typically need only to be drained. He identified and dispatched *aegyptae* in six nooks amid the palm trees and Spanish moss. "Aren't you afraid of getting bitten by a Zika bug?" asked the manageress, confiding that "There's a lot of panic about Zika." Every job has its risks, Mr Krueger reasons. His colleagues in the vegetation-management section sometimes wade into alligator-infested channels to clear obstructions that make the water hospitable to mosquitoes.

This sort of appreciation is rare for Florida's mosquito-busters. As Mr Stuck jokes, if air-conditioning were lost and the mosquitoes given their head, the millions of Americans who have moved to the state would stampede north again. With Zika, at least, Mr Krueger feels he is "assisting with something major that's happening. That's kinda cool," he observes, preparing to test the water in another bird-bath. ■

Political science

Trump and the academy

Political science refashions itself to deal with the Republican nominee

SOON after Donald Trump announced his candidacy, the usually bickering American pundits scoffed in unison. Armed with time-tested principles of political science, they were sure that no one so inexperienced and iconoclastic could build the consensus needed to win the Republican nomination. Their precious theories now sullied, scholars of American politics are hurriedly revising the old, and originating the new. A course on the political science of Trump will begin at the University of California, Irvine this month.

As with all disciplines, some explanations have gained more traction in political science than others. One of them was the idea put forward in a weighty and amply-footnoted book, "The Party Decides", that parties still exert a good deal of influence over who gets the nomination. In a forthcoming paper in the journal *Political Science and Politics*, the book's authors set out to save their theory from its mauling by Republican primary voters. A candidate who eschews consensus and campaigns only for a narrow section of voters could win, they concede, by appealing to voters directly via social media and by "playing on the penchants of journalists". The idea that this caused Mr Trump's rise has both the merit and the drawback of being impossible to verify. But throughout the Republican primary, national media did indeed lavish attention on the braggadocious upstart (see chart 1). The 16 other contenders vying for the Republican nomination had to make do with scraps.

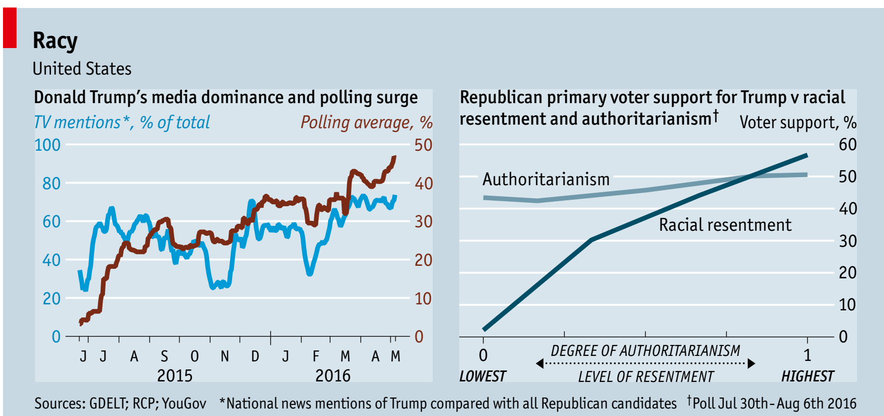
The apparent failure of the book's highly influential theory has created a new field of Trumpology. A mammoth survey of 87,000 Americans by Gallup, a pollster, shows that people who lived in areas less affected by globalisation—whether the loss of manufacturing jobs or influxes of immigrants—were the ones more likely to view Mr Trump favourably. The simple explanation that white Americans roiled by free trade and immigration are flocking to the outrightly protectionist and anti-immigration candidate does not suffice.

Disaffection of another sort seemed to predict support for Mr Trump: his popularity rose in areas with the least healthy populations and lower social mobility. A salesman first and foremost, Mr Trump spun a story that "elites in both parties haven't taken the white working class seriously", says Jonathan Rothwell, an economist who wrote the study. Yet polls suggest more than 40% of the electorate backs Mr Trump: only a small slice of that can be explained by his support in deprived areas.

Perhaps none of the many theories proposed were so jarring, or gained so wide a following, as the "authoritarianism" explanation. A study published in January argued that support for Mr Trump was fuelled by newly awakened "authoritarian" voters who thrilled to his continued haranguing of Muslims and Mexicans. After all, Mr Trump had "replaced the dog whistle"—coded language to appeal to prejudiced voters—"with a bull horn", says Matt MacWilliams, author of the study.

This argument did not suggest that Americans were pledging admiration for a new Mussolini en masse. "Authoritarianism" is instead measured by four questions on child-rearing—such as whether respect for elders matters more than independence. A general preference for obedience and authority, evinced by fancying good manners over curiosity, say, was especially prevalent among Trump supporters.

To test some of these nascent theories, *The Economist* examined the data underlying them. We asked YouGov to include the same questions used to assess authoritarianism in their weekly tracking poll. In this survey, authoritarianism, measured using the same child-rearing questions, was not ▸▸



associated with support for Mr Trump among Republican primary voters—though it was for his closest challenger, Senator Ted Cruz. We also examined the raw data behind another widely read version of this thesis and found it had not taken religion into account. When we repeated the analysis including measures for religiosity, authoritarianism became a far weaker predictor of Trump support.

However, one theory of Trump remains standing. Along with the questions on authoritarianism, we also requested YouGov to ask a battery of questions aimed at measuring racial resentment. Different from outright racism, this is measured by support for the idea that blacks are undeserving and clamorous for special assistance. Strongly disagreeing with the claim that "over the past few years blacks have gotten less than they deserve", for example, reflects a high degree of racial resentment.

Racial resentment was tightly linked to Mr Trump's supporters. These results held true when we controlled for region, race and religion, among other factors: 59% of Trump supporters in the Republican primary scored in the top quartile on racial resentment, compared with 46% of Republicans who backed other candidates and with 29% of voters overall. Those who thought that more should be done to fight terrorism were also much more likely to support him. In the Gallup study, whites who lived in racially isolated areas had a higher opinion of Mr Trump as well.

These findings cast doubt on the alarming notion that Mr Trump is propelled by a latent yearning for a strongman. Instead, they bolster the view that the candidate's recent speeches painting a dystopian vision of black America racked by crime and unemployment were aimed not at black voters themselves, but rather at the kind of whites who tell pollsters that blacks are lazy and overindulged. ■

Johns Hopkins

Applied research

BALTIMORE

A university tries to take on the social problems that surround it

BISHOP DOUGLAS MILES of Koinonia Baptist Church, in Baltimore, used to be embarrassed to be a Johns Hopkins alumnus. A girl once stopped talking to him when she found out where he studied. Other residents recall being told by their elders to run past Johns Hopkins in case they were kidnapped by the research hospital for experiments. The university did not help by reneging on promises in the 1950s and 1960s to build new housing for the city. Hundreds of mostly black residents (Baltimore is 63% black) were displaced when the university hospital expanded. The new development was reserved for university staff and students, and then fenced off so that locals could no longer walk on the streets where they once lived. The university became an island and, until fairly recently, its students were advised not to go into certain neighbourhoods.

While Johns Hopkins has thrived, Baltimore has not. Between 2003 and 2014 the city received $2.8 billion in federal aid and another $2.2 billion in state assistance, yet a quarter of the population still lives in poverty. Nearly a third of high-school pupils fail to graduate on time. On August 10th the Department of Justice (DOJ) found that the city's police department engaged in unconstitutional practices, including disproportionate rates of stops, frisks and arrests of black Baltimoreans, and used excessive force against minors and the mentally ill. One black man in his mid-50s was stopped 30 times in less than four years on suspicion of loitering. The DOJ found that people were publicly strip-searched during traffic stops and that police retaliated when civilians complained.

Yet the relationship between the university and its host city has changed. Johns Hopkins is the biggest private employer in Baltimore. And Ron Daniels, the university's president since 2009, has assumed the kind of responsibility for the rest of the city more often associated with a government than with a private institution.

The university has promised to increase its use of local and minority-owned construction businesses, to favour hiring local residents, especially those from distressed communities, and to use local vendors. It has encouraged more than two dozen other Baltimore companies, including BGE, a large regional utility, which already relies on local suppliers, to do the same. Tim Regan, the head of Whiting-Turner a large construction firm which signed up, says that Mr Daniels has tremendous power as a convener. In April the companies he recruited pledged $69m over three years, kick-starting what Bishop Miles calls "the most significant economic and jobs initiative in the life of the city".

Johns Hopkins is helping to finish a long-delayed development on 88 acres (36 hectares) near the hospital; it is also overhauling the curriculum at nearby schools to emphasise science, maths and engineering. In May the university began working with the city's health department to help provide glasses for school-age children. Extra screening is now done immediately, and children can pick their frames in a "vision van" parked outside their school. Johns Hopkins is not only a fund-raiser for the programme; it will also evaluate it, to make sure it is working as it should.

The university's Bloomberg School of Public Health works with the city's police department. Daniel Webster, who heads its work on guns, has a project that crunches data to help study and reduce violent crime. He and Kevin Davis, the new police chief, who took over from Anthony Batts when Mr Batts, who was fired after the unrest in the city last year, are working together, getting officers to walk the beat and to focus on the worst offenders. The university is also helping to improve recruitment.

All this will test the limits of what a university which excels at solving theoretical problems can do for a place marked by boarded-up houses and mistrust. Mr Daniels is undeterred. "So goes Baltimore, so goes Hopkins," he likes to say. ■

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Why the Republican nominee does not need to concern himself with policy details

SHERIFF JOE ARPAIO of Maricopa County, Arizona—a law-and-order populist who styles himself "America's toughest sheriff"—sets much store by his gut. His gut tells him that his county, a sun-frazzled expanse of retirement villages and shopping centres around Phoenix, is safer when foreigners with no legal right to be in America are tracked down and locked up. That same instinct made the sheriff an early supporter of Donald Trump, lauding the New York businessman as he promised to build a border wall and deport an estimated 11m migrants in the country without the right papers. The ferocity of "Sheriff Joe", a gruff, bearlike 84-year-old, could yet send him to jail: a federal judge recently recommended that he be prosecuted for defying court orders to cease patrols that target people by race.

So it was striking, this week, to find Mr Arpaio rather relaxed after several days in which Mr Trump seemed to hint that his immigration policies might be about to soften—even to the point of giving interviews saying that he will focus deportation efforts on "bad guys" and other foreigners with criminal records, while pondering a more leisurely approach for those who have lived blameless working lives for many years.

Lexington caught up with Mr Arpaio at the headquarters of the Arizona Republican Party in Phoenix, a day before Mr Trump came to the city to spell out details of his policies on immigration, after a swift detour south of the border to meet President Enrique Peña Nieto of Mexico. Asked how he would feel if, after sorting through 11m migrants, a President Trump allowed several million to remain, Mr Arpaio replied: "I would live with it, he's my guy," adding, "Everybody has the right to change a little." In Mr Arpaio's telling, he will follow Mr Trump "to the end" because, unlike the cast of career politicians who also sought the Republican presidential nomination, the property tycoon is not seeking the presidency "for his own advantage".

Motives matter a lot in Trump-world. A volunteer making telephone calls for Mr Trump at Republican headquarters in Phoenix, Diana Brest, says that Mr Trump can change any policy and have her vote. "I'll forgive him, no matter what," she says. She offered no such absolution to the Republican politicians who, during the presidential primary contest, called it unrealistic to say that 11m people can be thrown out. Politicians are "phoney people" who say things to look good, she asserts: they betray themselves with their "swifty eyes".

Though more people have moved from America to Mexico this decade than have gone in the opposite direction, it is instructive to ask Trump supporters why they think that Congress and successive presidents, of both parties, have not sealed America's borders. They have no truck with talk of complex problems that defy quick fixes. Instead they see a conspiracy to leave the law unenforced, born of ill-faith and corruption. When a politician changes his line on immigration it is a betrayal. When Mr Trump does it, it is further proof that he's not a politician, which is good.

As it happens, Mr Trump's big speech in Phoenix contained more to comfort his hardline base than to worry them. It followed a rather awkward performance in Mexico City, involving a press conference in which Mr Trump said that he had not discussed with Mr Peña Nieto his long-standing assertion that he will force Mexico to pay for his border wall. His Mexican host took to Twitter hours later to assert that he had begun their talks by making clear Mexico would not pay for a wall. Had Mr Peña Nieto said that to Mr Trump in front of the cameras, the day could have turned disastrous for the American. Those wondering what the trip was for received a part-answer a little later when Mr Trump contrasted himself with his Democratic rival, Hillary Clinton. She had been invited to Mexico but not gone, Mr Trump told his Arizona audience, taking the chance to feed conspiracy theories that she is deathly ill by commenting: "She doesn't have the strength or the stamina to make America great again."

Mr Trump's Phoenix rally began with testimony from a succession of speakers whose loved-ones were killed by illegal immigrants. "Countless Americans [...] would be alive today if not for the open-border policies of this administration," Mr Trump said, with special emphasis on the case of a 64-year-old woman "sexually assaulted and beaten to death with a hammer".

A tall, powerful, beautiful wall

The Republican vowed to triple the number of deportation officers in the Immigration and Customs Enforcement agency, with orders to move fast to remove criminals who have evaded justice, joking that on that basis they might deport Mrs Clinton ("lock her up" roared the crowd in Phoenix with delight). On Day One of his presidency, he would begin expelling what he called 2m "criminal aliens", naming gang members, visa over-stayers and those on welfare as special targets. He pledged to start work on an "impenetrable, physical, tall, powerful, beautiful" wall.

Dig a bit, and there were small nods to realism: he talked of setting "priorities" when enforcing immigration (as the Obama administration does), but added that no one who entered the country illegally would be "immune" from deportation. In plain English, he is ditching his promise to swiftly deport 11m, and instead proposing to leave perhaps 9m or more in the shadows, unless they are arrested or come to police attention for any reason.

His most chilling lines seemed to divide would-be immigrants along cultural and religious lines, saying America had to be honest that not every group can successfully assimilate. It has a sovereign right to choose "immigrants that we think are the likeliest to thrive and flourish," he declared, which either means nothing or something rather frightening. It is also, at a practical level, impossible to implement. Mr Trump's supporters do not care, leaving him free to say what he wants on immigration or anything else. His actual policies do not have much to do with it. ■

Brazil

Time for Temer

BRASÍLIA

The new president takes over a country in crisis

THE street vendors who set up around Brazil's congress must have been disappointed. Police had expected thousands to gather for the closing stages of the impeachment trial of Dilma Rousseff, Brazil's president. But when the senate voted by 61 to 20 to remove her from office on August 31st, the esplanade, bisected by a fence to prevent clashes between her foes and her supporters, was eerily empty. Her former vice-president, Michel Temer, who has been interim president since May, was sworn in hours later to serve out the remaining 28 months of her term.

It was a muted end to a remarkable era. For the past 13 years Ms Rousseff's left-wing Workers' Party (PT) has dominated politics. The party broke barriers. Luiz Inácio Lula da Silva, Ms Rousseff's predecessor and patron, became the first working-class president in 2003; she was the first woman to hold the job. The global commodity boom paid for programmes that helped 40m people lift themselves out of poverty. Many Brazilians remain grateful.

But Ms Rousseff's impassioned self-defence before the senate on August 29th moved few of them. The charge against her—that she tampered with government accounts to conceal the size of the budget deficit—was not an impeachable offence, she insisted. She compared her ordeal to the injustice and torture she had suffered as a left-wing guerrilla during Brazil's military dictatorship of 1964-85. Conservative political and business elites were persecuting her again, this time to sabotage her pro-poor policies, she contended.

In fact, her downfall was brought about by Brazil's worst-ever recession, which is partly her doing, by the multibillion-dollar scandal centred on Petrobras, the state-controlled oil company, and by her own political ineptitude. The people hit hardest by her policies were those she sought most to protect. Nearly 12m Brazilians, about one worker in nine, are jobless, a third more than a year ago. The economy shrank 3.8% year-on-year in the second quarter of 2016, the government reported on August 31st. But with inflation close to 10%, the central bank had little choice but to keep its target interest rate unchanged at 14.25%. That, too, is largely Ms Rousseff's fault. During her first term in 2011-14 she pressed the bank to ease monetary policy prematurely.

Mr Temer now promises to revive the economy, largely by reversing her policies. His talk of privatisation, deregulation and fiscal discipline has cheered investors. "Our motto is to spend only what we collect," he said in his first television address as president. His economic team, led by the finance minister, Henrique Meirelles, inspires confidence. The São Paulo stockmarket and the real, Brazil's currency, have strengthened since Mr Temer took charge. The cost of insuring government bonds against default has fallen by a quarter.

Among ordinary voters, though, the new president has little more support than the outgoing one. His approval rating is below 20%, according to recent polls. His Party of the Brazilian Democratic Movement (PMDB) is as embroiled in the Petrobras scandal as the PT, its ally for more than a decade. Half of Brazilians want a chance to choose a new president in a fresh election. This would heal wounds opened by the flawed impeachment process, says João Castro Neves of Eurasia Group, a consultancy, but it would also delay urgent economic reforms. Mr Temer has no intention of triggering an election by resigning.

Now it's Michel's mess

Instead, he will begin the Herculean task of cleaning up Brazil's chaotic public finances. Ms Rousseff began her presidency with a primary surplus (before interest payments) of 3.1% of GDP and ended it with a deficit of 2.7%. That deterioration raised borrowing costs, which made the fiscal situation still worse. The overall deficit is an alarming 10% of GDP.

If nothing is done, warns Vilma Pinto of FGV-IBRE, a think-tank, public debt will exceed 110% of GDP in 2022, double what it was when Ms Rousseff took office, and will keep on rising. That could lead to a default, or to a return of the hyperinflation that blighted the decade after 1985. That was tamed by Itamar Franco, the last vice-president who was thrust into the top job (by the impeachment on corruption charges of Fernando Collor).

Mr Temer hopes to work similar wonders. He is counting on two measures to achieve that: a 20-year freeze on public spending in real terms and a reform of the pension system, which generously rewards retired workers at the expense of ▸▸

everyone else. Both require amending the constitution. The proposals stalled during the impeachment process. Now, the government promises, both will move ahead.

Many analysts say they are not ambitious enough. The budget presented on August 31st did nothing to dispel those worries. It would reduce the primary deficit only modestly, to 2% of GDP. Under the proposed spending freeze, the government would not run a primary surplus before 2021, says Ms Pinto. Public debt would peak at 90% of GDP in the early 2020s. That would probably avert catastrophe, but it would still crimp Brazil's capacity to respond to economic shocks, such as a sudden domestic slowdown or a flight by nervous foreign investors.

Faster deficit reduction will be politically painful. Brazilians want more from public services, not less. A survey in July found that a third of Brazilians had dropped their private health insurance over the past year because of economic hardship; they now rely on public clinics. Some 14% of parents say they have withdrawn children from fee-charging schools. Plenty of wasteful spending remains that could be cut without hurting ordinary Brazilians, reckons Alberto Ramos of Goldman Sachs, an investment bank. Non-interest expenditure grew twice as fast as the economy under the PT. "It is hard to believe that all that was wise and efficient," says Mr Ramos.

Opposition from the PT will be ineffectual. Demoralised by recession and scandal, it is fielding half as many mayoral candidates in October's local elections as it did four years ago. Its distinctive red star has disappeared from some candidates' campaign literature. Lula, still its most popular leader, has been charged with obstructing the investigation of the Petrobras affair. He denies wrongdoing. Several other party leaders are serving prison sentences.

As so often in Brazilian politics, the president's friends may prove more troublesome. The spending freeze and the proposal to raise the retirement age need three-fifths majorities in both houses of congress to pass. Mr Temer's PMDB wants them watered down, for example by ring-fencing parts of health and education spending (together a third of the federal budget). The odds of other structural reforms, to Brazil's Mussolini-era labour laws or its Byzantine taxes, are slim.

Mr Temer will thus have plenty to ponder on his long flight to the G20 meeting on September 4th-5th in China, his first official trip as president. In striving to be the next Itamar Franco he could suffer the fate of José Sarney, a vice-president who was unexpectedly promoted in 1985 after the end of military rule. Mr Sarney proposed a series of half-baked inflation-fighting plans that only made things worse. The resulting turmoil helped usher in a telegenic populist in 1989: Fernando Collor. ■

The Latinobarómetro poll

Neither Trumpian nor Brexiteer

Latin America has different worries from the United States and Europe

THE year since *The Economist* last published the results of the wide-ranging Latinobarómetro survey of Latin American public opinion has been an eventful one. In three countries, voters rebuked populist left-wing governments: Argentines elected a centre-right president; Venezuelans and Bolivians used non-presidential votes to undermine the incumbents. Peru chose Pedro Pablo Kuczynski, a 77-year-old ex-banker, as president over the mildly populist Keiko Fujimori, daughter of a former strongman, Alberto Fujimori, who is in jail. The Dominican Republic re-elected its centre-right president, Danilo Medina. Only Guatemalans voted for a miracle cure. They elected as president a comedian with no political track record, Jimmy Morales, mainly because voters believed his claim to be "not corrupt".

Latin pragmatism looks like a welcome contrast to the rise in support for fringe candidates and causes in Europe and the United States. But this year's Latinobarómetro poll suggest that Latin Americans are no more content with the status quo than are Brexit-voting Britons or Trump-drunk Americans. The proportion of Latin Americans who think the elites govern in their own interests is on average 73%, its highest level in 12 years. For the first time, the share of people who say their countries are going backwards is bigger than that of people who think they are progressing.

Latin Americans do not fret about the same things as Europeans and Americans. Terrorism and immigration are not among their chief concerns. They are not in a protectionist mood: 77% favour greater integration between their countries and their neighbours. Inequality, the rise of which explains much discontent in Europe and the United States, has fallen in Latin America since the early 2000s. Latin anxieties are a cocktail of worries about the economy, crime and corruption (see chart).

Economic optimism has been hurt by six successive years of deceleration after the end of the global commodities boom. Latin Americans' satisfaction with the performance of their economies is at its lowest level since 2004. Unemployment is the main economic worry. But in Venezuela, which received an absurd commendation last year from the UN's Food and Agriculture Organisation for reducing malnutrition, shortages outweigh joblessness: 68% of Venezuelans say the supply of food is the most pressing problem.

Preoccupation with crime, which jumped in the late 2000s, remains high. In half the countries, including Mexico, Peru and El Salvador, it is the loudest complaint of 30% of respondents or more. Corruption comes first or second on people's list of worries in four countries: Bolivia, Brazil, Chile and Peru.

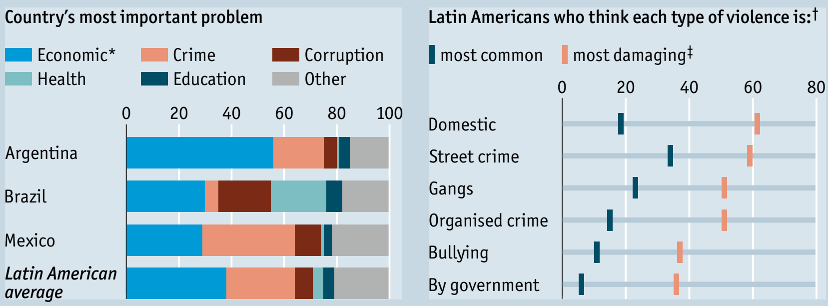
The measure is scandal-sensitive. In Brazil, where investigators revealed that governing parties took billions of dollars in bribes from Petrobras, the state-controlled oil company, graft is the top concern of 20% of the population. It comes just behind health, which became the biggest worry after the outbreak last year of the Zika virus, which causes birth defects. In every country two-fifths of people or more think corruption is increasing.

Where disgust with the shenanigans of political leaders is strongest, support for democracy has dropped. It plunged by 22 percentage points to just 32% in Brazil from 2015 to 2016; in scandal-racked Chile it dropped 11 points, to 54%. In El Salvador, Guatemala and Nicaragua it is the lowest it has been in ten years.

But that does not mean Latin Americans are ready to abandon democracy for something else. Overall, 54% say it is better than any other system, a proportion that has not changed much since 1995. Instead, they are channelling their discontent into activism. Outrage over corruption has inspired massive demonstrations in Brazil, ▸▸

Tristes tropiques

Share of Latinobarómetro respondents, 2016, %



Source: Latinobarómetro *Economy, inflation, unemployment, poverty †Multiple answers allowed ‡To country development

Guatemala and Honduras. Thousands of Mexicans have protested against official impunity; now Chileans are demonstrating against inadequate pensions.

Evidence of greater assertiveness can be teased out from Latinobarómetro's data. Last year's survey asked whether Latin Americans would be willing to protest for such goals as higher wages, better health care and democratic rights. On a ten-point scale, where ten is the highest level of enthusiasm, they ranked their willingness to demonstrate at six-to-seven, a slight increase from 2013.

Changing attitudes towards violence are evidence of greater maturity and more assertiveness among ordinary citizens, argues Marta Lagos, Latinobarómetro's director. Although Latin Americans say that violence from street crime is the most common sort, the most damaging to their country, they think, is domestic violence. The priority people give to domestic violence is new, Ms Lagos believes (although the question has not been directly posed before). It suggests that Latin Americans are beginning to challenge the culture of *machismo*, which is pervasive in some countries. Women in particular are less willing to suffer in silence. This represents a "huge cultural change", says Ms Lagos.

Latinobarómetro's snapshot of opinion shows that the progress of recent decades has raised expectations, but that Latin Americans have little faith that today's institutions can fulfil them. As Ms Lagos puts it, they are challenging established forms of leadership but have yet to invent new ones. Although Latin Americans have little appetite for the dictators of the past, new types of anti-democratic politics could emerge. Unless elected politicians offer answers to crime, low growth, inequality and corruption, less democratically minded leaders may provide them instead. ■

Bello | The unspeakable and the inexplicable

Why did Enrique Peña Nieto invite Donald Trump to visit Mexico?

SOME leaders like their governments to be teams of rivals, or big tents or nests of brilliant specialists. Those are not the preferences of Enrique Peña Nieto, Mexico's president since 2012. He rules through a tight coterie of loyal aides, many of whom worked with him in his previous job as governor of the state of Mexico (which surrounds Mexico City). Whatever their other qualities, they have often seemed impervious both to the imperatives of democratic politics and to the ways of the wider world.

It must have looked like a brainwave to someone in Mr Peña's inner circle to invite the candidates in the American presidential election to drop by. It would put Mr Peña on the world's front pages as a statesman able to do business even with Donald Trump, the Republican candidate, who has made Mexico-bashing the leitmotif of his campaign.

Almost any foreign-policy expert would have disabused him of the idea. "It's a very misguided and highly risky initiative," says one, Andrés Rozental, a former deputy foreign minister. Mexicans are accustomed to the issues of drugs, migration and trade protectionism surfacing during American election campaigns. But no modern candidate has been as offensive and aggressive as Mr Trump. And it is rare for a Mexican president to host candidates at this stage of an American campaign. Indeed, officials long insisted that the government could not rebut Mr Trump's falsehoods about Mexico because that would be to intervene in their neighbour's internal affairs.

Languishing in the polls and needing to convince voters that he could act like a statesman, Mr Trump jumped at the invitation (Hillary Clinton, the Democratic candidate, no doubt has better things to do). Their hour-long meeting on August 31st at Los Pinos, the presidential palace, did indeed put Mr Peña in the headlines. For many Mexicans, the news was that their president failed to extract a public apology from Mr Trump for his denigration of the country's migrants as "rapists" and "criminals".

In a prepared statement, Mr Peña duly gave a long-winded account of how Mexican emigration has fallen sharply, and of how 6m jobs in the United States depend on his country, and how the border should be seen as a "shared opportunity". "Mr Trump," he declared, "Mexicans deserve the respect of everyone."

Mr Trump, looking less ebullient than usual, responded that Mexicans are "amazing people". Mr Peña can claim some credit for his visitor backing away from his previous threat to discourage American companies from building plants in Mexico. That is now a promise "to keep industry in our hemisphere"—a significant concession. But another of the "shared commitments" Mr Trump read out, without rebuttal, was "the right" to a border wall to keep out migrants. At least he had the tact on this occasion not to ask his host to pay for it, though that is still his policy.

Any Mexican president might struggle to react to Mr Trump. Mr Peña has flip-flopped. He began by ignoring him, on those grounds of non-intervention. Facing domestic criticism, he then gave an interview in which he compared the American businessman's "strident rhetoric" to that which brought Mussolini and Hitler to power.

The invitation to Mr Trump thus smacked of an attempt by Mr Peña to distract attention from the countless domestic problems he faces. The economy continues to disappoint. The government is visibly divided as to how to handle a rebellion by extremist teachers against its flagship education reform. Violent crime is rising again. A fresh conflict-of-interest allegation has surfaced concerning the First Lady, this one involving a flat in Miami (which she denies owning). And Mr Peña has been accused of plagiarising part of his thesis for his law degree (a claim the university has confirmed). Even before the latest two scandals, his approval rating had fallen to 23%, the lowest recorded for a Mexican president this century. That is the harvest of his peculiar and provincial way of governing.

Mr Peña may believe that he took a bold initiative by opening a dialogue with Mr Trump. His demand for respect is legitimate. But it should be delivered by citizen diplomacy within the United States, and conveyed after the election to the winner. By allowing his visitor to seem presidential, he has helped Mr Trump perform some rhetorical climbdowns that were electorally inevitable. Even if Mrs Clinton wins she will not thank Mr Peña for that. If he turns out to have helped Mr Trump get elected, many Mexicans will never forgive him or his party, and neither will much of the rest of the world.

Middle East and Africa

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Nigeria's food crisis

Hunger games

BAMA

Famine looms in areas devastated by Boko Haram

AT A tiny air force clinic in Bama, a wretched town in north-eastern Nigeria, a military doctor is trying to insert a drip into a starving child. He gives up on the two-year-old's arms and labours with a needle just above his brow. But that vein has collapsed too, and blood seeps through the pinprick. Half-dressed and dirty, the baby is bundled off to a quieter room. "He's going to die if I can't get it in today," the medic says, following him out.

Scenes like this are common in Borno, the state worst-affected by Nigeria's insurgency, Boko Haram, which is affiliated to Islamic State. In Maiduguri, its capital, camps for the internally displaced are teeming with bloated-bellied babies. Their shoulder-blades stick out like wings. When a bereaved mother collapses at a clinic run by Médecins Sans Frontières, a non-governmental organisation, staff barely blink: they see hundreds of underfed children every day.

All told, the UN estimates that 240,000 children in Borno are suffering from severe acute malnutrition—the deadliest category of it. More than 130 will die each day without assistance. Across the wider north-east of Nigeria, a population equivalent to New Zealand's is in need of food aid. In Abuja, the country's sleepy capital, humanitarian co-ordinators compare the crisis to those of South Sudan and the Central African Republic. Unlike them, Nigeria cannot excuse itself as a failed state. It is Africa's second-biggest economy. Things should never have got this bad.

That they did is largely because of Boko Haram. The jihadists want to establish a caliphate in Nigeria: until early last year they occupied a territory the size of Belgium. But they are hopeless administrators, skilled only in violence. Rather than wooing neglected villagers, they pillaged food, stole cattle and poisoned water. Instead of using farmers to feed their fighters, they held them under lock and key. "They wouldn't allow us to come and go," says one woman, who fled to Bama's 10,000-person camp. "Only if your husband was with Boko Haram did they give you food."

Mercifully, the insurgents have been pushed out of most big towns in the north-east over the past 18 months, though they still strike smaller villages, and camp out in the bush. Soldiers say that landmines litter farmers' fields, making it dangerous to grow food. Borno is now entering its third season without a harvest. Where food is available, prices have soared. Vendors in Maiduguri's Monday market, a favourite of the suicide-squads, say that the prices of some staple grains have trebled. Those who can find supplies at all are the lucky ones.

Nigeria's government mutters about sending displaced people home, but many reclaimed towns are still in lockdown. There is hardly a building standing or a soul on the street in Bama, once a city of 250,000 people: only roofless walls covered in Arabic scrawl, and fallen power lines. Its closed-off camp depends entirely on food aid, like many others in the state. But Borno's roads are often raided, so aid is in short supply. Soldiers in Bama were sharing out their rations before international help arrived in May.

The Islamist desolation

In other areas, the army is accused of exacerbating the food crisis by closing markets (which could be bomb targets) and blocking the passage of supplies (which could be destined for Boko Haram). At one outpost in Maiduguri, farmers say that when their sorghum grew "too much like a bush" they were ordered to chop it down. Starving out guerrillas is one thing; but it will kill civilians too. More culpable is the Nigerian government, which underplayed the crisis as Boko Haram lost territory last year. International partners fume that it did not want Nigeria to be stereotyped as "another African conflict country", and therefore denied that help was needed. ▸▸

Months ago, the UN ought to have declared a "Level 3" emergency—the highest level, reserved for the likes of Syria and Yemen—to raise funds and mobilise personnel. Instead it pandered to politicians' vanity and told humanitarian agencies that "the government would not tolerate it." Many NGOs have been slow and ineffectual, too. Of the roughly 20 international non-profit organisations that together hand out 90% of the world's aid, only half are present in Nigeria's north-east, according to Toby Lanzer, the UN's humanitarian coordinator for the Sahel. Nigeria's own relief agencies are more used to dealing with floods than food crises, and are also accused of stealing supplies.

Faced with an emergency which it can no longer deny, the government has at last grown more ready to accept help. Donors are also beginning to pay more attention: by the end of this year, their allocations should be roughly double what they were in 2015. But the worst is not yet over. The numbers needing aid will grow as new towns open up: there are perhaps 750,000 hungry people in the north-east who currently cannot be reached at all. Some aid agencies think that most insecure parts of Borno are now in full-blown famine, which would suggest that 30% of people there are acutely malnourished.

To help humanitarians, Nigeria's army must secure major roads and push forward into smaller towns, instead of sitting on its haunches. The UN says that discussions about proclaiming a top-level crisis are "really happening", although it will probably make the call internally, rather than in public. Either way, it must not dally: eight months into the year, its campaign is only a third funded. Then it will need more (and better) partners, and require the snail-paced government to speed up its response. "What we are seeing is just the tip of the iceberg," says one aid worker in Abuja. "It's going to be one Bama after another as Borno opens up." ■

South Africa

Uncivil war

A battle for control of the state spills into the open

DEMANDING bribes from large state-owned companies can be a tricky business, even if the intended beneficiary is the ruling party. But at least the maths can be kept nice and simple. Take a deal to supply locomotives to South Africa's state-owned passenger-rail agency. According to papers before a Johannesburg court, a politically well-connected businesswoman allegedly told the winning bidder that, since the contract was worth billions of rand, "she could not understand why 10% of the value of the bid could not be paid to the African National Congress (ANC)".

The allegation was made by Popo Molefe, chairman of the rail agency. More important, he is a former premier of a province and a stalwart member of the ANC, which has ruled South Africa since the end of apartheid in 1994 (and says it never received a penny of this money). Mr Molefe made the allegations after he was told by the minister of transport, Dipuo Peters, to "close off" a corruption probe that has discovered at least 14 billion rand ($951m) in dodgy spending. Mr Molefe also says he was told by the winning bidder that it had paid money to a go-between to give to the ANC for rigging the contract.

Mr Molefe's claims are striking not for the rottenness they reveal in a country where corruption has become endemic, but for the fact that they have been aired by a senior member of the ANC, which since its days as an underground movement has prized loyalty above all. Now comrade has turned on comrade, ministers speak out against each other and the bosses of state-owned companies openly defy their political masters.

"The thing about the ANC is that it has pretty much practised a code of *omertà*," says Tony Leon, a former leader of the opposition Democratic Alliance (DA). Yet these are unusual times for the ruling party. The old rules are being ignored in a desperate battle for the levers of power.


Flash Gordhan, saviour of the public purse

Central to this is a struggle between Jacob Zuma, a president accused of 783 counts of corruption, fraud, money-laundering and tax evasion, and Pravin Gordhan, his respected finance minister (pictured), over control of the Treasury. The state's highest crime-fighting body, known as the Hawks, has called in Mr Gordhan for questioning over charges that look trumped up. Rumours of Mr Gordhan's possible arrest have sent the currency spiralling down. Growth has ground to a halt.

Various bits of the state that are still loyal to Mr Zuma have waged virtual war on Mr Gordhan, whom Mr Zuma appointed in December under pressure from the markets and his more sensible advisers. (The currency had collapsed after Mr Zuma had removed a previous finance minister, apparently for blocking some of his more profligate schemes.) Eskom, the state-owned electricity producer, has simply `refused to give Mr Gordhan documents relating to questionable procurement deals struck with the president's pals. South African Airways, the almost-broke national airline, has ignored his orders to restructure its board and kick out Dudu Myeni, its chairwoman, who is another of Mr Zuma's close friends.

The latest infighting comes after a dramatic shift in power to the opposition in local elections in August, when the ANC's share of the vote slumped to 54% from the 60-70% it had previously won. The DA ousted the ANC from the mayoralties of three of South Africa's biggest cities: Johannesburg, Tshwane, which contains the capital, Pretoria, and Nelson Mandela Bay, which includes Port Elizabeth. It also held on to Cape Town, which it has governed for a decade.

This shift has big consequences for a party that relies partly on patronage for support. Hundreds, if not thousands, of ANC appointees will now lose their jobs. Some of the new mayors say that they have already uncovered dirty dealings. Many ANC parliamentarians must also be wondering whether their jobs are at risk, if the ANC suffers a similar slump in national elections in 2019.

After suffering a defeat when he tried to install a pliant finance minister in December, Mr Zuma appeared to have been held in check, not least because one court then found that he had breached his oath of office for spending state money on his own home, and another ruled that prosecutors should not have dropped corruption charges against him. Yet, with his party divided after its setback, Mr Zuma seems intent on tightening his grip on the government. This is a time for more of the ANC's stalwarts to line up and be counted. ■

Egypt's economy

Of bread, bribes and fungus

CAIRO

A stupid policy from an incompetent government

WHEN Egypt, the world's biggest importer of wheat, signalled last year that it would begin enforcing a ban on shipments of the grain with even trace amounts of ergot, a common fungus, it roiled the markets. Egypt, like most countries, had allowed grain with up to 0.05% ergot—a harmless level. The new standard would be nearly impossible to achieve, said suppliers, who proceeded to boycott the state's grain tenders and raise prices. Within months, Egypt had to backtrack.

Yet on August 28th the government reimposed its zero-tolerance policy on ergot, no doubt hoping that doing the same thing again will produce a different result. This is after a UN study found that the fungus posed no risk to Egyptian crops. Instead, the government is relying on its own group of pseudo-scientists, who have disregarded decades of evidence to reach the opposite conclusion. All but one supplier boycotted a state tender on August 31st.

There is perhaps no better example of the Egyptian government's incompetence than its handling of wheat. The state buys millions of tonnes of the stuff each year from local and international suppliers. Subsidies aim to encourage Egyptian farmers to grow more of it. The government then sells loaves to the masses at sub-market prices.

The system is ruinously costly and riddled with corruption. A parliamentary commission's report on the problems runs to over 500 pages and was referred to the prosecutor general on August 29th. Among the findings, officials and domestic suppliers appear to have been falsifying local procurement statistics and pocketing government payments. Investigating MPs say that some 40% of this year's supposedly bumper harvest may be missing, or may never have existed in the first place. Egypt must use scarce dollars to buy wheat from abroad because it does not produce enough at home.

A study by America's agriculture department estimates that Egypt's "unorthodox" agricultural policies will cost the country over $860m in 2016, even as the government considers new austerity measures under a bail-out deal with the IMF. Some of this is simple protectionism. Egypt, for example, bans American poultry parts because they may not be halal. Yet Muslims in Kuwait, Jordan, Iraq and Saudi Arabia happily devour them. Ridiculous standards, unpredictable enforcement and frequent "inspections" by bribe-grabbing officials make life hell for suppliers. The costs are passed on to Egyptian consumers, who are already suffering high food prices.

Despite official pressure to stop the probe into wheat-related corruption, arrests have been ordered, and assets frozen. The biggest head to roll has been that of Khaled Hanafi, the supply minister, who resigned on August 25th. Though not accused of directly profiting from the graft, he oversaw Egypt's food-subsidy programme. Mr Hanafi points to supposed successes, such as instituting smart-cards for bread distribution and reducing costs. But the cards were hacked, and spending on bread subsidies rose on his watch. Somehow his ministry failed to buy rice after the last harvest, leading to nationwide shortages and higher prices.

Oddly, the corruption probe may have encouraged the daft policy on ergot. The supply ministry, which oversees grain purchases, had pushed for reasonable standards. But the government does not want to be seen as doing any favours to traders, some of whom are accused of corruption. The new ban is being billed as an effort to protect Egyptians when, in fact, it will only add to their misery. ■

Guinea and the haj

The pilgrims' tale

CONAKRY

Getting from west Africa to Mecca is not easy

PILGRIMS jostle outside the Islamic Centre in Conakry. A stressed-looking official barks at them to queue in single file. Rain pours down the sides of a dilapidated portico. Hawkers hover, flogging plastic sandals and kola nuts.

These men and women have travelled from all corners of Guinea to apply for a "pilgrimage package" that will take them to Mecca, Saudi Arabia, on the *haj* in September. All Muslims are supposed to perform the ritual at least once. Guinea has been allotted 7,200 places this year by the Saudi authorities. Some pilgrims have been saving all their lives for this opportunity. All are anxious that their papers are processed in time.

Complicating matters is pent-up demand. Pilgrims from Guinea were banned from taking part in the *haj* for two years because of the Ebola virus, which killed more than 2,500 of their compatriots. Saudi Arabia lifted the ban only at the end of June, so officials have had little time to prepare.

Spot the Guineans

"Some of those applying are not able to read or write and when they come to the centre they can't manage the paperwork," says Oumar Diallo, a local journalist. Many find that their passports are no longer valid and must be replaced with new biometric ones.

That has left the passport office in Conakry flooded by impatient applicants. They occupy every chair and every inch of floor space. The office cannot cope: people have been forced to spend up to a week in the waiting room.

This is but one of the many sacrifices demanded of the faithful. In a country where the average income is $1.80 a day, it is not easy to raise $4,470 for the pilgrimage package (which includes flights, hotels, food, injections and visas). It is especially hard so soon after Ebola damaged so many people's livelihoods. By one estimate, economic growth fell from 4.5% to 2.4% during the outbreak.

Mariama Conté has been planning to go on the *haj* since she started her clothes business back in 1984. "I saved up enough money and was ready to leave the year that Ebola hit. That time was very bad. Often I was not selling anything, but I didn't give up," she says. "It is this year that God has called me to Mecca."

Guinea sits near the bottom of the UN Human Development Index, at 182nd out of 188. Corruption, poverty and disease are endemic, leaving religion the only source of hope for many. Battered yellow taxis with "God will provide" and "Allah is one" painted on their bumpers crawl through Conakry. When asked about the pre-*haj* chaos, the vice-minister of religious affairs, Karamo Diawara, said: "It has not been easy, but by the grace of God we are overcoming the difficulties." It is a common refrain in Guinea.

The war on Syria's doctors

The ultimate barbarity

GAZIANTEP

Dr Assad turns Syria's hospitals into death traps as part of a "kneel or starve" policy

ON A wintry morning in February warplanes supporting Syria's President Bashar al-Assad launched a series of missiles that slammed into a field hospital in northern Syria. Medics raced towards the thick cloud of grey dust that mushroomed above the building, before clambering over breeze blocks and fallen trees to pull the wounded from the rubble.

About 40 minutes later, the jets—either Russian or Syrian, no one is sure—circled back and dropped another bomb on the medics as they worked. The air strikes killed 25 civilians, including eight medical workers, making it the single deadliest attack on medical personnel since the war in Syria began in 2011. Unsatisfied with the death toll, the jets tracked the ambulances carrying the wounded to another field hospital three miles north. They hit the hospital entrance with another missile and then, ten minutes later, dropped yet another bomb. "There's no way on that day they didn't know what they were doing," says Ahmed Tarakji, president of the Syrian American Medical Society, which financed the second hospital hit that day.

In the euphemistic lexicon of war, these attacks are known as "double-tap" or "triple-tap" strikes. This devastating tactic, used to hit schools, bakeries and marketplaces, has become a common feature of the Syrian government's air campaign.

It has also turned Syria's hospitals into death traps. Barrel bombs, artillery and air strikes have struck more than 265 medical facilities since the start of the war. Last month, possibly the deadliest since the war began, bombs and missiles hit a hospital or field clinic every 17 hours. Experts reckon that no previous war has witnessed such widespread, systematic targeting of hospitals and medical workers.

There is little doubt among human-rights groups and UN officials that many of these attacks are deliberate. There is also little doubt about who is responsible: those documenting attacks on medical facilities say Syria's government and its Russian backers have launched more than 90% of the attacks. "It's not that hospitals haven't been bombed in Afghanistan, Yemen, Somalia and Sudan. It's that the intent and strategy as a tool of war is on another level. The government of Assad has aimed its weapons at the delivery of health care," says Susannah Sirkin of Physicians for Human Rights, a New York-based chronicler of the atrocities in Syria.

Dr Death

By laying siege to rebel-held areas and bombarding civilian buildings, the Syrian president has sought to make life unbearable for civilians trapped in rebel areas. It is a classic counter-insurgency technique, a chilling response to Mao Zedong's maxim that a guerrilla should move among the population as a fish swims in the sea. Mr Assad's "kneel or starve" policy—so-called after the graffiti scrawled on walls by government loyalists—is designed to deprive the rebels of the sea in which they swim.

The strategy is working. In the besieged east of Aleppo, once the country's largest city, residents say they live inside a "circle of hell". Less than a quarter of its hospitals can operate at all. Fuel for the generators needed to power vital equipment is scarce. When air strikes hit blood banks and oxygen tanks, patients are simply left to die. Fewer than 35 doctors remain to treat a population of 300,000. The rest have fled or been killed, detained or tortured. In the nearby rebel-held town of Madaya, only two dentistry students and a veterinarian are left to treat a population of 40,000.

"The attacks are designed to terrify civilians. During sieges, people don't want to give blood. They'd rather save it for themselves. Many are too scared to go to hospitals because they know they'll be hit," says Dr Hatem, one of the few remaining paediatricians in eastern Aleppo.

The rebels have clung on in Aleppo, despite the intensity of Russian and Syrian air raids. Elsewhere, however, Mr Assad's strategy has proved too much. On August 26th rebels in the Damascus suburb of Daraya surrendered to the government after enduring a siege that lasted four years and saw residents forced to eat grass to stay alive. A week before the surrender, Mr Assad's air force bombed the last remaining hospital with incendiary weapons. Mr Assad once trained as a doctor himself.

The destruction of Syria's once sophisticated health system has forced doctors and medical charities to come up with innovative ways to escape the daily bombardment. Western-funded aid agencies have built a handful of secret hospitals underground. Others have tunnelled into the side of a mountain to build wards inside caves. But the costs are prohibitive.

The legacy of the war and the regime's unrelenting attacks on health facilities and medical workers could have broader repercussions. The international community's failure to stop the attacks has led to fears that the deliberate targeting of medical facilities will become the new norm in future wars. "The laws of war were drafted to protect civilians, to make war less hellish. These laws are being eroded in Syria," says Widney Brown of Physicians for Human Rights. "When no one enforces these laws, when those who commit war crimes aren't held to account, then what message does that send?"

Efforts to hold the Syrian regime and its foreign backers to account have failed. Russia and China blocked the country's referral to the International Criminal Court in 2014. Governments in the West have begun to look at launching their own investigations into war crimes in the hope of prosecuting individuals under universal jurisdiction, but the creation of an independent body that investigates every alleged hospital attack is a dream.

"Without justice, it will be impossible to get rid of this feeling of revenge," says Dr Rami Kalazi, the only neurosurgeon working in eastern Aleppo. "Without justice people will lose their trust in the international community completely. They will lose their trust in everything except for weapons." ■

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France's identity politics

Ill-suited

PARIS

As its presidential race kicks off, France argues over burkinis

THIS week France came back from the beach for *la rentrée*, the return to school and work after the August holiday. The summer had been far from restful. It began with two terrorist attacks in Nice and Normandy, followed by a weeks-long political fixation with the "burkini", a cross between a burqa and a swimsuit, which dozens of mayors of seaside resorts tried to ban from their beaches. The resurgence of identity politics in France, at a time of heightened tension over Islam and security, now looks likely to frame next year's presidential election.

The row over the burkini will probably abate as the beaches empty. On August 26th France's highest administrative court suspended a ban imposed in the Mediterranean resort of Villeneuve-Loubet after it was challenged by human-rights groups. The court ruled that the mayor had not proved any risk to public order, and that the ban constituted a "manifestly illegal" infringement of "fundamental liberties".

Had France not been under a state of emergency, the matter might not have flared up as it did. But the French are hypersensitive to signs of overt Muslim religiosity. Politicians, roused from their holiday hide-outs, seized on the burkini row—and not just on the right. Manuel Valls, the Socialist prime minister, called the burkini an "enslavement" of women, and claimed it was part of a political project to impose Islamist rules on France. He noted that Marianne, a female figure symbolising the French nation, is classically depicted barebreasted. The implication seemed to be that women in burkinis are un-French, while true French women go topless.

France has a long history of trying to keep religion out of public life. A law of 1905 entrenched the principle of *laïcité*, or strict secularism, after a struggle against authoritarian Catholicism. The country banned the headscarf and other "conspicuous" religious symbols from state schools in 2004, and the face-covering burqa from public places in 2010. Indeed, such laws enjoy broad cross-party support. Yet secular zeal at times overrides common sense, or sensitivity to France's Muslim minority, estimated to form about 10% of the population. Unlike the burqa, which is banned from the beach, the burkini does not even cover the face. As Olivier Roy, a French scholar of Islam, points out, it also offers a certain modern liberty to Muslim women who otherwise might not swim. Hardline Islamists, he says, would not allow women to bathe in the first place.

The burkini frenzy sets the tone for an election season of culture wars over French identity. Nicolas Sarkozy, a former president vying for the nomination of the conservative Republican party, says he wants to ban the burkini altogether. So does Marine Le Pen, leader of the far-right National Front, who claims that the "soul of France" is at stake. Yet amid this feverish identity politics, some voices are trying to appeal for calm. One is Alain Juppé, a centre-right former prime minister and presidential hopeful. He backed the local burkini bans, but says national legislation would be provocative. Another, on the left, is Emmanuel Macron, who resigned on August 30th as economy minister.

Mr Macron's departure had been widely expected. In April he launched a new political movement, *En Marche!* ("On the Move!"). Although he stopped short of declaring this week that he would run for president, that may be a matter of time. A former adviser to President François Hollande, Mr Macron is now an unambiguous rival to his Socialist former mentor, whose own chances of running for re-election dwindle by the day. The ex-minister is trying to build a platform of economic reform to resist populist nationalism.

Post-socialist international

On leaving his ministry, Mr Macron said that his government experience had taught him the limits of the current political system. He now hopes to redraw the partisan map, pulling in support from both left and right for a pro-European, centrist movement that embraces globally-minded progressive politics. This is a daunting challenge, not least because Mr Macron has never stood for election for any office before, is short of money and has little parliamentary support.

It also seems to cut against the national mood. After 18 months of barbaric terrorist attacks, France is leaning towards tightening restrictions on liberty, not loosening them. Freed from the constraints of the economics portfolio, Mr Macron will now be able to speak out on matters such as terrorism and religion. With the country so on edge, France could do with a dose of measured reflection. ■

The future of the EU

Now what?

BRUSSELS

Europe vows progress after Brexit, but is unsure which way to go

AUGUST usually finds Europe's politicians bronzing on the beach or lacing up their walking boots. But for the past few weeks they have been huddling, scheming and debating how to give their floundering European Union a fresh lease of life. "Citizens will only accept the EU if it makes it possible for them to prosper," said Angela Merkel, Germany's chancellor, during a visit to Warsaw last week.

If there is a fresh urgency to the EU's latest bout of navel-gazing, blame Brexit. Britain's vote to leave on June 23rd was a grievous blow to a club that has only ever known expansion. At a summit six days after the vote, the leaders of the 27 remaining countries vowed reform and arranged to meet again in Bratislava on September 16th. Much of the recent shuttle diplomacy has been aimed at finding common ground for that meeting. As ever, Mrs Merkel has taken the lead. On August 22nd she and her French and Italian counterparts laid on the symbolism by holding a mini-summit on Ventotene, an Italian island where Altiero Spinelli, an early Euro-federalist, had been imprisoned during the war.

There is no shortage of ideas. This week five senior European analysts and officials issued a paper calling for a "continental partnership", including new decision-making structures for the single market, which could include Britain as well as other countries on Europe's periphery, such as Turkey or Ukraine. Diehards are dusting off plans for *grands projets* like a standing EU army or a Europe-wide intelligence agency.

But in a curious echo of the British government's struggle to move ahead with Brexit, Europe's leaders have not progressed much beyond slogans. This summer's terror attacks brought calls for intelligence agencies to share more information, and for boosting the powers of Europol, the EU's police co-ordination body. But such suggestions are nothing new. At Ventotene the leaders urged more defence co-operation. But there is little will to create anything that could rival NATO.

On refugees, agreement seems limited to a beefed-up EU border force that officials hope to conclude on later this year. Eastern European governments remain implacably opposed to the EU's plans to distribute hundreds of thousands of asylum-seekers across Europe. Viktor Orban, Hungary's combative prime minister, will stage a referendum against the relocation plan on October 2nd. The easterners also fear a fresh wave of job-killing "social" initiatives from the European Commission.

Ideas for deepening integration in the euro zone, from common bank deposit-insurance schemes to a single finance minister, seem no closer to fruition. Leaders have spoken of a scheme to tackle youth unemployment, but most of the tools for that lie in the hands of national governments, which may lack the will to act (a mild labour reform in France triggered weeks of protests this summer). Coming elections in the Netherlands, France and Germany limit leaders' room for compromise.

The crises that have buffeted Europe in the past few years continue to bubble away. The EU's talks with Greece over its third bail-out are not going well. The Minsk peace process in Ukraine is stuck. The Transatlantic Trade and Investment Partnership (TTIP), the EU's mooted deal with America, has become a *piñata* for electioneering European politicians: this week ministers in Germany and France declared it dead. And while a deal with Turkey has cut refugee flows, smugglers are still getting through and Greek islands are dangerously overcrowded. Turkey has threatened to scupper the arrangement entirely if the EU does not grant visa-free access by October.

Brexit does little to fix any of these problems. (In some cases, such as TTIP, it makes them harder.) And managing the departure of a major country presents the EU with an entirely new sort of challenge. The will to keep the club together is strong, and predictions of further exits to follow Britain's are overblown. But the old adage that Europe is forged only in times of crisis is starting to look threadbare. ■

Germany's refugee anniversary

Assimilation report

BERLIN

A year after Angela Merkel welcomed migrants, two Syrians differ on whether integration can work

IF ALL of the roughly 567,000 Syrian refugees currently in Germany were like Firas Alshater (pictured), there would be no integration problem. Mr Alshater is living proof that alienation and trauma can be overcome with a good attitude. In Syria, he was tortured in Bashar al-Assad's prisons for nine months. "You sit there, hear the torment of others, and you don't know when it's your turn," he recalls. In 2013 he escaped to Germany. "I had heard that the Germans are closed," he says. "No, they're not!" Now 25, he rarely looks back.

But Mr Alshater fled to Europe at a time when the flow of migrants was still manageable. That changed a year ago, during the night of September 4th-5th. Masses of refugees who had trudged through the Balkans were stranded in a train station in Budapest. Fearing a humanitarian disaster, Angela Merkel, the German chancellor, allowed the whole lot into Germany. What was meant as a one-off exception was interpreted in the Middle East and Europe as a new open-borders policy, attracting even more refugees. Germany's initially euphoric "welcome culture" soon soured, especially after New Year's Eve, when crowds of mainly Arab men, including refugees, robbed and sexually assaulted women during festivities in Cologne and other cities. Now, as Germans mark the first anniversary of their experiment, many worry that integrating refugees will prove harder than they ever imagined.

Give me some sugar, neighbour

Mr Alshater burst into the public eye shortly after the Cologne assaults, like an angel of cross-cultural mingling. Speaking fluent German by now, he put his Syrian theatre-studies degree to good use with a self-produced YouTube clip. "Who are these Germans?", he promised to explain, sitting on a couch with a scraggly beard and body piercings. As with all his succeeding clips—called *Zukar Stückchen*, mixing the Arabic for "sugar" with the German for "cubes"—the video has negligible intellectual content but oozes comedy and goodwill. In one stunt, Mr Alshater stands blindfolded in a Berlin square until people spontaneously begin hugging him.

The clips went viral, helping Mr Alshater to launch a promising career in German ▸▸

media. With a partner, he is producing more *Zukar Stückchen* and will air his first television film this month. All this makes integration look easy. Is he a role model? "I don't even know what 'integration' is," he shrugs. "I accept them, they accept me, and I don't bother anybody."

Others are less sanguine, among them Germany's best-known Syrian immigrant of an earlier generation, Bassam Tibi. The 72-year-old Mr Tibi was born into an aristocratic family in Damascus. He learned to recite the Koran as a child, and grew up imbibing the anti-Semitism that pervaded his environment. But in 1962 he came to Germany, studied with renowned German-Jewish philosophers such as Theodor Adorno and Max Horkheimer, and embraced the West's tolerant and open society. As a professor of international relations at the University of Göttingen for four decades, he popularised the term "Euro-Islam", arguing that Muslims can and should integrate by blending their traditional and adopted cultures into a secularised and modern faith.

But of late Mr Tibi has turned pessimistic. Mrs Merkel's welcome last year, he thinks, could even turn Germany into a "failed state". Recently, he spoke with ten young Syrians. "Two of them spoke German, were doing well, and reminded me of myself back then," he says. "The other eight were telling me that 'Allah gave us Germany as a refuge, not the Germans'." Most Syrians and other Muslims, he now thinks, will never integrate, instead retreating into misogynistic, anti-Semitic and anti-democratic worldviews and segregating themselves in radicalised enclaves.

Many Germans share his worries. Anxiety has risen since July, when a Syrian refugee blew himself up outside a concert in Bavaria, injuring 15 people, and an Afghan refugee hacked several passengers on a train with an axe. Both claimed to be acting on behalf of Islamic State. The government knows of 340 cases in which Islamic extremists have infiltrated refugee camps in search of recruits.

Hard information on the progress of integrating refugees is elusive. Crime statistics suggest that "refugees, on average, are as likely or unlikely to become delinquent as the local population", according to the interior ministry. Indeed, relative to their numbers, Syrians are under-represented among criminal suspects. (Moroccans, Algerians and Tunisians are over-represented, but rarely qualify as refugees.) Other objective measures of integration—such as the speed with which the newcomers learn German, acquire vocational skills and find jobs—will take years to assess. As of July, the backlog of unprocessed asylum applications was still more than half a million cases. With so much unknown, anxiety only increases.

Mr Alshater is always cheerful in his videos, but in person can appear tired and sad at times. He tries bravely to remain optimistic. Integration just takes a lot of time, he says. "When I came, just that fucking paperwork took a year," he says, displaying an idiomatic command of German expletives. "But those now crammed in the camps with hundreds of other refugees—how are they supposed to integrate? Speaking to a wall? To an oak tree?"

Mr Tibi, convinced that integration will fail, blames not only the refugees. The German government thinks the challenge of integration boils down to teaching refugees German and getting them jobs. But it is really about identity, he says, and this is where German society fails. During his own stints at American universities, he was always impressed by how quickly he felt a sense of belonging. In Germany, even after writing 30 books in German and marrying a German wife, people still make him feel foreign. "I suffer from an identity crisis, but I go to a psychoanalyst and lie on the couch," Mr Tibi says. "These 16-year-olds go to Islamic State." ■

German populism's heartland

East is east

SCHWERIN

In a German backwater, anti-immigrant feeling thrives

"WHEN the end of the world is nigh," Otto von Bismarck allegedly said, "I will move to Mecklenburg, because everything happens 50 years later there." Even locals agree that the north-eastern state of Mecklenburg-West Pomerania will always be a backwater. But backwaters can also be bellwethers. On September 4th, all Germany will be watching as Mecklenburg elects its state assembly, housed in a medieval castle on an island in one of Schwerin's lakes. Not only is the state home to the electoral district of Chancellor Angela Merkel; it is the heartland of the Alternative for Germany (AfD), a populist right-wing party that is polling at 21%, a hair behind the largest mainstream parties. "We want to become the strongest party," says Leif-Erik Holm, the AfD's top candidate in Mecklenburg.

Even if it does, the AfD will not soon run Mecklenburg, or any other state. For that it would need a coalition partner, and no mainstream party will go near it. But it will almost certainly enter the Bundestag in the federal election next autumn, turning German politics into a six-party system. That fragmentation complicates coalition-building, and will put Mrs Merkel's Christian Democrats under pressure from the right. This uncertainty is one reason why Mrs Merkel this week refused to commit herself to running again next year.

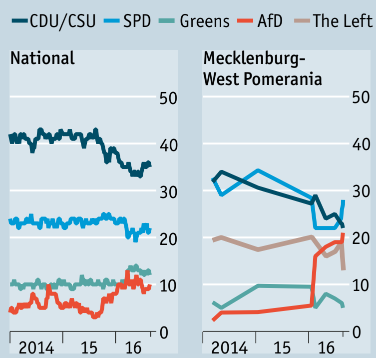
It is not clear why the AfD is so popular in Mecklenburg. Its hallmark is anti-immigrant rhetoric. But Mecklenburg has just 23,000 refugees, or 1.5% of the population. Foreigners make up 3%, and most are Poles or ethnic Germans from Russia. Muslims are a rare sight. Yet even before the refugee crisis, about one in three locals told pollsters that "because of the many Muslims, I sometimes feel like an alien in my own country".

Mecklenburg does have a longstanding core of far-right voters: it is the only state where the NPD, a party considered neo-Nazi, has seats in the assembly. But the AfD draws more support from former non-voters and The Left, a party descended from East Germany's communists. In the West, that may seem illogical. But it matches the gut feelings of many locals. One of the AfD's themes is *Ostalgie*, "nostalgia for East Germany". It nurtures a sense of solidarity against all outsiders, including western Germans and cosmopolitan elites. Since reunification people in the region have felt they were "overrun by the West", says Mr Holm.

At campaign events Mr Holm evokes 1989, when *Ossis* marched in solidarity against the communist regime. Now the enemy is perceived political correctness imposed by Berlin. The tone is invariably pro-Russian and anti-American. Asked how they feel about Russia's invasion of Crimea, supporters compare it with America's war in Iraq. "If the Ami does it it's okay, but if Russia does it, it's wrong?" asks one. The reasoning is questionable. But the emotional appeal is making the AfD a force to be reckoned with.

Alternative right

Germany, voting intentions, % of respondents



Source: Wahlrecht.de/Forsa

Charlemagne | Magical misery tour

Visits to Europe's nastiest spots are becoming popular

WITH its high unemployment, pervasive crime and rows of empty shops, the Belgian town of Charleroi is a "*musée du globalisation*", quips Nico Buissart, with something approaching pride. The former art student has run tours of his town, which was once voted the ugliest place in Europe, since 2009; he now conducts two or three a week. When Charlemagne took the tour, the hulking Mr Buissart led the group down concrete paths littered with scrap metal and defaced by graffiti, under the shadow of looming steelworks, through waist-high weeds and up an enormous slag heap to take in the view of old factories and piles of waste from industries that have mostly moved elsewhere.

Eccentric souls have long enjoyed exploring miserable bits of the continent. Valencia boasts a guided tour of the numerous big-ticket construction projects, some of them abandoned, launched by its corrupt politicians. In eastern Europe, fans of Soviet architecture regularly trek to long-forgotten places to uncover hidden brutalist gems. An alternative German guide to Berlin suggests spurning the Tiergarten and the Brandenburg Gate in favour of the hideous *Schwerbelastungskörper*, a cylinder of concrete laid down by Albert Speer, Adolf Hitler's architect, which is so gargantuan that it cannot be moved.

Lately, such tours of urban dysfunction have become popular for new reasons. With terrorism and the alleged failures of globalisation and multiculturalism dominating many countries' political discussions, more and more people are keen to see the benighted European places where these disasters are supposedly unfolding. Unemployment, segregation and terrorist attacks may not be the sort of thing that local politicians want their towns to be known for, but they create a brand that can serve as the basis of a small, perverse tourism industry.

In Molenbeek, a poor part of Brussels where at least two of the terrorists involved in the Paris attacks last November lived (and where Salah Abdeslam, the surviving suspect, was captured), guided tours used to run around five times a year. Since the attacks there have been 50, says Anne Brumagne, who works for the association that sets up tours throughout the capital. In late September Daniel Pipes, an American critic of Islamism, will take a group to Berlin, Paris and Stockholm to look at what he terms the "new Europe". A highlight of the trip, he says, will be so-called "no-go zones": places which, because of their large Muslim populations or high crime rates, are believed by anxious outsiders to be inaccessible to non-Muslims or the police.

In many ways such tours are a good thing. People who know Molenbeek only from news accounts assume it is "a hellhole", complains Ms Brumagne. After visiting, they are surprised at how lively it is. In April a big modern-art gallery opened there (though its opening was delayed by the terrorist attacks in Brussels in March). Community centres, gardens and social projects have sprung up, aided by an enterprising first-term mayor. In general, no-go zone designations are ridiculed by those who know the areas in question. A pundit on America's Fox News went so far as to claim that Birmingham, Britain's second-biggest city, was one. (He later apologised. The murder rate in Birmingham, England is less than 1/20th that in Birmingham, Alabama.) Visits by non-Muslim tourists help demonstrate that the down-at-heel parts of Europe are not wastelands or outposts of Islamic State.

Nonetheless, the strange appeal of such areas hints at the magnitude of the problem facing European politicians. Many of the Belgians on the Molenbeek tour are seeing a side of their country they have never experienced before. Neighbourhoods where the signs are in Arabic, Moroccan men lounge outside tea rooms and women shop in headscarves may not actually be forbidden to them, as the term no-go zones suggests. But the fact that they find such places exotic shows how segregated their society is.

This failure to integrate is a big problem. After a year of terrorist attacks and an unprecedented influx of refugees from the Middle East, Europeans are worried about immigration as never before. According to Ipsos MORI, a pollster, Europeans are among the most likely people in the world to doubt that refugees can integrate, and they hold some of the most negative views of immigrants. Fully 65% of Italians, 60% of Belgians and 57% of French people think there are too many immigrants in their country. While over a third of Americans and Britons think that immigration has had an overall positive impact on their countries, a measly 11% of Belgians and French do.

Segregation today, segregation for ever?

Europe's urban divides are in some ways more subtle than those in America. When Americans think of dysfunctional places they imagine cities like Detroit, where large areas are literally in ruins, says Mr Pipes. "It's quite surprising that places like Molenbeek are pleasant-looking," he admits. Yet this can make some issues harder to tackle. Molenbeek is linked to nearly every recent terrorist plot in France and Belgium; Salah Abdeslam lived just around the corner from its police station. The neighbourhood's density, social life and complex informal economy may have made it harder to track him down. Jean Jambon, Belgium's interior minister, wants to ramp up security forces in the district. That might help law enforcement, but it will not tackle the aspects of poverty that contribute to radicalisation: poor education, unemployment, lack of adequate housing—and social segregation.

By bringing public attention to problem areas, urban-dysfunction tours may help nudge the political system to address such issues. Then again, politicians may simply learn to celebrate the mess. When Mr Buissart first started his tours, local politicians in Charleroi complained that he was too negative, he says. Now the city's website advertises jogging events through its industrial landscape and bicycling tours along disused railway tracks. Misery has officially become a marketing opportunity. ■

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The economy since the Brexit referendum

Fact and fiction

The dire prophecies of doom have not come true—yet. But the economy is slowing

AFTER Britain voted to leave the European Union on June 23rd, financial markets took fright. Sterling lost one-tenth of its value in two days of trading. The FTSE 250, an index of domestically focused firms, fell by 14%. Remainers predicted that Leave voters would soon suffer from an acute case of buyer's remorse. Yet as the summer has worn on, the mood has changed. Companies have not fled Britain en masse. The pound has stabilised and the FTSE 250 is up on its pre-referendum level. Polls suggest that few Brexiteers regret their vote: indeed, many of them now argue that the pre-referendum doom-mongering was overblown, and some even detect the beginning of a "Brexit boom". What is the reality?

Some of the gloomier pre-referendum forecasts ignored the possibility that the authorities would respond to a Leave vote by propping up the economy. In the event, the Bank of England loosened monetary policy six weeks after the referendum, a widely anticipated move that nonetheless boosted confidence. The new government of Theresa May quickly made clear that it would tone down the fiscal austerity of its predecessor.

Nor did wonks foresee that Brexit would take so long to get under way. During the referendum campaign David Cameron implied that Britain would begin the process of withdrawal from the EU immediately, in the case of a Leave vote. Instead he left the job to his successor. Mrs May has said negotiations will not begin until 2017; only on August 31st did she convene a cabinet meeting to discuss the broad shape of Brexit. Bookmakers reckon there is a 40% chance that Britain will not leave the EU before 2020. Those who are pleasantly surprised by Brexit's consequences should bear in mind that it has not yet happened.

Still, in the short term the economy seems to be faring better than some economists had predicted. Consumer spending appears to be healthy. In July retail sales rose by 4% compared with the year before. But the fact that they grew by the same amount in September 2008, the month that Lehman Brothers collapsed and thus precipitated the global financial crisis, should give pause for thought. Consumers do not immediately internalise bad economic news: the man on the street is not thinking about Article 50 of the EU treaty as he enters a shopping centre. And more than half of Britons clearly never saw Brexit as bad news in the first place.

For a better gauge of the future of the economy, look at the behaviour of companies. Before the referendum, economists' main worry was that firms would hold back on expensive, hard-to-reverse decisions while Britain's future relationship with the EU was sorted out. The two big questions concern jobs and investment.

Growth in business credit has markedly slowed. The Bank of England's latest survey of business confidence indicates that planned investment is being reined in. In July the value of contracts in the infrastructure industry fell by 20% compared with June, based on a three-month rolling average, according to Barbour ABI, a consultancy. As businesses hold back on investment, productivity will slow and, with it, wages.

Data from Adzuna, a job-search firm, show that in July wages and vacancies fell compared with June. (A higher rate of inflation linked to the weak pound is eating further into real earnings.) The number of advertised low-paid and contract roles has grown, as employers seek to plug gaps without committing to permanent hires. *The Economist*'s model analysing Google searches for "jobseekers", which is correlated with official unemployment back to 2004, suggests that unemployment is now around 5.3%, higher than the official rate of 4.9% last recorded for April-June.

What of exports, which Brexiteers forecast would soar following a fall in the pound? A survey of manufacturing firms on September 1st showed strong growth in sales to places like America and China. Yet hopes of an export boom should be tempered. A high proportion of exports' content is made up of imports, which are now pricier. And British exports compete mainly on "non-price" factors, such as quality and customer service, making them insensitive to currency fluctuations. When sterling fell by a similar amount in 2008-09, net exports barely responded.

Britain now hopes to avoid entering recession, as many, including the Treasury, forecast before the vote. It partly depends on what Philip Hammond, the chancellor, announces in his autumn statement, a mini-budget due later in the year. To sup- ▸▸

port the economy he will have to loosen the current fiscal plans considerably. His predecessor, George Osborne, pencilled in a reduction in the cyclically adjusted budget deficit in 2017 of about 1% of GDP, a sharp contraction even by the standards of recent years. Mr Hammond could help by cancelling this austerity. He is likely to announce a round of spending on infrastructure (see next story).

Such policy decisions may yet fend off recession. But deploying a fiscal boost would not be costless, with Britain's public-debt-to-GDP ratio already running at 84%. Nor is ever-looser monetary policy, given the damage it does to pension funds. And consider the counterfactual. Before the referendum many economists had predicted a boost to growth in the event of a vote for Remain, as a big source of uncertainty was removed. The Bank of England had forecast growth of 2.3% in 2017, but now expects just 0.8%. Following the vote to Leave, the government and the bank have been forced to use monetary and fiscal policy just to try to keep growth in positive territory. And Brexit itself, of course, is still to come. ■

Infrastructure

Ropy roads, rail and runways

Britain needs to hurry up with transport projects—both large and small

TO LOOK down from the air-traffic control tower at Heathrow airport—Europe's busiest—is to see a hive of activity. Crammed between the two runways to the west is the gleaming Terminal 5. To the east is Terminal 2, newer still, alongside a labyrinth of older terminals that are being refurbished or rebuilt. Yet despite its ongoing makeover, Heathrow is groaning. Operating at 99% of capacity and in need of new runways and terminals, the congested London airport is testament to politicians' decades-long dithering about where to build new infrastructure. With Britain now flirting with a Brexit-induced recession, it is a habit the new government needs to break.

The problem does not lie with builders. Terminal 5 was built on budget and on time; the Elizabeth line in London, a £15 billion ($20 billion) underground railway due to open in 2018, is also on track. A lack of planning by successive governments is instead to blame. Since the 1960s, decisions about where to put a new runway near London have been delayed repeatedly. Procrastination has left Britain lagging behind Europe and Asia on high-speed rail. Apart from the Channel Tunnel link, no new main lines have been built in Britain since the 1890s. And pothole-pocked roads suggest the highways are no better.

Time to pour more money into black holes

The government now has an opportunity to make up for lost time. Since the vote in June to leave the EU, political support for more infrastructure spending has grown. Last November the Treasury announced that investment in transport projects would double by 2020. The new chancellor, Philip Hammond, is likely to expand this much further later this year. This would help soften the economic blow from Brexit and boost long-term growth.

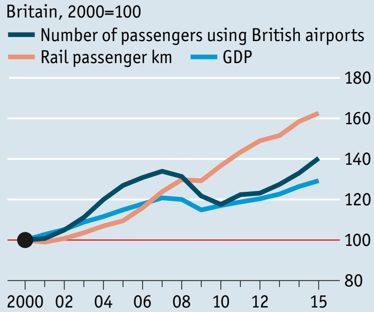
There is no shortage of potential projects lying in the government's in-tray. Work on the Thames Tideway Tunnel, a £4.2 billion super-sewer under London, will start by November. And construction of the £28 billion HS2 railway, initially between London and Birmingham, will start early next year if, as expected, it is approved by Parliament in the autumn, says David Higgins, its chairman.

Yet their fiscal impact will be only modest in the near term. Phase one of HS2 will pump at most £2 billion into the economy each year, says Mr Higgins, and it would be difficult to accelerate construction even if the chancellor wanted him to.

The same applies to Crossrail 2, another planned railway in London, and to competing proposals to build new runways at Heathrow and Gatwick. Work would probably not begin on the runways before 2020, even if they got the go-ahead tomorrow. Although an independent commission last year backed Heathrow's proposed runway as the option that would most improve London's connections to other cities, academic research suggests that building runway capacity boosts a city's economy much more than increasing the number of places to which it has direct flights.

Steaming ahead

Britain, 2000=100



Sources: ONS; Civil Aviation Authority; Office of Rail and Road

Smaller projects could get going quicker. Over the next four years around £20 billion of roadworks and £50 billion of rail contracts are in the pipeline, says Michael Dall of Barbour ABI, a consultancy. Some could be accelerated. County surveyors have reams of shelved road-resurfacing plans that could be quickly dusted down. It would cost £11.8 billion to repair Britain's roads to a good standard, according to a recent survey of local authorities.

Little improvements often have strong business cases, because they allow existing infrastructure to be used more intensively. The government calculated that the cost-benefit ratio for expanding rail capacity on existing lines was almost 50% higher than for building HS2. For some improvements the benefits were eight times greater than the costs. Smaller projects can also help to revive "left behind" regions—a stated priority of the government—which are literally bypassed by the likes of HS2.

And without the small transport projects, passengers find it harder to use the big ones. "You have to do both," Mr Higgins admits, or "you'll have massive car parks everywhere." For example, although a £6.5 billion investment in Thameslink has helped to reduce train journey times from London to Luton airport to just 24 minutes, the last mile from station to terminal, by bus transfer, can take an hour because of congestion on local roads. Although the government should get on with its big projects, the tiddlers are just as important. ■

Bagehot | The ungovernables

Brexit achieved and Nigel Farage gone, little remains to unite the UK Independence Party

IF NIGEL FARAGE detected a little bafflement in the crowd at the Coliseum on the matter of his identity and relevance to American politics, he did not let on. Donald Trump had invited the outgoing leader of the right-populist UK Independence Party (UKIP) to stump for him in Jackson, Mississippi. "I'll keep it short," Mr Farage assured his host, not quite off-mic, as he bounded onto the stage. "I come to you from the United Kingdom with a message of hope," he gushed as his audience cheered (whoever this guy was, he sure seemed upbeat). Then they went wild for: "We made June 23rd our independence day when we smashed the establishment!" Mr Farage, without whom Britain's vote for Brexit probably would not have happened, could not have been happier.

Back home, his party is in a bad way. Which is odd: UKIP has just altered the course of British history, has soared ahead in recent local government elections, is ideally placed to hassle Theresa May's government to move harder and faster towards Brexit and stands on the brink of toppling the Labour Party, divided and incompetent, in its doughty northern English strongholds where working-class voters backed Brexit. Yet UKIP's poll numbers are down: to 12%, their lowest since last year's election, according to YouGov. Meanwhile the race to replace Mr Farage has been dismal. None of the party's most impressive figures is a candidate and Diane James, the unremarkable front-runner, has refused to propose any new policies or attend hustings.

All of which exposes the underside of Mr Farage's six years as leader, his second spell in the role. A talented rabble-rouser who has achieved more in the past few years than most cabinet ministers, UKIP's former chief does not do computers (his wife sends e-mails on his behalf), people management or details. Raheem Kassam, a former aide, has described the party's headquarters as "a fucking playground" where "we'd have to lock certain doors because the people behind those doors were too embarrassing to be seen". As Mr Farage conceded to Bagehot when, last year, the two were barricaded inside UKIP's Rotherham office by anti-racism protesters, the party has struggled to develop clear positions on subjects other than Europe and immigration.

Then there are the psychodramas. Mr Farage fell out spectacularly with his party's only three other political talents fit for national prominence: Suzanne Evans (whose membership was suspended after she called him "divisive"), Patrick O'Flynn (a former political editor of the *Daily Express*) and Douglas Carswell (a libertarian who defected from the Tories in 2014 to become UKIP's only MP). He also managed to alienate his party's executives, who barred one of his preferred successors, Steven Woolfe, from standing because he submitted his application 17 minutes late. Mr Farage's unhappy parting shot was to call them "among the lowest grade of people I have ever met" and "total amateurs". Ms James, who has ended up as the candidate least hated by the Farageists, wants to call an extraordinary general meeting of the party to disband the executive committee if she wins.

She seems a capable manager—more so than Lisa Duffy, her main rival and formerly the hands-on UKIP mayor of Ramsey, a small town in Cambridgeshire—but would still struggle to improve things. For the party's problems are deeper than they look. Populist political forces succeed by saying what their audiences want to hear and, as David Art, a political scientist at Tufts University, argued in his book, "Inside the Radical Right", are thus fundamentally inimical to professional structures and processes.

This is more true of UKIP, whose sole unifying cause has been Brexit, than broader-based counterparts like France's National Front, Austria's Freedom Party and Mr Farage's carrot-hued new buddy in America. Beyond leaving the EU, virtually nothing unites UKIP. The party is at once libertarian and authoritarian. It preaches individual freedom but contains admirers of Vladimir Putin. It wants to privatise the National Health Service, apart from when it does not. It has flirted with both a tax on luxury goods and deep tax cuts for the richest. It hems and haws on gay marriage, halal food and the burkini. It is vague about what sort of immigrants Britain should let in, and in what numbers. Even on the EU it is utterly divided: some (like Mr Carswell) want Britain outside the union to become a European Singapore, while others (like Aaron Banks, the forthright businessman who bankrolled the party's pro-Brexit efforts) want something more like a return to the 1950s.

All parties, and especially populist ones, contain a range of views. Yet they tend to congregate around certain stretches of the political spectrum. Founded in pursuit of Brexit alone, UKIP has no such common ground. On sprawling, defining themes like the vocation of the state, the meaning of nationhood, the interaction of public and private spheres, and the roles of pluralism, globalisation and citizenship in modern societies it has no continuity and is irredeemably at odds with itself. That inhibits it from establishing and sticking to the sort of long-term strategy it needs to become and remain more professional.

Making plans for Nigel

This points to a grim cycle. The last time Mr Farage resigned, UKIP tumbled. For 11 ignominious months Lord Pearson, a languidly aristocratic former Tory, trashed his party's prospects: in a television interview shortly before the 2010 election he appeared not even to have read its 14-page manifesto. All of which may now repeat itself. "One quite plausible possibility is we end up with a rerun of the Lord Pearson experience: a year or two of messy and incoherent leadership under a figure not cut out for the big leagues, then Farage comes back," suggests Robert Ford, a UKIP expert at Manchester University. The fact is that UKIP's weaknesses point to Mr Farage's weird genius. Besides the quest for Brexit, his unique schtick was all the party had. Now, again, it may be its only salvation. ■

Terrorism

Learning to live with it

People are surprisingly good at coping with repeated terrorist attacks. In America and Europe, they may have to be

IT HAS been an edgy summer in France. Since the horror of Bastille Day, when Mohamed Lahouaiej Bouhel killed 86 people in Nice, heavily armed soldiers have patrolled the beaches. In late July fanatical Muslims murdered a Catholic priest in Normandy. France remains in a state of emergency after gunmen affiliated to Islamic State (IS) killed 130 people in Paris last November. Next year's presidential election threatens to be a competition over who can sound toughest on terrorism.

Last week Nicolas Sarkozy, a former president, launched his campaign to get his old job back. As well as calling for a national ban on the "burkini", a modest swimsuit favoured by Muslims, he has proposed the detention or electronic tagging of potentially thousands of people who are on a list of Islamist-inspired security threats. If he wins his party's nomination, Mr Sarkozy could be the less nativist of two second-round candidates for the presidency. The other would be Marine Le Pen of the National Front.

Germany, too, remains on high alert after two Islamist attacks and a shooting rampage by a mentally unstable teenager in July. It is boosting spending on its police and security forces. Eight state interior ministers from the ruling Christian Democrat party met on August 18th to back a raft of measures, including restricting dual citizenship for Germans of Turkish origin and banning the burqa. Some reports suggest that the government will soon advise citizens to stockpile food and water in case of a major terrorist attack.

In America, meanwhile, mass shootings in San Bernardino and Orlando have forced terrorism into the presidential race. In August Pew, a pollster, reported that Americans wanted Hillary Clinton and Donald Trump to spend more time debating how they would protect America from terrorism than debating the economy. Another poll conducted earlier this year asked the 83% of its respondents who said they followed IS news closely whether the group was "a serious threat to the existence or survival of the US". No less than 77% agreed with this extraordinary suggestion.

The age of humdrum terror

September 11th, 2001 has remained an outlier both for its carnage and for its wider impact. Since then, Western security and intelligence services have become good at disrupting complex plots. Civil airlines have become dauntingly tough targets, albeit at enormous cost in money and travellers' convenience. Fears of a terrorist group getting hold of a nuclear weapon have not disappeared. But nor has it happened, despite many predictions to the contrary.

And yet the number of deaths rises, both in America and Europe. Killers have ranged from the "lone wolf" attacker (attracted to the IS brand by its slick propaganda on the internet) to commando-style operations. Almost without exception, targets have been chosen for their vulnerability or cultural symbolism. Whereas some attacks have involved IS fighters who have returned home (something that security agencies have been warning about for several years) most have been the work of local sympathisers, often with social or mental-health problems, who have been nowhere near Syria.

Even when the caliphate is defeated in Iraq and Syria, as it surely will be, the threat to the West seems likely to persist. And the kind of attacks IS encourages are fiendishly hard to prevent. Anyone can rent or steal a lorry and drive it at a crowd. Especially in America, it is all too easy to buy high-powered automatic weapons that can kill scores of people in moments. Neither great planning nor great intelligence is required to carry out such attacks. Even when the perpetrators are on the radar of the police and security services—and by no means all are—there is no guarantee they can be stopped, given the sheer number of potential jihadists.

Thus it seems likely that much of Europe and America will have to get used to acts of Islamist-inspired terrorism becoming, if not routine, at least fairly regular occurrences. The challenge for open, liberal societies is how they should respond to that threat, particularly at a time when popular confidence in traditional political elites has sunk so low. Above all, the danger is of over-reaction.

As a result of the Troubles in Northern Ireland and the actions of ETA, a Basque separatist group, terrorism was consistently deadlier in the 1970s and 1980s than it has been since (see chart). Even then, the chance of being murdered was small. During the 30 years of the Troubles, the annual risk for civilians of being killed in Ulster was about one in 25,000. During the four bloodiest years of the second *intifada*, the annual risk to an Israeli civilian was about one in 35,000. Even in 2001, the likelihood of an American in the United States being killed in a terrorist attack was less than one in 100,000; in the decade up to 2013 that fell to one in 56m. The chance of being the victim in 2013 of an ordinary homicide in the United States was one in 20,000. Traffic accidents are three times as lethal.

Barack Obama was correct when he said earlier this year that the danger of drowning in a bathtub is greater than that of being killed by terrorists. Baths are a one-in-a-million risk. Even if the terrorism deaths in San Bernardino and Orlando were doubled to give an annual death toll, the risk would still be about one in 2.5m. Yet the president was lambasted for his otherworldly complacency.

That hints at the peculiar effects of ter- ▶▶

rorism. Voters and most politicians treat it as something entirely distinct from other, far greater, risks. As a result, cost-benefit analysis becomes almost impossible.

After the attack on the World Trade Centre in 2001, America threw massive resources at homeland security. On conservative estimates, by 2009 it was spending an extra $75 billion a year. In a report for the Cato Institute, a libertarian think-tank, John Mueller and Mark Stewart assess whether that spending is worthwhile. Judging it on the same basis as other government spending that aims to mitigate fatality risk, they say it would be justified only if it was thwarting nearly half of 1,667 serious attacks a year. You would have to believe that without the additional security measures in place, America would be suffering four significant attacks a day.

The limits of statistics

But woe betide any politician who suggests diverting money from homeland security to areas where it might save more lives. The first popular response to a major terrorist incident is shock and grief. The second is nearly always that those in power have not done enough. After the Nice attack, one opinion poll found that 67% had no confidence in the government's ability to tackle terrorist threats. Despite the enduring state of emergency and President François Hollande's repeated assertion that France is "at war" with IS, the impression that his government has done too little has stuck.

For political leaders, the calculation appears to be that you can never be seen to be doing too much to defeat terrorism, even if a great deal of the apparent effort is ineffective displacement activity, described by experts such as Bruce Schneier as "security theatre". Much airport security is like that. One team appointed by the Department of Homeland Security managed to get fake guns or bombs past baggage scanners on 67 out of 70 attempts.

Terrorism is a form of psychological warfare against a society. It is supposed to have effects that are utterly disproportionate to the actual lethality of the attacks. Thanks in part to the extensive media coverage that terrorist attacks attract, thanks also to the reaction of politicians who glibly talk of threats being "existential", and thanks too to the security services who, for their own purposes, inflate the capability of terrorists, the perception of risk is typically far higher than the reality.

Compared with other traumatic events, such as natural disasters, terrorist attacks tend to distress people who were nowhere near an incident and who knew nobody caught up in it. That is partly because of the seemingly random nature of attacks. It also shows how disturbing is the idea of an "enemy within". In the case of suicide attacks, the terrorists' fanaticism adds a dimension of horror.

In 2002, at the height of the second *intifada*, 92% of Israelis feared that they or a member of their family would become a victim of a terrorist attack. Nearly 10% of the population suffered symptoms associated with post-traumatic stress disorder (PTSD). A survey of 30 countries in 2011 found that Northern Ireland had the highest rate of PTSD. Fully 15% of the adult population were affected as a result of conflict-related experiences.

That is the bad news. The good news is that, despite the psychological and physical wounds that sustained terrorist campaigns inflict, societies can become inured to them. Dov Waxman, an Israeli academic who studied the effects of the second *intifada*, found that people can become habituated to repeated terrorist attacks, and live "a semblance of normal life". Research on the impact on the morale of Israelis during the peak period of terrorist attacks (2002-04) has found that their satisfaction with life barely changed. It also compared quite favourably to terrorism-free societies.

As terrorism becomes routine, its capacity to shock diminishes. Gradually, the news media lose interest. One study of four attacks on Israelis in 2002 and 2004, all of which killed between eight and eleven people and injured 50-60, found that the main television channels began to devote less time to attacks and ratings for the news programmes dropped. Politicians also exhaust their capacity for hyperbole and settle for a tone of grim defiance.

Two things, however, may have contributed to Israeli resilience that are less evident in some Western societies. The first was the already strong social solidarity among Israeli Jews. The second was the relatively high confidence that Israel's security services and political leaders would eventually get on top of the situation.

The building of the security wall between Israel and the West Bank after 2003 showed how far the government was willing to go. The construction of the highly effective wall was a fairly simple solution that impinged little on the lives of most Israelis (though a lot on Palestinians). Governments in Europe and America, faced with a threat that comes mostly from their own radicalised citizens, will struggle to find any acceptable equivalent.

Arguably, they should not even try. The greatest damage that terrorists do is almost always through the over-reaction their acts provoke. Given that this is such an obvious trap, it should be possible to avoid running full-tilt into it. As Messrs Mueller and Stewart point out in another paper, by wildly exaggerating the extent of the threat that terrorists pose, political leaders and security specialists play the terrorists' game by glamorising their squalid enterprise.

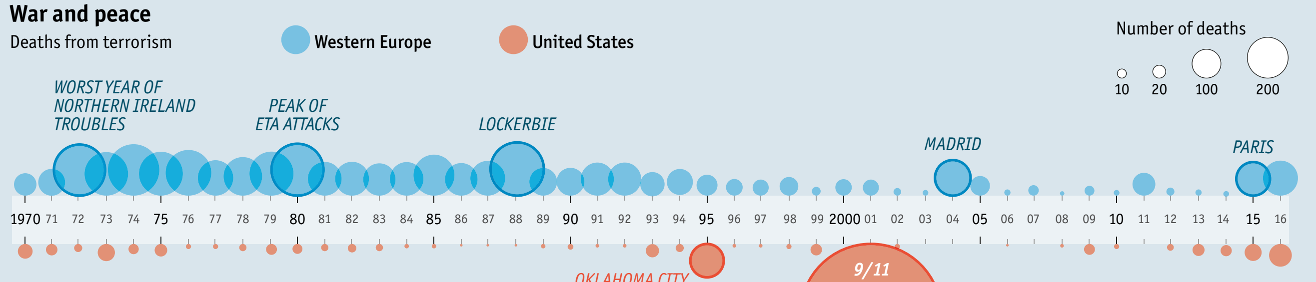
Leaping into the trap

Last year General Michael Flynn, Donald Trump's adviser on national-security issues and a former head of the Defence Intelligence Agency, did just that. He described the terrorist enemy as "fuelled by a vision of worldwide domination achieved through violence and bloodshed" that was "committed to the destruction of freedom and the American way of life". That may indeed be how IS thugs see themselves. But why should anyone sensible be so keen to validate their boasts?

To his credit, Mr Obama has consistently warned about the consequences of using hyperbolic language to describe the terrorist threat. In a TV address last December, after the San Bernardino shootings, he explained that success against IS and other terrorists "won't depend on tough talk or abandoning our values, or giving in to fear". Instead, he said, America would prevail by being strong and clever, resilient and relentless. Mr Obama is right. Defeating terrorism depends above all on good intelligence, a degree of stoicism and a refusal to allow it to undermine the principles that open societies are built on. ■

War and peace

Deaths from terrorism



Sources: START, University of Maryland, press reports

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Corporate taxation

The €13 billion bite

The European Commission's huge penalty against Apple opens up a new front in the war on tax avoidance

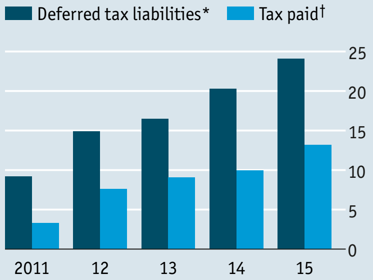
MARGRETHE VESTAGER, the EU's competition commissioner (pictured), likes to knit elephants in her spare time, because, she once said, "they bear no grudge, but they remember well". It is hard to imagine executives at one of the big beasts of the tech world forgetting August 30th 2016 in a hurry: that is when Ms Vestager told the Irish government to recover up to €13 billion ($14.5 billion), plus interest, in unpaid taxes from Apple. The decision was expected, but the figure was higher than experts had predicted.

The ruling is the most important—and controversial—moment so far in the war on corporate tax avoidance. Tax-justice campaigners hooted with delight. Apple was livid, and vowed to appeal. The Irish government may follow; its finance minister, Michael Noonan, would rather "defend the integrity of our tax system", as he put it, than accept a windfall that would exceed Ireland's annual health budget. Politicians in America, Apple's home market, denounced the move as a "tax grab".

The commission concluded that Irish rulings in 1991 and 2007 artificially lowered the tax Apple was due to pay, and that although the firm did not break any law, this arrangement was in breach of EU state-aid rules preventing member states from offering preferential treatment to particular firms. The spat centres on two Irish-registered subsidiaries that hold the right to use Apple's intellectual property to make and sell its products outside the Americas. The commission argues that a dubious profit-allocation deal allowed most of their profits to be moved to a "head office" that existed only on paper and was tax-resident in no country—allowing Apple to shrink its tax rate in Europe to well below 1%.

The ruling is part of a broader assault on aggressive tax avoidance, led by Europe. This began several years ago, when post-crisis austerity produced calls for greater tax fairness. The commission is looking into questionable structures set up by several other (mostly American) firms, including Starbucks and McDonald's—though these involve much smaller sums than Apple. The focus is on arrangements that allow the firms to minimise taxes paid in Europe on sales in the region, while simultaneously using deferral provisions in the American tax code to keep the profits offshore indefinitely—thereby also shielding them from a tax hit back home, where they would be taxed at a hefty 35% (minus any payments made in Europe) if repatriated.

Whose pot of gold?
Apple, $bn



Source: Company reports
*At September
†Cash paid for income taxes, net

European countries have been closely involved in efforts to create international consensus on how to close loopholes in cross-border taxation. These are led by the OECD, and are known as the Base Erosion and Profit Shifting (BEPS) project. The 44 participating countries (now 85) agreed on a set of reforms last year, but implementation is patchy. Some see the commission's ruling on Apple as a sign that it has little faith in BEPS. The judgment certainly complicates international tax diplomacy.

America criticised the ruling, calling it "unfair". It had warned that it might retaliate in some way if Brussels went ahead. It argues that the commission is trying to turn itself into a "supranational tax authority", threatening the consensus achieved through BEPS on the crucial "arm's-length principle" at the heart of transfer-pricing rules. These govern the prices that subsidiaries of a multinational in different countries charge each other for the products and services that flow between them.

The Americans are fretting mainly because the ruling signals that Europe will lay claim to some of the more than $2 trillion of profits that American firms have amassed offshore, under the deferral provisions. Policymakers in Washington believe only the federal government has the right to tax this, as and when it is brought home. The Brussels decision may spur American politicians to set aside their differences on tax reform and agree on a package with a reduced tax rate for profits that firms repatriate; better that than to let Europe dip into the offshore pot, they think. ▸▸

Apple has come out fighting. It has denounced the ruling as unfairly retroactive, based on various "fundamental" misunderstandings of its operations and underpinned by iffy theories that have changed over time and that deviate from settled practice. It strikes "a devastating blow to the sovereignty of EU member states over their own tax matters and the principle of the certainty of law in Europe," Tim Cook, its boss, harrumphed. The firm's CFO, Luca Maestri, accused Ms Vestager's team of "legal mumbo-jumbo" and poor maths: their calculation that Apple paid an Irish tax rate of under 1% for 2014 was arrived at using the "wrong denominator and the wrong numerator", he claimed. Apple says it paid the equivalent of $400m in Irish tax that year at the statutory 12.5% rate.

Apple also took issue with the assertion that the "head office" was stateless; the unit is, it says, taxable in America (in theory at least). It is also true that Apple pays substantial tax globally; last year it wrote cheques for more than $13 billion, which is comparable with the tax rate that many large American firms pay—though a sizeable chunk of what it owes is not paid straight away but is instead recorded as a deferred tax liability (see chart).

Ireland has its own reasons to chafe. It worries that being forced to collect would undermine its successful economic model: hosting multinationals that see Ireland as an attractive European base. "To do anything else [but appeal] would be like eating the seed potatoes," said Mr Noonan.

In the commission's view, Ireland is not the only country short-changed by Apple's tax practices; others, in the EU and beyond, have lost out. They may now challenge its arrangements. Other firms have reason to worry, too. There is no reason to think Brussels's probes will end with Apple and the handful of other companies already under public scrutiny. These cases will not be resolved quickly. Apple's appeal could take a decade to grind through the courts. In the meantime, it will have to put the amount demanded in escrow. At 7% of its cash pile, that's comfortably affordable. Not many companies could say that. ■

Drugs in America

Seizure-inducing

NEW YORK

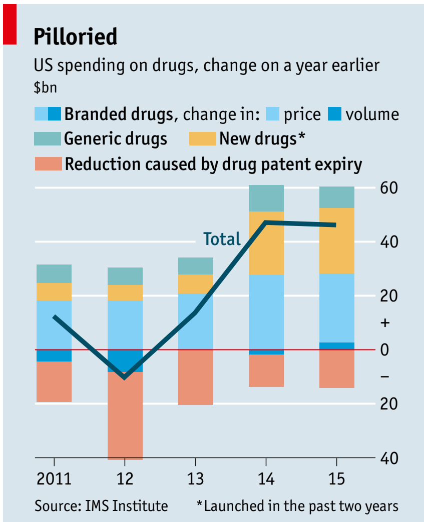
A row over Mylan's EpiPen allergy medicine raises fresh questions about how drugs are priced

JULIANA KEEPING is rushing to work in Oklahoma with two children in tow. Her three-year-old son, Eli, has cystic fibrosis, a deadly lung disorder. He is too young for a drug called Orkambi from Vertex Pharmaceuticals, a biotech firm, but one day it may keep him alive. His mother's question is why it costs over $250,000. A charity helped pay for its development, she says, with some donations from people who were "D-Y-I-N-G"—she spells out the word. That is because she doesn't want her other child to understand. "She doesn't know her brother's disease is F-A-T-A-L."

Ms Keeping has started a petition against the price of Orkambi. She is not alone in her anger. Americans are furious about the cost of medicines. Over the past week their ire engulfed Mylan, a generic-drug firm, which had raised the price of its EpiPen, an injectable medicine that fends off deadly allergic reactions, to $608, from about $100 in 2007. On August 29th Mylan said it would start selling a generic version for half the price. The brawl is far from over. Both Hillary Clinton and Donald Trump are proposing measures that would mean tighter price controls on drugs.

For pharma firms, this is a worrying prospect. To date the government has done little to lower or cap spending on medicines. Across Europe governments control prices in one way or another, but American drug firms can set whatever official price they like. Their single biggest customer is Medicare, which spent a massive $112 billion on medicines for the elderly in 2014. The way it operates rewards doctors for

Sticker shock



selling costly intravenous drugs. And it is illegal for Medicare to negotiate with drug companies. Only private health insurers do so on the government's behalf, but they are sharply constrained—for example, they are required to pay for six broad categories of drugs. The idea is that competition among insurers (and accompanying pressure to pass on savings to consumers) will restrain costs, but it has not done so. As a result America spends 44% more on drugs per person than Canada, the next-highest.

There have been plenty of rows over drug prices in the past, but matters are becoming more heated now. For one thing, insurers are obliging patients to pay a greater share of the cost for their treatment, so they notice higher prices. Ms Keeping has private insurance, but she still had to spend nearly $3,000 last year on her son's care.

Prices are also rising rapidly. The average launch price of a range of cancer drugs, adjusted for inflation and health benefits, grew by 10% each year between 1995 and 2013, according to a recent paper from the *Journal of Economic Perspectives*. Prices for older, patented drugs are climbing, too (see chart). Drugs firms used to say increases were due to inflation, says Steve Miller, the chief medical officer for Express Scripts, a firm that manages drug costs for employers. Since there is now little general inflation about, he says, "it's price gouging." The pharma industry's rationale, which is that brilliant new drugs are worth it, is often faulty. Some new medicines are impressive, such as Gilead's $84,000 cure for Hepatitis C, Sovaldi, but others are not. Sanofi introduced Zaltrap, a cancer drug, for $11,000 a month, despite the fact that it offers little more benefit than cheaper drugs.

Price increases for generic drugs seem even more arbitrary. The most egregious case remains Turing, a small company that bought an old HIV drug with an expired patent and boosted its price by 5,556%. Many in the industry branded its boss, Martin Shkreli, an evil anomaly. But the ▸▸

case of Mylan shows that Turing was not quite the outlier it appeared to be. The larger firm's chief executive, Heather Bresch, heads the generic-drugs lobby and is the daughter of an American senator.

In the field of patented medicines, the industry points to the billions of dollars that are required to develop new treatments. But many question whether drug firms' profit margins, which greatly exceed those of other industries, especially in the case of biotech companies, need to be as high as they are. "There's limited evidence to show that spurring innovation requires that level of profit," says Ronny Gal of Sanford C. Bernstein, a research firm.

What does the doctor order?

The Food and Drug Administration (FDA) has made progress in addressing some of these problems. Last year it approved an impressive number of both generic drugs and innovative medicines. Still, it could work faster, particularly when a generic has a monopoly.

Private insurers and pharmacy-benefit managers, such as Express Scripts, are old hands at resisting high drug prices. They use co-pay schemes and other incentives to push patients towards cheaper medicines. They also refuse to pay for some new drugs when there is a reasonable alternative. This works quite well. The official or "list" prices for spending on drugs climbed by 12.2% last year, according to IMS Health, a research outfit, but net spending, which includes the rebates and discounts that employers and health insurers demand, rose by a more modest 8.5%.

A popular idea is to let the government negotiate prices of the drugs for Medicare directly with pharma firms. The idea has support from both Democratic and Republican voters. But any legislation might not pass, and it would be complex to put into practice. Furthermore, Medicare would need to be able to refuse to pay for some medicines; neither Mrs Clinton nor Mr Trump have gone so far as to suggest that. The public might object, too. The only thing that Americans detest more than an expensive drug is a bureaucrat who says they can't have it.

Reform will of course be opposed strongly by the pharmaceutical industry, which has many friends in Washington, DC. The chief strategy employed by drug companies to rein in costs for patients has bordered on the devious. They offer coupons and other help to cover patients' out-of-pocket costs for expensive drugs. But the prices for insurers remain high, which raises costs for everyone. Now that the threat of regulation looms, they may be willing to do better. ■

Own goal: In our story on Chinese investment in football, of August 27th, we exaggerated the valuations of two clubs, Aston Villa and Granada, by a factor of ten. Sorry.

Xiaomi

Show me again

SHANGHAI

A once high-flying startup needs to get back to basics

IF YOU can sell smartphones, you can sell anything. That seems to be the motto of Xiaomi, a Chinese firm best known for making feature-laden but affordable handsets. On August 31st, at a splashy event in Beijing, it unveiled a robotic vacuum cleaner—the latest in its "ecosystem" of devices, which also includes smartwatches, air purifiers, hoverboards, rice cookers and even an electric screwdriver (most are built by startups in which Xiaomi has a stake).

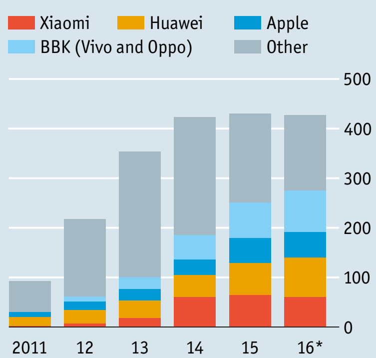
The snazzy vacuum—it features a futuristic distance sensor that is able to scan its surroundings up to 1,800 times a second—is a symbol of the hubris that has led Xiaomi to chase its ecosystem dreams even as it has neglected its core business. Considered the world's most valuable startup only a couple of years ago, when it attracted more than $1 billion in funding at a valuation of $46 billion, some now reckon it to be worth only a tenth of that.

The firm vigorously rejects such estimates—and calls another figure deeply flawed. According to IDC, a market-research firm, sales of Xiaomi handsets on the Chinese mainland fell by nearly 40% in the second quarter of this year, compared with a year ago. Other research, Xiaomi points out, shows that sales have declined only a bit. The firm insists that demand remains strong, claiming it sold nearly 7m phones in June alone (it shifted more than 70m last year).

Whoever is right, the days of heady growth are clearly over (see chart). The firm soared by offering legions of first-time buyers smartphones with high-end features for just 699 yuan ($105). Partly as a result, smartphone penetration in urban China has risen from 51% two years ago to 75% today, according to Kantar Worldpanel, another research firm.

Bad line

Smartphone shipments in China, units m



Sources: IDC; Euromonitor; *The Economist* *Estimate

Xiaomi also prospered by staying "asset-light". Its initial business model involved holding few phones in stock, selling online only and offering only a limited number of models. In addition, rather than splash out on costly advertising, it relied on word-of-mouth recommendations and short-lived online sales campaigns that deliberately kept supply scarce ("hunger marketing", in the jargon).

Yet the smartphone market in China has quickly matured. Consumers are now buying their second or third devices. They are ready to pay for more expensive devices—and are less susceptible to marketing gimmicks. These worked when most people in big cities had never bought a smartphone, but now many find them annoying, observes Duncan Clark of BDA, a consultancy. Xiaomi's slow product-release cycles may also have led the firm to appear "stale and uninnovative", adds Edward Tse of Gao Feng, another consultancy. Consumers now favour mid-priced phones from local rivals such as Huawei and BBK.

Other problems are home-made. C.K. Lu of Gartner, another research firm, argues that Xiaomi has failed in its push into services, which was meant to offset the thin margins on handsets. Xiaomi claimed it would reach $1 billion in revenues from services last year, but achieved barely half that amount. The firm's noisy forays abroad, to South-East Asia and elsewhere, have proved a costly distraction. But the biggest headaches have been supply-chain snags, which hurt product quality and are another reason why it missed its sales targets. These troubles have led Lei Jun, the firm's founder, to take personal charge of smartphone development and supply-chain management.

Executives insist that the firm remains on track. Shou Zi Chew, its chief financial officer, says the bet on services is paying off. He claims his company is already profitable and predicts that revenues from services will reach the billion-dollar mark by the end of this year. Hugo Barra, who runs Xiaomi's international business, points to sales growth of more than 70% year on year in India. Xiaomi recently won a licence for internet banking and will launch an online-payment service soon. It also plans to open 50 of its own retail stores across China by year-end. Some Xiaomi investors are looking to dump their holdings, but many seem patient. One of the biggest says: "The company is in no danger of collapse…and Lei is focused on the right things." If he is wrong, others warn, Xiaomi could become the "Blackberry of the East" or the "HTC of the mainland", referring to two once-proud handset makers that are shadows of their former selves. ■

Serge Pun & Associates

Honest partner

YANGON

Myanmar's best-known business house is joining up with multinationals

THE maroon hot-air balloons which carry tourists over Bagan—an ancient city teeming with crumbling red-brick temples—are famous in Myanmar. The fleet belongs to one of the country's best-known tycoons. Since the pariah nation began to open up in 2011, Serge Pun has gradually transformed an empire built on property into a conglomerate with interests in tourism, consumer goods and other industries. His firms have become favourite partners for foreign multinationals.

Mr Pun is an atypical character in Myanmar's business scene. He spent his teenage years in China, his family having left Myanmar after the army's coup in 1962. During the Cultural Revolution Chinese authorities sent him to a re-education camp. He returned home in the early 1990s after starting his own property firm in Hong Kong.

He owns two flagship companies, First Myanmar Investments (which became the first company to list on Myanmar's new stock exchange in March) and Yoma Strategic Holdings, which is listed in Singapore. Both hold stakes in a number of housing developments, whose value Myanmar's opening has greatly boosted.

Most Burmese companies are banned from forming partnerships with Western entrepreneurs, because they remain subject to sanctions imposed by the American government, designed to punish the army's cronies. But Mr Pun's firms never appeared on the sanctions list. His businesses kept their noses clean during years of military rule. At the time this rigour cost them dear in terms of deals, he says. Now their reputation for honest governance appeals to multinationals. It has also helped them to hire Western-educated exiles from Myanmar, who are increasingly choosing to return.

Recent tie-ups with foreigners include plans by First Myanmar to invest in a network of hospitals in partnership with Lippo group, an Indonesian conglomerate. A bank of Mr Pun's plans to launch a mobile-payments system in partnership with Telenor, a Norwegian telecoms firm. Yoma has acquired, from Yum! Brands, the American owner of Pizza Hut, Taco Bell and KFC, the right to operate the fried-chicken chain in Myanmar. The company is also distributing tractors from New Holland Agriculture, an Italian-owned maker of agricultural equipment (whose parent is controlled by Exor, whose chairman sits on the board of *The Economist*'s own parent company), which should benefit from the mechanisation of Myanmar's farms.

The wind's set fair

The future is still unpredictable. Foreign interest in Myanmar slowed ahead of a general election last November, and remains subdued as outsiders wait to see how the new government (led by Aung San Suu Kyi, a longtime democracy activist) will run things. The property market recently softened, and is only now reviving. Meanwhile, the authorities forced all high-rise construction in Yangon, the biggest city, to halt for an inspection of permits granted under the old regime, adding to worries that the government's plans to boost business and the economy are still vague. But Mr Pun's well-connected businesses look sprightlier than most. ■

Corporate activists in Germany

Stada and deliver

PARIS

A putsch at a drugs firm is a sign of rising confidence among investors

IT MADE an uncommonly inviting target for an activist. Stada, a German maker of generic drugs based near Frankfurt, had low revenues, high running costs and opaque accounting. It was valued lower than its peers and shunned by investors. And if its overpaid top managers were lacklustre, its supervisory board was fossilised: crammed with elderly doctors and pharmacists who did little to pep it up.

Shareholders in Germany usually shy away from confronting such problems. But after a rancorous 14-hour annual general meeting on August 26th, they voted out Stada's chairman, Martin Abend. He went the way of the once-dominant chief executive, Hartmut Retzlaff, who quit in June (owing to an illness). As the board is rejigged, managers have rediscovered some ambition. They have promised to lift revenue to €2.6 billion ($2.9 billion) by 2019, from €2.1 billion last year.

It is a big victory for a young, German-led investment firm, Active Ownership Capital (AOC), which has adopted the sort of aggressive style usually associated with American, British or Nordic funds, such as Cevian Capital of Sweden. AOC, which has a 7% stake in Stada, fought for a year to shake up the board. The scrap broke out into the open in May. "We have seen a type of proxy contest, a big change in composition of a board, that has never happened before," says Alexander Georgieff of Georgieff Capital, a boutique investment bank.

Only 27 German companies were subjected to (public) activist campaigns between 2010 and today, according to Activist Insight, which tracks such activity, compared with 147 in Britain. The number is surely rising. Cevian, especially, has made waves. A 10% stake it bought in Demag Cranes in 2010 roughly doubled in value by the time it helped an American buyer to take over the firm in 2011. It holds 16% of ThyssenKrupp, a huge, ill-run German steel and engineering conglomerate, which it hopes to shake up (and perhaps to break up). Cevian also bought a hefty stake in Bilfinger, a construction firm, though it is finding it hard to inspire an overhaul.

Increased activism comes partly because ownership of German firms has changed. When banks and insurers held most stocks, they tended to leave sleepy boards alone; managers could decide whether or not to seek growth. Now foreign entities, notably pension funds, own over half of the shares in every firm listed on the DAX stockmarket index.

Activism itself is on the rise globally. A report in August by JPMorgan Chase, a bank, counted more activist campaigns everywhere in the year to July, with Europe, which is late to the party, seeing the most dramatic increase. It totted up 99 campaigns by agitators there, up from 61 the year before. Perhaps the best-known foreign activist in Germany is Elliot, an American hedge fund known for buying large minority shares in firms targeted by others for takeover. In 2014 it sold a 25% stake it had built in a Stuttgart-based drugs firm, Celesio, for some $2 billion to an American buyer, McKesson, which distributes drugs. Another fund, Southeastern Asset Management, now has one of the largest shares in Adidas, a sportswear firm, and could do something similar. All these examples, and that of AOC, should encourage other investors—both local and foreign—to treat the "proxy season" of annual general meetings next spring as a chance to make their voices heard. Good news for everyone but the underperformers. ■

Zalando

Fashion forward

BERLIN AND MÖNCHENGLADBACH

One of Europe's most interesting technology companies sells shoes and threads

PAST the rolling hills, grazing ponies and sleepy villages of North Rhine-Westphalia, in west Germany, a convoy of trucks converges on Mönchengladbach. Here a hangar the size of 13 football fields encloses the logistics centre of Zalando, Europe's biggest online vendor of clothing and footwear. Inside, people pack boxes with shoes, jeans and handbags; and thousands of parcels progress at fairground speed up and down a 14km conveyor belt where they are weighed, labelled, scanned and sorted before tumbling down slides into trucks bound for 15 countries. Last year Zalando shipped 55m orders, over 100 per minute, from three such warehouses.

The firm's founders, David Schneider and Robert Gentz, started by selling flip-flops online from their Berlin flat in 2008. They found that Europe's market for shoes and clothing was fragmented, inefficient and offline. Soon, they were backed by Germany's Samwer brothers, whose habit of imitating American online businesses earned them a reputation as the copycat kings of Europe. They noted that whereas Zappos, a firm later bought by Amazon, an American online retailer, was selling shoes online in the United States, nobody was doing so in Europe.

Backed by the Samwers' firm, Rocket Internet, Zalando has grown into a giant. Spending on fashion in bricks-and-mortar outlets is stagnant in Europe, but online sales are increasing by around 15% a year in the countries where Zalando operates. Its sales—of €3 billion ($3.3 billion) in 2015—are rising by around 30% a year (even after taking into account returns of items to the firm). When a series of Dutch shoe stores went bankrupt last year, many pointed to "the Zalando effect", echoing the impact that Amazon has had on bookshops.

Selling fashion in lots of markets is not easy. Half of what Zalando sells (by value) comes back to it in the form of returns, because of problems with fit or style. It tolerates all manner of customer whims. They can order as much as they like and are allowed 100 days to send back items at no cost. In places where people aren't used to buying fashion online, such as Italy and Poland, they can pay the postman in cash. In towns and cities, the company is experimenting with collecting returns directly from customers' homes and offices. All this has yielded 18m shoppers a year (who buy at least one item). Workers may not be as well treated: two years ago conditions for employees in one of its warehouses came in for criticism, as they have at Amazon. Zalando claims to have improved them.

Early on it was difficult to get meetings with fashion brands. Christoph Lange, the company's chief product officer, had to lie and say that Zalando had a physical store just to get in the door. Makers of clothing thought internet selling was evil, he says. Representatives of Topshop, a British mid-market brand, walked out of the two firms' first meeting. Now it gives Zalando exclusive rights to sell its ranges in Europe. Zalando has relationships with 1,500 brands that supply 150,000 articles. It sells mostly well-known labels. Another online fashion retailer, ASOS, sells only 850 brands of clothing and shoes and relies heavily on its own label. A lure for retailers and brands is that Zalando saves them from having to invest in e-commerce themselves.

It also saves them from having to get to grips with an unfamiliar office culture. Zalando has a Silicon Valley-inspired work environment, holding "fuck-up nights" to celebrate failure and "hack weeks" to cook up new ideas. It encourages its employees to abandon hierarchy and structure for what it calls "radical agility". It has a 1,350-strong, and rapidly growing, technology team. Among its other assets are its software, which it built itself, and its user-friendly apps (two-thirds of all traffic goes through mobile phones). Other, older German companies, such as Otto and Lidl, are trying to mimic Zalando's startup feel, notes Thomas Slide of Mintel, a market-research firm.

A platform for all shoes

Big data, in style

Zalando pays close attention to data. It gleans a wealth of numbers from the more-than-5m daily visits to its site, and some brands and retailers of the bricks-and-mortar sort give it access to their stock counts. Both sets of figures help improve the firm's forecasting of fickle fashion trends, its use of targeted ads and the speed of its responses to shifts in weather patterns or fashion tastes. Through data-mining it can spot the trendsetters among its customers and stock up on what they buy. In future it wants to sell its insights to the rest of the industry. "We want to keep tabs on every fashion item in the world," says Rubin Ritter, Zalando's chief financial officer.

Its success has not gone unnoticed, however. Investors in Zalando have done well recently—its shares have risen by 19% over the past three months, compared with 8% for the DAX, Germany's main share index—but the main worry is that Zalando could be overrun by Amazon, which plans to expand in fashion, or by Alibaba, a Chinese e-commerce juggernaut that is expanding in Europe. Mr Ritter's argument that Amazon and Zalando can comfortably co-exist rests chiefly on the fact that Amazon is pursuing the more price-conscious shopper, whereas Zalando is after a higher-value, more brand-conscious segment. The company believes that for such customers, shopping for clothes, shoes and accessories is an emotional activity; shopping on Amazon is just a transaction. "Amazon lists prices, we give advice," sums up Mr Lange.

Not everyone is convinced by that, but many agree that Zalando has a head start. Amazon can copy it, but it would be hard to outperform the German company to the point where people start switching en masse, says Max Erich of ING, a bank. Eventually, though, Amazon will build a strong offering, and consumers will be called upon to decide: do they want a one-stop-shop for everything, from electric toothbrushes to Jimmy Choo shoes? Zalando's hope is that there is still something special about shopping for fashion, even if it's done while waiting for the bus. ■

Schumpeter | Leaving for the city

Lots of prominent American companies are moving downtown

FIFTY years ago American companies started to move their headquarters away from city centres to the suburbs. Some critics blamed the exodus on "white flight", as businesses followed their employees out of increasingly crime-ridden cities. The firms themselves ascribed it to corporate responsibility. They provided offices in safe neighbourhoods and near good schools—one academic, Louise Mozingo, of the University of California, Berkeley, calls it "pastoral capitalism". Whatever the reason, it created a new type of HQ: not an office tower in the pumping heart of a metropolis but a leafy campus in the middle of nowhere.

Now a growing number of companies are moving back again. The most prominent example is General Electric, which abandoned New York City for a 68-acre campus in Fairfield, Connecticut, in 1974, but is now swapping its bucolic site for a collection of warehouses on the Boston waterfront. There are legions more. Chicago's downtown has attracted an impressive collection of HQs, from both the surrounding suburbs and from farther afield, including McDonald's, Kraft Heinz, Motorola Solutions, Boeing, and Archer Daniels Midland, a food-commodities giant. Zappos, an online retailer, has moved from an office park outside Las Vegas into the city's old downtown. Biogen moved from Cambridge, Massachusetts, to the Boston suburbs in 2011 only to return a year later. Many tech companies were born urban and couldn't be any other way. Twitter and Salesforce are in downtown San Francisco, and Jeff Bezos is building a huge campus for Amazon in downtown Seattle.

City boosters are delighted. "This is better than hosting the Olympics," says Shirley Leung, a columnist with the *Boston Globe*, of GE's move. Corporate executives sound like graduate students after their first reading of "The Rise of the Creative Class" by Richard Florida, an urbanophile intellectual. Jeff Immelt, GE's chief executive, says that "we want to be at the centre of an ecosystem that shares our aspiration", and notes that Boston attracts "a diverse, technologically fluent workforce". Ann Klee, who is helping to oversee GE's move to Boston, says that the new headquarters will do without a car park, in order to encourage workers to use public transport. It will dispense with security gates and wants the public to come in. Greg Brown, the CEO of Motorola Solutions, commends downtown Chicago for its "energy, vibrancy and diversity".

Is the new urbanism all it is cracked up to be? It is easy to find counter-trends, given America's size and variety: many CEOs continue to see a future in the suburbs of the sunbelt. ExxonMobil is building a headquarters for 10,000 people in the outskirts of Houston. Toyota is moving its North American headquarters from Torrance, California, to suburban Dallas. There is also tax-and-benefits arbitrage going on: over the past decades, the suburbs have become complacent and downtowns have got hungrier. GE's affection for its old home in Connecticut was no doubt weakened by the state's decision in 2015 to raise business taxes by $750m. Boston provided an estimated $145m in incentives to secure the deal.

Still, something is clearly changing in America's older cities. They are much less crime-ridden than before, thanks to a combination of better policing and demographic change. The homicide rate fell by 16.8% from 2000 to 2010 in big cities. Now these urban centres are magnets for millennials fresh from university and with few responsibilities. Young professionals are reconquering former no-go areas and shifting the problem of urban blight into the suburbs. Hiring such people in Boston, GE reckons, will help it shift its focus from hardware to software and from selling things to offering services over the internet.

Yet the new downtown headquarters are very different from the old ones, and not just because they are open-plan and trendy. They are far smaller. Often, firms are moving their senior managers to the city along with a few hundred digital workers. Moving back to Chicago's centre has usually involved downsizing: Motorola Solutions' HQ shrank from 2,900 to 1,100, and that of Archer Daniels Midland from 4,400 to 70. Many companies are deconstructing their headquarters and scattering different units and functions across the landscape, leaving most middle managers in the old buildings, or else moving them to cheaper places in the southern states. Aaron Renn of the Manhattan Institute, a think-tank, reckons that head offices are splitting into two types: old-fashioned "mass" headquarters in the sunbelt cities, and new-style "executive headquarters" of senior managers and wired workers in elite cities such as San Francisco, Chicago and Boston.

That suggests there will be no return to the broad-based urban prosperity of America's golden age. San Francisco could be the template of the future. Its centre is divided between affluent young people who frequent vegan cafés and homeless people who smoke crack and urinate in the streets. Long-standing San Franciscans resent the way that the urban professionals have driven up property prices. And those young workers may fall out of love with the city centre when they have children and start worrying about the quality of schools and the safety of streets.

To the top of the pyramid

The best book to read if you want to understand corporate America's migration patterns is not Mr Florida's but a more recent study, Bill Bishop's "The Big Sort". It argues that Americans are increasingly clustering in distinct areas on the basis of their jobs and social values. The headquarters revolution is yet another iteration of the sorting process that the book describes, as companies allocate elite jobs to the cities and routine jobs to the provinces. Corporate disaggregation is no doubt a sensible use of resources. But it will also add to the tensions that are tearing America apart as many bosses choose to work in very different worlds from the vast majority of Americans, including their own employees. ■

Also in this section

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China's data

Superstition ain't the way

Why do people still pay rapt attention to China's unsatisfactory growth statistics? Because the alternatives are often worse

CHINA'S official statisticians attract plenty of criticism from baffled outsiders. In recent months, however, they have also endured attacks from party colleagues. On August 26th China's corruption watchdog, the Central Commission for Discipline Inspection, charged Wang Baoan, head of the National Bureau of Statistics (NBS) from April 2015 to January 2016, with a variety of sins, including moral decay and "superstitious activities". Earlier this year, the commission also paid a visit to Liaoning province in China's industrial north-east, where it urged local officials to stamp out widespread data fraud.

These exhortations may be having some effect. The recent collapse in Liaoning's economic indicators (fixed-asset investment fell by 58% in the first half of the year, compared with a year earlier) may partly reflect efforts to wring the "water" out of fraud-soaked figures, according to Liu Liu and Hong Liang of China International Capital Corp, an investment bank.

Many flaws in China's data are well documented. Provincial GDP figures do not add up to the national total. Quarterly and annual growth do not always mesh. Of the three ways to measure GDP (by counting output, expenditure and income), production figures are reported miraculously quickly, even as the counterpart numbers for spending and earnings appear agonisingly slowly.

Recent numbers have raised fresh questions. Fixed-asset investment by private enterprises fell by 1.2% in July, compared with a year earlier. Meanwhile the equivalent figure for state-owned enterprises surged. Services have been strong, even as industry has struggled. Growth has not dipped below 6.7%, even as prices slipped into deflation in late 2015.

These doubts and discrepancies have motivated an understandable search for alternatives. As far back as 2000, scholars turned to indicators like electricity consumption as a statistical refuge from what one called the "wind of falsification and embellishment" rustling the official data. But electricity is a less reliable guide as an economy evolves away from power-hungry industry towards low-wattage services. In a post-industrial economy like America, for example, GDP can grow even as electricity consumption shrinks (as it did in 2015).

Ker-ching moment

Liaoning itself inspired a somewhat broader alternative. When he was the province's party chief, Li Keqiang, now China's premier, said he relied on rail freight, electricity and bank lending to keep track of the local economy, preferring them to the GDP figures, which, he noted, were "man-made". His comments inspired this newspaper in 2010 to combine all three indicators into a simple gauge of the national economy, the "Li Keqiang index".

The most sophisticated version of this index was created in mid-2013 by John Fernald, Israel Malkin and Mark Spiegel of the Federal Reserve Bank of San Francisco. They fitted their version of the index to the official GDP figures from late 2000 to late 2009, then examined whether the fit remained snug in subsequent quarters. Surprisingly, it did. An index born out of frustration with the official numbers seemed to enjoy a stable, consistent relationship with them—up to the end of 2012 at least.

This snug relationship has since broken down, however, according to our update of their work. Whereas the NBS reported growth slowing gradually to 6.7% in recent quarters, the Li Keqiang index shows it dropping below 5% (see chart on next page). This gap may reveal flaws in the official data. But it may equally reflect shortcomings in the index, which would not have picked up the boom in financial services that boosted China's GDP over this period.

In relying on just three alternative indicators, Mr Li was relatively parsimonious. Other critics have been less picky. Some have passed a dragnet through China's databases, which are teeming with raw statistics on the physical output of individual products: tonnes of steel, metres of silk, litres of beer, even kilowatts of solar cells.

In a recent blog post for the *Financial Times*, Chris Balding of Peking University's HSBC Business School in Shenzhen collected data on 69 "major industrial products" listed by Wind, a data provider. A simple average of these products shows industrial growth (year on year) of about 0% in the second quarter, compared with the official figure of about 6%. Goldman Sachs has gone even further, combining 89 products. ▸▸

Their measure shows industrial output actually shrinking in mid-2015, followed by a modest recovery since.

The appeal of these output data is that they are less "man-made" than the headline figures. It is more straightforward to count tonnes of cement, square metres of glass or kilowatt-hours of electricity than it is to calculate the value added by a business. But without some measure of monetary value, it is impossible to know how much weight to give one product compared with another. "Tractors", for example, appear four times in various guises in Wind's data list. That gives them an outsized 5.8% weight in Mr Balding's simple average of 69 products. (Goldman Sachs instead weights its products by revenues.)

Counting tonnage is also, in some ways, a step backwards. China was once obsessed with measuring the sheer quantity of industrial goods, so as to fulfil the requirements of ambitious central plans. Back then, it was foreign critics who pointed out the shortcomings of such measures, which cannot capture quality, variety and efficiency. Growth often stems from reducing inputs or introducing novelty, not expanding volumes. For example, the NBS recently added smartphones, industrial robots and new-energy vehicles to its list of major industrial projects.

Other alternatives to official data are futuristic, rather than anachronistic. Some data-sceptics have turned to space, using satellite images of China's city lights to estimate its GDP. Others, such as the boffins at the Big Data Lab of Baidu, China's biggest online-search company, are relying on smartphones. Through the mobile devices in people's pockets, they can track online searches for—and physical visits to—shops, cinemas, industrial parks and other places of consumption and employment.

They say their work can successfully predict fluctuations in Apple's Greater China revenues and expose possible data fraud. Some cinemas, for example, reported much higher box-office takings than you would expect given the number of people who searched Baidu's maps for the cinemas' location.

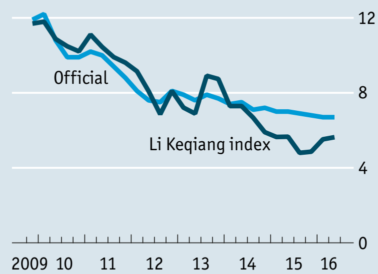
These high-tech alternatives are still in their infancy and may never provide more than a timely cross-check of official statistics. Fortunately, technology can also improve those official numbers. The NBS, for example, now receives direct data reports from almost 1m firms through an online system, initiated about four years ago. It has also expanded its central survey teams, making it less reliant on local help.

As a result of these and other reforms, the official figures may be improving. In a second paper Messrs Fernald and Spiegel, together with Eric Hsu of the University of California, Berkeley, pit GDP against ten of its rivals. They test its ability to explain fluctuations in exports to China, as reported by America, the European Union and Japan, a gauge of China's economic fortunes that neatly sidesteps the country's statistical system. They find that China's GDP does a much better job after 2008 than it did before. Indeed, the official figure tallied better with their trade-based benchmark than any other single indicator, except rail freight. (Some combinations of indicators did, however, outperform GDP, especially a combination of rail, electricity, retail sales and a measure of the availability of raw-material supplies.)

Investors may disdain China's official data but they cannot disregard them. The figures can still move markets, which is why unscrupulous traders sometimes try to get hold of them in advance. Leaks used to be commonplace. But investigations and arrests over the past few years seem to have made the bureau more watertight. Mr Wang may now be in disgrace. But his alleged superstitions probably date back to his long career at the finance ministry, rather than his short stint at the statistics bureau. Beijing presumably thinks the bureau's reputation can withstand the bad publicity, or it would not have charged him so publicly. The accusations may be a paradoxical sign of confidence in the NBS. Some indicators move contrarily. ■

Premier economy

China, GDP, % increase on a year earlier



Sources: Haver Analytics; Fernald, Malkin, Spiegel (2013); *The Economist*

Politics and statistics

Called to account

The disturbing prosecution of Greece's chief statistician

"FACTS are stubborn," wrote Mark Twain, "but statistics are more pliable." Because made-up GDP and borrowing figures can trick creditors into lending more cheaply, and fiddled inflation numbers can cover up economic woes, politicians are sometimes tempted to tweak data. It is the job of statisticians to keep numbers honest.

Occasionally, at a high price. In 1937 Olimpiy Kvitkin, a Russian statistician in charge of a census of the Soviet Union, was arrested and shot. His error was to find that the country contained fewer people than Joseph Stalin had announced (the dictator's brutal policies may have explained the shortfall).

Less extreme, but nonetheless shocking, is the case of Andreas Georgiou, who has gone from Greece's chief statistician to its chief scapegoat. Mr Georgiou's crime? Estimating that the government's budget deficit in 2009 was 15.4% of GDP.

Never mind that the first estimate of this figure had been only a little lower, at 13.6% of GDP. Never mind repeated confirmation from the European Commission that Mr Georgiou's numbers were accurate. Never mind, too, his 21 years of experience at the IMF. Detractors across the political spectrum accused him of inflating the figures. They then took him to court.

At first they claimed that the alleged falsification led to the panic that ended in Greece's bail-out in 2010. Awkwardly, Mr Georgiou started at ELSTAT, the Greek statistical agency, after the bail-out. So the accusation changed. Now he is said to have caused Greece €171 billion-worth ($190 billion) of damage. His supposedly false numbers justified the harsh conditions imposed by Greece's creditors.

Courts have rejected these charges three times. But on August 1st the Greek supreme court reopened the case. And in December Mr Georgiou faces a separate trial, in which he is accused of refusing to allow ELSTAT's board to use a vote to decide on the level of the deficit. Statistics are not supposed to work by ballot.

When it is politically difficult to stand up for harsh truths, external agencies can be statisticians' only fallback. So far it has fallen to the commission, rather than the Greek government, to speak up for Mr Georgiou. In a similar episode in 2013 in Argentina, where the then-president, Cristina Fernández de Kirchner, had a penchant for prosecuting number-crunchers keen to report accurate inflation figures, the IMF threatened expulsion if statistics did not improve.

Statisticians know better than anyone that fiddling figures is hard. When Jean-Bédel Bokassa, dictator of the Central African Republic in the 1970s, ordered a boost to population figures, the total duly went up—but the separate tallies for men and women did not. Lies, damned lies and statistics? There's a difference, all right. Ask a statistician.

Stockmarket returns in America

The long arm of the Fed

BERKELEY

The central bank may exert a strange sway over stockmarket returns

SPECULATORS have always sought ways to anticipate shifts in share prices. Once they scrutinised rail-carriage movements to get a jump on business trends. A recent paper* concludes that since 1994, a shrewd approach would have been to focus on the Federal Reserve.

It is no surprise that meetings of the Federal Open Market Committee (FOMC), in which Fed governors and regional Fed presidents set interest-rate policy, can trigger rises and falls in the stockmarket. But the study analyses a remarkable correlation. Usually every fortnight between FOMC meetings, fresh information is discussed in a gathering of Fed governors. It finds that all the gains in the stockmarket have occurred, on average, in the weeks of the FOMC meetings and the ones that involve the governors alone. A dollar invested only during those weeks would have grown more than 12-fold over the period. A dollar invested during other weeks would have lost half its value (see chart).

To check their results, the authors explored potential correlations such as company earnings and economic data. They found none that were as statistically significant. They speculate that there is a causal connection, selective disclosure, which they say is unfair. Those who attend the meetings have informal contact with the media, consultancies and financial firms, and eventually the content of those meetings makes its way to the stockmarket. Some of that is potentially valuable. The governors receive reports on the economy, banks and the financial markets, and often begin formulating what may be announced by the FOMC.

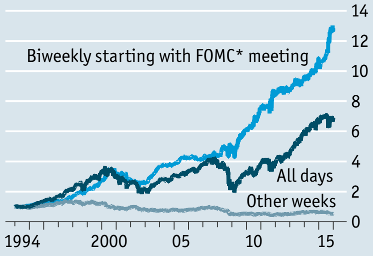
In 2012 an alleged leak from within the Fed to a publication, Medley Global Advisors, prompted an investigation by the Justice Department and Congress, which has yet to be concluded. The paper cites several non-nefarious reasons for those informal contacts: to extract information from market participants; to explain the Fed's decision-making process; and to air competing views within the central bank. (Often board members also make their views known through speeches and interviews.)

There are questions about the significance of the correlation. Why did it not start before 1994? Why does it not also apply to the bond market, which should be at least as sensitive to Fed policy? Why does the stockmarket always rise during the weeks in question, when Fed deliberations may cause a stockmarket sell-off? Whatever the answers, it shows what intriguing patterns data-crunching reveals. It will also add to calls for more scrutiny of the Fed. ■

* "Stock Returns over the FOMC Cycle", by Anna Cieslak, Duke University; Adair Morse, University of California, Berkeley, and National Bureau of Economic Research (NBER); and Anette Vissing-Jorgensen, University of California, Berkeley, NBER and the Centre for Economic and Policy Research

Market timing

US stock-market returns, value of $1 invested at start of 1994



Source: "Stock Returns over the FOMC Cycle", Cieslak, Morse and Vissing-Jorgensen, 2016

*Federal Open Market Committee

Indian capital markets

Bank vigilantes

MUMBAI

Companies in India are being shunted away from banks and towards bonds

AFTER years of frustrated attempts to bolster India's corporate-bond markets, Indian policymakers are supplementing their efforts with a dose of bank-bashing to improve their chances of success. The plans will make life pleasingly hard for crony capitalists. But they could leave some Indian companies struggling for capital if implementation fails to go to plan.

Big companies across the world typically mix borrowing money from banks (which are flexible and can disburse loans quickly) with that raised from investors through bond markets (which offer lower interest rates). In India the balance has been skewed towards banks. This is, in part, because 70% of the banking sector is state-owned; at times, it has seen financing of even dubious projects as a calling rather than a way to make money. Issuing bonds has in any case been a fiddly business.

That system used to work, but a good chunk of the money loaned by banks in a mini-credit boom that started around 2011 now appears not to be coming back. Around 16% of total loans have been restructured or are distressed in some way, and some banks have been bailed out by the government. One cause of the bad lending is that ministers have forced bureaucrat-bankers to extend credits to their favoured industrialists, many of whom were heavily indebted to begin with. Astute businessmen knew how to borrow from one bank to repay a loan from another, sometimes several times over.

All that misdirected lending would have been less likely if companies had bonds outstanding: even the laziest banker will hesitate to lend to a company if its bonds are trading at 60 cents on the dollar. Such price-signalling requires an active secondary market, which in India is hampered by cumbersome regulations. One measure to remedy that, announced on August 25th, is to allow banks to use top-rated corporate bonds as collateral when funding themselves via the central bank's "repo" facility (right now, only government bonds will do). The ability of banks to use their holdings of corporate bonds in this way will make them far keener to purchase them, either as creditors or in their investment-banking roles as marketmakers, facilitating the buying and selling of bonds by institutional clients.

Other, bank-bashing measures are likely to have even more bite. In effect, companies with more than a fixed amount of debt will have no choice but to tap bond markets for at least half their new borrowings. The total maximum debt ceiling will be low: just 100 billion rupees ($1.5 billion) by 2019. So cronies whose main skill was charming bankers over long lunches will have to face the cold scrutiny of markets instead. Rashesh Shah, boss of Edelweiss, a finance firm, says the "relationship-based" pricing of loans in recent years will be replaced by the market-based sort instead.

This is a kick in the teeth for the old-style borrowers and, in the short run, for the bankers who backed them blindly. Investment banks that help companies issue bonds should prosper—provided buyers for bonds can be found. Some managers of institutional money are sceptical. "There are a million reasons why the bond market hasn't thrived in India," says one. "Removing one barrier is often just a way of uncovering another one you hadn't even thought of." Overcoming those unknown hurdles could be hard, particularly for companies with anything less than a high, double-A rating which currently find it virtually impossible to issue bonds.

Throttling banks so they don't binge and bust again is a laudable, if heavy-handed, response to the recent mess. But the curtailing of bank lending presupposes that a thriving bond market will emerge, even though efforts spanning a decade have yielded little. If banks cannot lend and institutional investors prove unwilling to fund a corporate-bond market, those companies will have nowhere else to go—in effect, capping the size of companies whose capital structure the authorities disapprove of. ■

Private-equity search funds

Seek and we shall fund

NEW YORK

Private equity for absolute beginners

IN 2007 Lucas Braun and Ryan Robinson emerged from the Stanford Graduate School of Business with such a sense of "professional invincibility" that they decided not to return to their old jobs in a consultancy and a hedge fund, respectively. Instead the two Americans took a leap of faith—in themselves.

They were 32 and had no experience of running businesses, but they persuaded a group of investors to finance them for 21 months as they searched for a business to acquire. They discovered OnRamp, a Texas-based private company, and assumed the roles of chief executive and chairman. Following spin-offs and acquisitions, the company now provides cloud computing for industries with sensitive data. Over the past seven years, they say, revenues have grown by 30-35% a year.

The two executives are products of a niche of the private-equity industry known as search funds—such a small niche, in fact, that few in the business have heard of it. But Stanford, which helped pioneer the industry in the 1980s, tracks it, and says that it has grown sharply in the past two years. In 2015 more than 40 new funds were established, twice as many as in 2009. Over the same period the number of acquisitions made by these funds tripled, to more than 15 a year.

The typical search-fund principals are MBA graduates from an elite American university, who raise $400,000 or so of "walking around money" from investors, who purchase a stake in the fund for about $40,000 a share. The fund searches for a high-growth, high-margin target, valued at $5m-20m. The fledgling businessmen then hold a second round of acquisition financing, as well as raising debt. Their tenure as bosses lasts until they sell out.

Returns are surprisingly good. The average is 8.4 times the money invested and an internal rate of about 37%. They do much better than the average of the rest of the private-equity industry, analysts say. By the time of the exit the principals can hold a 30% equity stake, provided they have met their targets. That is not a bad deal for a no-money-down entrepreneur.

Some firms are injecting scale into the business. Boston-based Pacific Lake Partners, for instance, is dedicated to investing in search funds, and gives firm guidance regarding the industries and regions it prefers. Timothy Bovard, an industry expert, founded an incubator called Search Fund Accelerator in 2015 that provides capital and mentoring to aspiring search-fund entrepreneurs, in exchange for equity. Increasingly, the business is cherry-picking best practices from other bits of private equity. But the funds never invest in a portfolio of firms. Instead, the years knocking on doors can lead to a visceral sense of commitment to the targeted business.

For several decades, America and Canada were the sole home of search funds. But lately European MBA courses have included search-fund case studies that have whetted the appetite of some intrepid would-be entrepreneurs. There are plenty of reasons for caution, though. About a quarter of searches come to nothing, and about a third of the acquisitions end in failure. But that is still better odds than starting a business from scratch. ■

Bad loans to shipping

That sinking feeling

Banks continue to count the cost of shipping's troubles

TOO many ships, too little trade. On August 31st Hanjin Shipping, South Korea's biggest container carrier and the seventh-largest in the world, filed for receivership, after five years of losses and another deficit in the first half of 2016. Hanjin was holed by shipping's prolonged global slump, the product of vast overcapacity and slow trade growth. Its creditors, led by state-owned Korea Development Bank (KDB), have had enough.

Shipping's malaise is both broad and deep. An earnings index compiled by Clarksons, a research firm, covering the main types of vessel—bulk carriers, container ships, tankers and gas transporters—reached a 25-year low in mid-August. The average for the first half of 2016 was 30% down, year on year, and 80% below the peak of December 2007. Stephen Gordon of Clarksons adds that new orders at shipyards are the lowest in 30 years.

As KDB's loss of patience shows, the industry's troubles hurt lenders as well as shippers. According to Petrofin, another research group, Asian banks have expanded their shipping loans in recent years. With China's economy slowing and world trade in the doldrums, they may soon regret that. For their part, European banks have already been tossed this way and that since the financial crisis of 2007-08. Some, notably *Landesbanken*—public-sector, regional wholesale banks—in northern Germany, are still counting the cost.

German banks, traditionally strong in shipping, were eager lenders before the crisis, happily putting up 70% of a vessel's cost—and even the rest, before borrowers raised the equity. Then the storm broke: Petrofin calculates that between 2010 and 2015 leading German lenders slashed their shipping books from $154 billion to $91 billion. In 2012 Commerzbank, the country's second-largest lender, decided to quit altogether. Its portfolio has since dwindled from €19 billion ($24 billion) to €8 billion.

On August 31st Bremer Landesbank, from the city-state of Bremen, announced loan-loss provisions, mainly for shipping, of €449m—over one-fifth of its equity at the end of 2015—and reported a first-half loss of €384m. At €6.5 billion, its shipping portfolio is around 30% of its loan book. Bremer LB will not be allowed to sink. NORD/LB, its neighbour, which already owns 54.8%, is taking it over fully. The deal values the state government's 41.2% stake at €262m—far below its worth when Bremen boosted its holding in 2012.

NORD/LB itself is far from shipshape. It recently reported a first-half loss of €406m, thanks to further loss provisions on marine loans. It plans to cut its shipping book, €19 billion at the end of 2015, to €12 billion-14 billion. Last month it agreed to sell $1.5 billion of loans to KKR, a private-equity firm, and an unnamed sovereign-wealth fund. A third lender, HSH Nordbank, is seaworthy largely thanks to guarantees, covering €10 billion of loans, from the states of Hamburg and Schleswig-Holstein. The guarantees were cut to €7 billion in 2011, but increased in 2013 when that proved premature. In May the European Commission approved the reinstated aid, provided that the bank's core operations were sold. This is due by 2018.

Some are confident of steering through choppy waters. Besides KKR, Berenberg, a Hamburg bank, is talking to institutional investors about buying (well-performing) loans. Not everyone is seasick. ■

Australia's economy

Good on you

SYDNEY

Australia has weathered the China slowdown and commodities slump well. What has it done right?

THE last time Australia was in recession, Mikhail Gorbachev led the Soviet Union and Donald Trump had filed for Chapter 11 only once. Barring unforeseen catastrophe, late next year Australia will pass the Netherlands' modern record of 26 years of consecutive growth—despite the slowdown of its biggest trading partner, China. Unlike most of the rich world, it sailed through the global financial crisis, and unlike most commodity exporters, it has weathered the raw-materials price slump. Its GDP growth rate of 3.1% dwarfs that of America and the euro zone.

Australia is often called "the lucky country", and luck, particularly in geology and geography, has played a part in its success. But it has deftly played both sides of the China boom: the surging demand for raw-material imports while that lasted; more recently, the desire of the Chinese middle-class to eat well, travel and educate their children in English. Yet every silver lining has a cloud. Not only does Australia have one of the most expensive housing markets in the world, it remains overexposed to the fortunes of China.

The story of Australia's success starts with what its government did not do: spend beyond its means. Tight budgets in the late 1990s and early 2000s, combined with improving terms of trade, meant that when the financial crisis hit, the government was running budget surpluses (though the country as a whole has a long-running current-account deficit). It could thus afford stimulus packages in late 2008 and early 2009 worth more than A$56.6 billion ($42.8 billion). Only China provided greater stimulus as a share of GDP.

Australia was then in the middle of the biggest mining boom in its history, stemming from increased demand in China. In the decade to 2012, the value of its mined exports tripled; mining investment rose from 2% of GDP to 8%. From January 2003 to February 2011 the price of iron ore, which these days comprises 17% of Australia's exports by value, rose from $13.8 to $187.2 a tonne. Australian thermal coal, which accounts for 12% of its exports, rose from $26.7 to $141.9 (down from a peak in 2008 of $192.9).

The Reserve Bank of Australia (RBA) estimates that, during that period, mining raised real disposable household income by 13% and wages by 6%, boosting domestic purchasing power. Saul Eslake, an independent economist, argues that "except for the Chinese people, no country derived more benefit from the growth and industrialisation of China" than Australia. The value of the Australian dollar also rose, which dented non-mining exports. But since demand from Asia kept prices high for Australia's agricultural commodities (such as beef and wheat), and because it exports relatively few manufactured goods, the damage was contained.

As China rebalanced and commodity prices tumbled, other exporters such as Russia, South Africa and Brazil fell into recession. In Australia, although business investment has fallen sharply, GDP growth remains near its 25-year average of 3% (and as a side benefit, the commodity-price fall quelled rising inflation).

For that, thank two factors. First, the rise in mining investment during the fat years led to increased production. Commodity exports have continued to grow (albeit modestly and less profitably). Though prices of iron ore and coal are well below the past decade's peaks, they remain above pre-boom levels.

More important, Australia let the dollar depreciate, which made its exports more appealing. Today Australia benefits from a growing number of Chinese consumers, who buy Australian food products that are widely seen as safer than their home-grown equivalents.

Middle-class Asian students have been flocking for English-language education to Australian universities, which are closer and cheaper than their American and British counterparts. Between June 2015 and June 2016 the number of international students enrolled in Australian colleges and universities rose by 11%, and the number of international visitors rose by 13.7%. Today education and tourism together account for 14% of Australia's export value. Graduates are eligible to work for up to four years, and some stay longer, giving Australia a relatively young, well-educated, multicultural workforce.

Those workers will need places to live, which has helped increase house construction. According to Paul Bloxham, the chief Australia and New Zealand economist at HSBC, Australian builders completed almost 200,000 new dwellings last year, and will probably do the same this year and next. Construction has absorbed some of the employment losses as mining investment has waned (building a mine requires more people than running one).

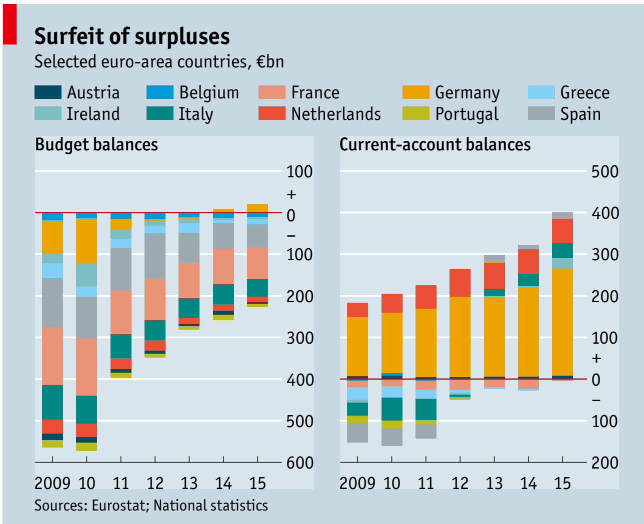
Yet that has failed to stop an alarming rise in house prices, particularly on Australia's east coast. In 2015 the median house price in Sydney was 12.2 times the median income, up from 9.8 in 2014. Melbourne's multiple rose from 8.7 to 9.7 in that period. Some argue that house prices have peaked, and that as residential construction continues prices will moderate (except perhaps in central Sydney). But if prices collapse, that could not just harm Australia's otherwise healthy banks, but also dampen domestic consumption for years.

Some argue that government debt, which has hit a record 36.8% of GDP, up from a low of 9.7% in 2007, is another worry, because it provides less policy room to deal with the next crisis. It remains lower than in most developed countries. But given the risks of a housing bust or deeper slowdown in China, such worries reflect a healthy lack of complacency. After all, one day the luck will run out. ■

Girder on you, too

Free exchange | More spend, less thrift

German budget surpluses are bad for the global economy



Surfeit of surpluses

Selected euro-area countries, €bn

Sources: Eurostat; National statistics

ON AUGUST 24th Germans received news to warm any Teutonic heart. Figures revealed a larger-than-expected budget surplus in the first half of 2016, and put Germany on track for its third year in a row in the black. To many such excess seems harmless enough—admirable even. Were Greece half as fiscally responsible as Germany, it might not be facing its eighth year of economic contraction in a decade. Yet German saving and Greek suffering are two sides of the same coin. Seemingly prudent budgeting in economies like Germany's produce dangerous strains globally. The pressure may yet be the undoing of the euro area.

German frugality and economic woes elsewhere are linked through global trade and capital flows. In recent years, as Germany's budget balance flipped from red to black, its current-account surplus—which reflects net cross-border flows of goods, services and investment—has soared, to nearly 9% of German GDP this year.

The connection between budgets and current accounts might not be immediately obvious. But in a series of papers published in 2011 IMF economists found evidence that cutting budget deficits is associated with reduced investment, greater saving and a shift in the current account from deficit toward surplus. Two IMF economists, John Bluedorn and Daniel Leigh, reckoned that a fiscal consolidation of one percentage point of GDP led to an improvement in the ratio of the current-account balance to GDP of 0.6 percentage points. On that reckoning, the German government's thriftiness accounts for a small but meaningful share of its growing current-account surplus; perhaps as much as three percentage points of GDP over the past five years.

That has helped to resurrect an old problem. Global imbalances were a scourge of the world economy before the financial crisis of 2007-08. Back then, China and oil-exporting economies accounted for the surplus side of the world's trade ledger, which reached nearly 3% of the world's GDP on the eve of the crisis. Other countries, notably America, ran correspondingly large current-account deficits, financed in part by flows of investment from surplus countries that flooded into the country's overheating housing market. A similar dynamic played out in miniature within the euro area, as core economies like Germany ran current-account surpluses and peripheral countries like Spain ran deficits.

The recession that followed the crisis temporarily reduced these imbalances. Spendthrift consumers in deficit countries suddenly found themselves squeezed by joblessness and the evaporation of easy credit: that led to a collapse in imports. But a sustained era of balanced growth failed to emerge. Instead, surpluses in China and Japan rebounded. In recent years Europe has followed, thanks to a big switch from borrowing to saving (see chart). The countries on the periphery donned their sackcloth out of necessity, tightening belts and buying less from abroad than they produced at home. Ageing Europeans in core economies, like Germany and the Netherlands, saved for different reasons, such as preparing for retirement. German government-budget surpluses have piled on top of this glut.

That adds up to a big problem, given the state of the world. Within the euro area, the struggling Mediterranean economies need faster rates of GDP growth to bring down unemployment and stabilise government debt. Germany's enormous surpluses mean that its households are buying less from other countries than they ought to. That hurts the growth prospects of the periphery, and raises the risk of a politically induced break-up.

The global picture is just as worrying. Interest rates have plunged since the financial crisis, indicating that the world's savings are chasing too few investment opportunities. In normal times, this would be manageable. Central banks could cut their policy rates, reducing borrowing costs for firms and households and encouraging them to tap the reservoir of savings. Yet many central banks have cut rates to near zero, only to find people are still borrowing too little. As cash pours into safe assets like government bonds, demand slackens and economies stagnate.

In-the-black hole

This malaise appears to be contagious. In weak economies, battered consumers buy fewer imports and unemployment depresses wages, which can help boost exports. That provides a cushion for the suffering economy, producing a current-account surplus that siphons off spending from healthier countries. But this in turn weakens those economies, adding pressure on their central banks to cut rates. In a paper published this year Ricardo Caballero of the Massachusetts Institute of Technology, Emmanuel Farhi of Harvard University and Pierre-Olivier Gourinchas of the University of California, Berkeley, found that in a world of integrated financial markets, a slump in some economies can eventually engulf all of them. Once a few economies become stuck in the zero-rate trap, their current-account surpluses exert a pull which threatens to drag in everyone else. America, the world's importer of last resort, remains pinned to near-zero rates, and economically vulnerable, thanks to this dynamic.

Theoretically, this black hole can be dodged. Surplus economies like Germany just need to borrow more. Bigger budget deficits would boost global demand and reduce current-account imbalances. But Germans favour frugal budgeting. Just as important, Germany's government, which is seen as an unforgiving taskmaster across the euro-area periphery, would prefer not to be accused of practising something different from what it preaches. And even a change of heart in Germany, helpful though that would be to the euro-area economy, would not solve everything. Imbalances are a global problem which cannot be fixed by any one country. ■

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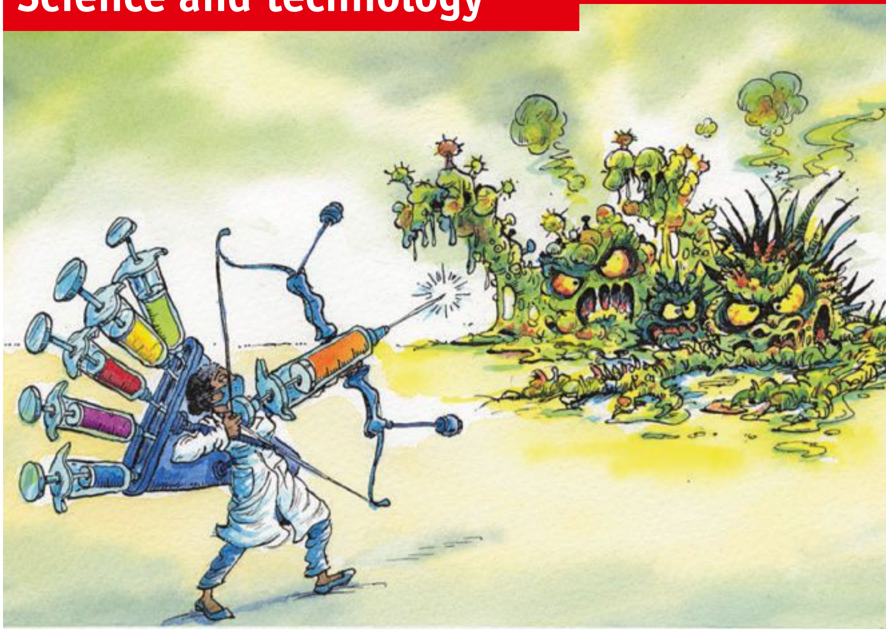

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Vaccines

Putting shots in the locker

How to anticipate epidemics

FOREWARNED, the proverb has it, is forearmed. But what happens when there is no warning? That was the case in December 2013, when an outbreak of Ebola haemorrhagic fever began in Guinea. It spread rapidly to Liberia and Sierra Leone and raged on for over a year. Around 29,000 people were infected. More than 11,000 of them died.

The world responded to this crisis, shipping in doctors, nurses and medical equipment. But what it could not ship in, for none existed, was the thing that would most quickly have stopped the epidemic: a vaccine. Such a vaccine was created eventually, but by the time it was ready, the outbreak was all but over. Had it been available from the beginning, things could have been different.

Next time, though, they might be, for on August 31st a new organisation came into being. CEPI, the Coalition for Epidemic Preparedness Innovations, was founded this week in London, at the headquarters of the Wellcome Trust, a medical charity. It is the joint brainchild of the Wellcome, the Bill and Melinda Gates Foundation, the World Economic Forum and the government of Norway, and its purpose is precisely to forearm the world against future outbreaks of disease, without foreknowledge of what those outbreaks will be.

Paradoxically, part of the inspiration for CEPI's creation was not the failure to deliver an Ebola vaccine in time for it to be useful, but how close that project came to success. Creating a new vaccine from scratch is a long-winded undertaking, but in the case of Ebola several candidate vaccines were already on the shelf thanks to earlier, but stalled, work by America's army and that country's National Institutes of Health. There were also three pharma companies, GlaxoSmithKline, Johnson & Johnson and Merck, willing, *pro bono publico*, to take these candidates and try to turn them into the real thing as quickly as possible. That they succeeded in doing so by the summer of 2015 was, by most standards, extraordinary—and means vaccines are available the next time Ebola rears its ugly head. If a spontaneous lash-up could achieve such an outcome, the thinking went, an organised approach should do even better.

You can bank on it

CEPI's plan is to build up a bank of candidate vaccines for as many as possible of the viral diseases that lurk menacingly on the edges of human society, but in which there is insufficient commercial interest for pharmaceutical firms to do the development work. These include Lassa fever, Marburg fever, MERS, SARS, Nipah and Rift Valley fever, but not dengue or influenza. Those two are already well served by drug-company researchers—as is Zika virus, for which a vaccine may be ready for testing in the field next year.

The aim, says Jeremy Farrar, the Wellcome Trust's director, is not to guess exactly which illness will become epidemic next, as this is a difficult thing to do. Instead CEPI will work through the list in a systematic way. To start with, it will pay for work on up to three viruses.

Scientifically, this means identifying several possible vaccines for each disease, putting these through animal trials, and then carrying out small safety trials on human beings. Those candidates deemed safe will be stored for a future outbreak. This approach maximises the saving of time while minimising cost. If a disease for which there are candidate vaccines does become threatening, larger and more expensive human-efficacy trials can be organised quickly in response. If not, no money is wasted doing so.

Organising efficacy trials quickly, though, illuminates CEPI's other job. This is to have the bureaucracy for such trials (planning how they might be carried out, and arranging ethical approval) sorted out in advance, along with the means to scale up the production of successful candidates. Indeed, CEPI may even invest in its own surge capacity for the manufacturing of vaccines, rather than forcing drug companies to divert resources from existing vaccine production (with potential consequences for public health).

There are thorny issues here, not least the question of legal risks. Even with the preliminary research already done, speed will be of the essence when the world is faced with an epidemic. Human trials will have to be conducted more hastily than drug companies are used to doing. That might lead to mistakes and thus to law suits. Who should bear the brunt of consequent liabilities needs to be sorted out in advance. This might involve governments offering some sort of reinsurance cover or waiver from such liability.

John-Arne Rottingen, CEPI's interim boss, argues that paying to prepare for future epidemics is like buying a form of global health insurance. But, unlike other forms of health insurance, the premium need not be paid for ever. No doubt the list of targets will grow as time goes by. But it is not infinite. Should the world wish to address the top 20 threats over the course of the next decade Dr Farrar estimates the total cost would be $1 billion-2 billion.

The next stage is to start raising that money. The organisation hopes to tap governments and charities, including those which helped found it. It will also involve, and thus pick the brains of, drug companies and the World Health Organisation. If things go well, CEPI will be up and running next year. Once that has happened, the threat from epidemic viruses will diminish year by year thereafter. ■

Chronic-fatigue syndrome

Blood simple?

A new test may diagnose a mysterious illness, and also help to explain it

CHRONIC-FATIGUE SYNDROME, or CFS, which afflicts over 1m people in America and 250,000 in Britain, is certainly chronic and surely fatiguing. But is it truly a syndrome, a set of symptoms reliably associated together and thought to have a single underlying cause—in other words, a definable disease?

CFS's symptoms—debilitating exhaustion often accompanied by pain, muscle weakness, sleep problems, "brain fog" and depression—overlap with those of other conditions. These include fibromyalgia (itself the subject of existential doubt), clinical depression, insomnia and other sleep disorders, anaemia and diabetes. These overlaps lead some to be sceptical about CFS's syndromic nature. They also mean many people with CFS spend years on an expensive "diagnostic odyssey" to try to find out what is going on.

Scepticism about CFS's true nature is reinforced by the number of causes proposed for it. Viruses, bacteria, fungi and other types of parasite have all had the finger pointed at them. So have various chemicals and physical trauma. Evidence that CFS truly does deserve all three elements of its name has accumulated over the years but a definitive diagnostic test has remained elusive. Until, perhaps, now. For in this week's *Proceedings of the National Academy of Sciences* Robert Naviaux of the University of California, San Diego, and his colleagues published evidence that the metabolisms of those diagnosed with CFS are all changing in the same way. Their data suggest it is this cellular response to CFS-triggering traumas, and not the way the response is set in motion, which should define the illness. They also show that this response produces a chemical signal that might be used for diagnosis.

Dr Naviaux and his team collected and analysed blood samples from 45 people who had been diagnosed with CFS, and also from 39 controls who were free of any CFS-related symptom. They then trawled through those samples looking at the levels of 612 specific chemicals, known as metabolites, which are produced during the day-to-day operations of living cells.

These metabolite profiles, they found, differed clearly and systematically between the patients and the controls. Some 20 metabolic pathways were affected, with most patients having about 40 specific abnormalities. The biggest differences were in levels of sphingolipids, which are involved in intercellular communication, though other molecules played a role as well. These differences should give clues as to what is happening at a cellular level during CFS. More immediately, a handful of the abnormalities—eight in men and 13 in women—were enough, collectively, to diagnose with greater than 90% accuracy who had the disease.

That is a good start. If this discovery is to lead to a reliable test for CFS, though, Dr Naviaux's experiment will have to be repeated to compare those diagnosed as having CFS with those who are not so diagnosed yet display some of its symptoms. The answer should soon become apparent, for he is already applying his method to people who have depression, autism, traumatic brain injury and post-traumatic-stress disorder.

One crucial question that needs an answer if CFS is to be understood better is: what cellular changes are these metabolic abnormalities bringing about? Here, Dr Naviaux has already made an intriguing and slightly disturbing discovery. Similar metabolite profiles to those seen in CFS are characteristic of a state known as "dauer" that occurs in one of biology's most-studied animals, a soil-dwelling threadworm called *C. elegans* (pictured). In dauer, which is reminiscent of hibernation in larger creatures, the worm puts its development on hold and enters a state of suspended animation in response to threats such as reduced food, water or oxygen levels. It can survive this way for months, though the lifespan of an active worm is mere weeks.


The answer lies in the soil

It may be a coincidence, but six of the diagnostic metabolites whose levels are low in CFS are also low in dauer. If it is not a coincidence, though, that suggests a biochemical overlap between the two conditions. If this were true, it could be of great value both in understanding CFS's underlying biology and (because *C. elegans* is so well examined and easy to study) in experimenting with potential treatments. ■

Textiles and thermoregulation

A cool shirt

Fabrics that pass heat but not light may keep people comfortable in summer

IF A room is cold, you have a choice. Pull on a jumper or a jacket, or turn up the heating. If it is hot, the obverse choice is not so easy to make. There is a limit to how much disrobing is permissible, and even the wearing of light garments such as T-shirts, in order to stay cool, is frowned on in some business circles. The default is therefore to switch on the air conditioning.

That may change if a discovery published this week in *Science* comes to commercial fruition. Yi Cui and his colleagues at Stanford University have discovered a fabric that keeps skin 2°C cooler than a cotton T-shirt. In terms of comfort, this is a significant drop—and one which would be good not only for the wearer but also for energy bills. If widely adopted it would mean buildings could be kept warmer than at present, saving huge amounts of electricity in the summer months.

Dr Cui's goal was to cool the wearers of clothing by tinkering with the way heat radiates from their bodies. More than half of body heat is in the infrared (IR) part of the spectrum. This means its wavelength is longer than that of visible light. Materials like polyethylene are transparent to both, making them useless for weaving into clothing for anyone other than exhibition- ▶▶

ists—though such clothes would dissipate IR effectively. Conversely, wool, cotton, silk and so on are transparent to neither part of the spectrum, so retain IR even as they preserve the wearer's modesty. In what seems to have been a classic "Eureka!" moment, however, Dr Cui realised the answer was staring him in the face.

His day job is as a battery researcher. One material commonly used in modern batteries is called nanoPE. It is a species of polyethylene sheet perforated by pores 50-1,000 nanometres (billionths of a metre) across. These pores are there to regulate the passage of ions within a battery, but they are also of exactly the right dimensions to make nanoPE opaque to visible light. They do not, however, affect the infrared part of the spectrum, meaning nanoPE blocks less than 10% of IR incident upon it. Cotton, by contrast, blocks more than 95% of IR.

Straight out of the factory, nanoPE resembles a plastic sheet and is, unsurprisingly, not that comfortable to wear. To overcome this, the team made three improvements. First, they punctured it at regular intervals using a tiny needle, to let air move in and out. Second, they added a substance called polydopamine, which made the plastic more hydrophilic. This meant that instead of repelling sweat and causing it to accumulate on the skin, the modified nanoPE absorbed perspiration and wicked it to the fabric's outer surface, whence it evaporated. Third, to improve the material's mechanical properties, the final product consisted of two nanoPE sheets sandwiched above and below a widely spaced cotton mesh.

The team then tested how the added bells and whistles affected nanoPE's performance. In a room kept at 23.5°C they found that the temperature of bare skin was 33.5°C. Skin covered by cotton warmed to 37°C, while skin covered with nanoPE alone clocked in at 34.3°C. The variant with perforations, mesh and doping did not do quite as well as this, but it still reduced skin temperature by 2°C compared with cotton, to 35°C.

Fashionistas are not, it is true, likely to be rushing out to buy garments made of battery membrane, however cleverly it has been treated. But what Dr Cui's work does do is create a new way of thinking about cooling the body. Manipulating its emission spectrum is a clever idea. It clearly works. So the search should be on for materials that do it better and more comfortably than nanoPE can manage.

Not that such considerations will apply to all customers. Besides being worn indoors, cool fabric of the sort Dr Cui has made will have many outdoor applications. There is, after all, no air-conditioning in the desert. And those who must work there—soldiers, for example—are less likely than the office-bound to worry about sartorial niceties. ■

The Anthropocene

Dawn of a new epoch?

People may have propelled Earth into a novel episode of geological time

ONE way to think of science is as a series of painful demotions. In the 1500s Nicolaus Copernicus kicked Earth from its perch at the centre of the universe. Later, Charles Darwin showed that humans are just another species of animal. In the 20th century geologists found that all human history amounts to less than an eye-blink in the span of a planet that they discovered is 4.6 billion years old.

Now, though, those geologists' spiritual descendants may give humans an unexpected promotion—to the status of geological movers and shakers. On August 29th Colin Waters, the secretary of the Anthropocene Working Group (AWG), an ad hoc collection of geologists, addressed the International Geological Congress in Cape Town. He told his colleagues that there was a good case for ringing down the curtain on the Holocene—the present geological epoch, which has lasted for 12,000 years—and recognising that Earth has entered a new one, the Anthropocene.

As its name suggests, the point of this new epoch would be to acknowledge that humans, far from being mere passengers on the planet's surface, now fundamentally affect the way it works. That sounds hubristic. But it is not a new idea. It was first promulgated in 2000 by Eugene Stoermer, now deceased, and Paul Crutzen.

Dr Crutzen is an atmospheric chemist, and the growth of carbon-dioxide concentrations in the atmosphere is perhaps the most familiar symptom of the Anthropocene. For instance, acidity in oceans caused by extra CO_2 affects the make-up of creatures whose shells will form Earth's future limestones. Nitrogen, too, is affected. The process by which this vital element cycles through the air, the soil and living organisms has been turbocharged by human use of artificial fertilisers. One consequence is the expansion of food production. In 1750 about 5% of the Earth's surface was farmed. That figure is now around 50%, and the transformation from wilderness to agricultural land leaves lasting changes in the nature of the soil. On top of this, dams hold back billions of tonnes of silt. As a result, river deltas everywhere are shrinking.

Markers of the Anthropocene will surely be visible in the fossil record. On present trends, numerous species will vanish from that record—exterminated by human activity. Meanwhile, "technofossils" will appear. A favourite for long-term preservation, for example, is the porcelain water closet. New types of mineral may come into existence as a result of things like the deposition of elemental aluminium in the soil (the stuff is unknown in nature) and the settling to the sea bed of zillions of plastic scraps now littering the ocean. Beds of fly ash from power stations may get consolidated into novel rocks. And who knows what refuse tips will look like when buried, compressed and metamorphosed?

The AWG, then, believes that the Anthropocene is real. The next question is how to define it. The traditions of geology demand a clear and sudden change, visible in the rocks. There are several contenders, including the appearance of plastics in the 1950s and the exchange of species between the New and Old Worlds in the 1600s. But most of the AWG's members plumped for the high point of nuclear-weapons testing, in 1964. Fallout from those tests scattered plutonium, an element vanishingly rare in nature, far and wide across the planet. Future geologists, depending on precisely how much time has passed and therefore how much radioactive decay has occurred, will be able to see a layer of plutonium, or of uranium, or (eventually) of lead in the rocks. At the congress, the AWG's members voted for this "bomb spike" to be the marker. That makes the Anthropocene more than half a century old already.

The next step will be to point to a single piece of the geological record (an ice core, perhaps, or samples from lake sediments) that can serve as the officially accepted reference point. Then the proposal must make its way through several strata of geological bureaucracy, any of which could scupper it. The last step will be a vote at a meeting of the International Union of Geological Sciences. If that passes, then geological time, whose passage is famously slow, will have ticked perceptibly on. ■

Also in this section

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The state of the world

Better and better

Human life has improved in many ways, both recently, according to a Swedish economic historian, and in the 19th century (see next review)

Progress: Ten Reasons to Look Forward to the Future. By Johan Norberg. *Oneworld; 246 pages; $24.99 and £16.99*

HUMANS are a gloomy species. Some 71% of Britons think the world is getting worse; only 5% think it is improving. Asked whether global poverty had fallen by half, doubled or remained the same in the past 20 years, only 5% of Americans answered correctly that it had fallen by half. This is not simple ignorance, observes Johan Norberg, a Swedish economic historian and the author of a new book called "Progress". By guessing randomly, a chimpanzee would pick the right answer (out of three choices) far more often.

People are predisposed to think that things are worse than they are, and they overestimate the likelihood of calamity. This is because they rely not on data, but on how easy it is to recall an example. And bad things are more memorable. The media amplify this distortion. Famines, earthquakes and beheadings all make gripping headlines; "40m Planes Landed Safely Last Year" does not.

Pessimism has political consequences. Voters who think things were better in the past are more likely to demand that governments turn back the clock. A whopping 81% of Donald Trump's supporters think life has grown worse in the past 50 years. Among Britons who voted to leave the European Union, 61% believe that most children will be worse off than their parents. Those who voted against Brexit tend to believe the opposite.

Mr Norberg unleashes a tornado of evidence that life is, in fact, getting better. He describes how his great-great-great-great grandfather survived the Swedish famines of 150 years ago. Sweden in those days was poorer than Sub-Saharan Africa is today. "Why are some people poor?" is the wrong question, argues Mr Norberg. Poverty is the starting point for all societies. What is astonishing is how fast it has receded. In 1820, 94% of humanity subsisted on less than $2 a day in modern money. That fell to 37% in 1990 and less than 10% in 2015.

Not only have people grown much more prosperous; they also enjoy better health than even rich folk did in the past. This is due partly to galloping progress in medical science. When the swine flu pandemic threatened to become catastrophic in 2009, scientists sequenced the genome of the virus within a day and were producing a vaccine in less than six months.

The spread of basic technology, allowing for clean water and indoor plumbing, may have helped even more. Louis XIV's palace was the pinnacle of 18th-century grandeur. Nonetheless, without flush toilets, it stank. "The passageways, corridors and courtyards are filled with urine and faecal matter," wrote a contemporary observer. Now 68% of the world's population have modern sanitation—a luxury denied to the Sun King—up from 24% in 1980.

People are growing smarter too. Americans scored, on average, 100 points on IQ tests just after the second world war. By 2002, using the same test, this had risen to 118, with the biggest improvements in answers to the most abstract problems. This "Flynn Effect", as it is known, is observed in all countries that have modernised. The most likely reasons are better nutrition and the spread of education—brains that are well-fed and well-stimulated tend to work better—and environmental improvements such as the removal of lead from petrol.

Mr Norberg agrees with Steven Pinker, a psychologist, that humankind is also experiencing a "moral Flynn Effect". As people grow more adept at abstract thought, they find it easier to imagine themselves in other people's shoes. And there is plenty of evidence that society has grown more tolerant. As recently as 1964, even the American Civil Liberties Union agreed that homosexuals should be barred from government jobs. In 1987 only 48% of Americans approved of interracial dating; in 2012 that figure was 86% (and 95% of 18- to 29-year-olds). The caste system in India has eroded as individualistic values have spread: the proportion of upper-caste weddings with segregated seating fell from 75% to 13% between 1990 and 2008.

Despite the bloody headlines, the world is far safer than it used to be. The homicide rate in hunter-gatherer societies was about 500 times what it is in Europe today. Globally, wars are smaller and less frequent than they were a generation ago. The only type of violence that is growing more common is terrorism, and people wildly overestimate how much of it there is. The average European is ten times more likely to die by falling down stairs than to be killed by a terrorist. Evidence that the past was more brutal than the present can be gleaned not only from data but also from cultural clues. For example, children's ▶▶

nursery rhymes are 11 times more violent than television programmes aired before 9pm in Britain, one study found.

That life is improving for most people does not mean it is improving for everyone. Male blue-collar workers in rich countries have seen their earnings stagnate. Even if the statistics fail properly to capture the benefits they enjoy as consumers of new technology, the slippage in their status is real and painfully felt.

Global warming is a worry, too, but Mr Norberg hopes that human ingenuity will tame it. He writes with enthusiasm about all kinds of green innovation. For example, thanks to more efficient farming technology, the world may have reached "peak farmland". By the end of the century, an area twice the size of France will have been returned to nature, by one estimate.

This book is a blast of good sense. The main reason why things tend to get better is that knowledge is cumulative and easily shared. As Mr Norberg puts it, "The most important resource is the human brain... which is pleasantly reproducible." ■

European history

The best of times

The Pursuit of Power: Europe 1815-1914. By Richard Evans. *Viking; 928 pages; $40. Allen Lane; £35*

TO APPRECIATE the social transformations that took place in Europe between the Battle of Waterloo in 1815 and the start of the first world war, consider what happened to its towns and cities. Economic growth and technological innovation allowed them to reach new and vertiginous heights. Lofty creations like the Eiffel Tower, completed in 1889, or the Royal Liver Building in Liverpool, which opened in 1911, symbolised a richer, more confident world following the Napoleonic wars.

In "The Pursuit of Power", an impressive and richly documented new book, Richard Evans of Cambridge University says that most contemporaries were convinced this was a time of "open-ended improvement". Breakneck industrialisation turned rural economies into metropolitan ones. Superior medicines and public sanitation, along with state vaccination programmes, cut the impact of epidemics like smallpox and typhus. Wars were relatively small and short-lived (the death rate of men in battle was seven times less than in the previous century). And steam power and electrical engineering freed societies from the limitations of human strength.

Motor transport and the expansion of roads, canals and railways shrank distances and modernised conceptions of time. In 1875 William Rathbone Greg, an English essayist, said that people were living "without leisure and without pause—a life of haste". Such developments, alongside steamships and the telegraph, were also the technological foundations of Europe's global domination.

The century was not one of inexorable progress, however, or of collective triumph; there were winners and losers. The former milked the benefits of what Mr Evans calls "the first age of globalisation". They profited from the dismantling of trade barriers, industrial growth and expansion of the state, which required unprecedented numbers of administrators.

For many, though, this proved to be no more than new forms of old miseries. Serfdom on the land gave way to wage labour in the factories. Workers lived in poverty, and gross disparities existed between the poor and well-off in health, nutrition and infant mortality. Perhaps the biggest losers were the traditional landowning aristocracy, who were undermined by economic change, the abolition of serfdom, the advent of elected legislatures and the commercial feats of enterprising bankers and businessmen.

A distinguished scholar of Germany, Mr Evans is just as sure-footed across the continent. His interests also extend beyond the usual subjects of war and revolutions. There are, for example, timely sections on efforts to master the natural world, and early fears about climate change. The book is particularly illuminating on how social trends after 1848—the spread of education, the standardisation of languages, railway development and the mass production of newspapers—led to the rise of political forces like nationalism and democracy.

Steaming ahead

Much of this history is well known, but Mr Evans is a skilled synthesiser with a strong eye for narrative. He acknowledges the pioneering work of other historians like Eric Hobsbawm and Jürgen Osterhammel. But if Hobsbawm identified the development of capitalism and the expansion of empires as hallmarks of the century, and Mr Osterhammel documented the emergence of "globalisation" *avant la lettre*, Mr Evans argues that it was the universal pursuit of power that defined the age.

Serfs wanted emancipation from landowners and women sought liberation from men. Industrialists required economic control and new political parties campaigned for office. All major European states imposed colonial mastery over Africa and Asia. But the book's real success lies with its timeliness. Europe is rendered not as a geographical space—its eastern borders have always been hard to define—but as a collective entity with a shared history. European leaders invited ruin upon themselves when they forgot that in 1914. They should never do it again. ■

Indian politics

Raise him up

Half-Lion: How P.V. Narasimha Rao Transformed India. By Vinay Sitapati. *Penguin India; 391 pages; 699 rupees*

INDIA'S tenth prime minister, P.V. Narasimha Rao, inherited a country on the point of collapse. In the run-up to the election in 1991 separatists were on the rampage in Kashmir and Punjab, the treasury was running out of foreign reserves and 800 people were killed in clashes across the country. Then Rajiv Gandhi was blown up by a Tamil Tiger suicide-bomber as he campaigned in southern India. Rao, a reticent scholar with government experience but little popular support, was his improbable successor. Power-brokers in the Congress Party believed they were installing a puppet in the prime minister's office. What they got instead, as Vinay Sitapati writes in "Half-Lion", was the most consequential Indian leader since Jawaharlal Nehru.

Socialist India was in an advanced state of decay when Rao entered office. Aided by his finance minister, Manmohan Singh, he devised a radical plan to devalue the rupee, liberalise trade policies and lower the barriers to foreign capital and competition. But resistance to change was formidable. Rao's minority government was subjected to multiple no-confidence motions in parliament. Mr Sitapati, a doctoral student at Princeton University, has unearthed a remarkable document which reveals that

His time has come

the prime minister survived (and pushed through his reforms) in part by deploying India's intelligence agencies to dig up dirt on recalcitrant MPS.

As foreign minister in the 1980s, Rao, who spoke a dozen languages, including Arabic, French, Spanish and Farsi, disarmed world leaders by addressing them in their own tongue. As prime minister, he initiated the overhaul of India's foreign policy, aggressively courting South-East Asia to counteract China's growing clout in the region, and moving India away from the Soviet Union and closer to the West. He even convinced Yasser Arafat to fly to India and endorse his establishment of diplomatic ties with Israel. People who once dismissed Rao as a pushover began likening him to Kautilya, the Mauryan empire's strategist who wrote a book on statecraft a millennium before Machiavelli.

Rao's failure to stop Hindu zealots from razing the medieval Babri mosque after a political rally in 1992 has long been a stain on his memory. Mr Sitapati mounts a heroic defence of his subject. The worst that can be said of Rao, he writes, is that he placed a naive faith in the personal assurances given to him by high-ranking Hindu-nationalist leaders. Rao, a devout Brahmin, was accused of secretly abetting the mosque's destruction. Mr Sitapati persuasively demolishes this charge with a careful reconstruction of events.

India was a different country by the time Rao left office. Even the communists had joined the consensus around free trade. Mr Sitapati does an excellent job of tracing India's transformation back to Rao's vision and leadership. Alas, he is less good at making sense of its undesirable side-effects. The rapid rise of Hindu nationalism, despite Rao's aversion to it, is very much his legacy. So are the oligarchs and robber barons who have proliferated across the country. Rural India suffered disproportionately during Rao's years in government. After being thrown out of power by an electorate that was overwhelmingly poor, Rao seemed appalled by his own creation. He attacked India's widening inequality in one of his last public speeches, warning that "'trickle-down economics'—the practice of cutting taxes for the rich, hoping it would benefit the poorer in society—does not work."

Rao had committed the sin of being insufficiently deferential to the Gandhi dynasty while in power. He spent his final years as a pariah. His name was scrubbed from the Congress Party's lore, and credit for his achievements was given to Manmohan Singh and Rajiv Gandhi. But Mr Sitapati makes an unanswerable case for Rao as the father of India's economic reforms.

When Rao died in 2004, Sonia Gandhi, the head of the Gandhi family, refused to allow his body to be cremated in Delhi or displayed in the party's headquarters. His funeral was a humiliating affair, thinly attended by the establishment and poorly guarded. Stray dogs reportedly tore at the remains of his partially cremated body.

Mr Sitapati has resurrected his subject from the ignominy and obscurity to which he has long been condemned by his party's petty proprietors. Rao deserves a place alongside Nehru as India's most important prime minister. ■

History of philosophy

Seeing the light

The Dream of Enlightenment. By Anthony Gottlieb. *Liveright; 301 pages; $27.95. Allen Lane; £20*

WESTERN philosophy has had two golden ages. The first was the remarkable explosion of thought in early Athens, sparked by Socrates and continued by Plato, Aristotle and their followers. Then came the great flowering in northern Europe in the 17th and 18th centuries, when a diverse group of thinkers questioned received opinion and put their faith in reason in what is now known as the Enlightenment. This story is too simple to be the whole truth; but it is a narrative that is useful for those coming to the history of Western philosophy for the first time, even if they revise or abandon it later on.

In "The Dream of Enlightenment", the second in a planned trilogy that began with "The Dream of Reason", Anthony Gottlieb focuses on some of the great Enlightenment thinkers, including Descartes, Hobbes, Spinoza, Locke, Leibniz, Hume, Rousseau and Voltaire. He offers engaging summaries of their main ideas and choice details of their lives. They were freelance philosophers working independently of the universities, criticising mainstream views and liberating thought from its academic straitjacket and neo-Aristotelian dogmatism.

They were dangerous thinkers all, one publication away from exile, imprisonment or worse for their radical views on religion, politics and morality. Spinoza was the subject of a *cherem*, the equivalent of excommunication from the Amsterdam Sephardic synagogue; Locke disguised his authorship of "Two Treatises of Government", and spent a number of years in self-imposed exile; Hume chose to publish his "Dialogues Concerning Natural Religion" posthumously; and Rousseau fled to England when persecuted in mainland Europe. Metaphysics was far from the safe activity it is today, and was often condemned as blasphemy or heresy.

In an essay called "What is Enlightenment?", written in 1784, Immanuel Kant crystallised the essence of the movement in the motto *Sapere aude* ("Dare to know"). Humanity had used reason to emerge from its state of immaturity, he argued. For many, Kant is the supreme example of an Enlightenment philosopher; though less provocative in his moral and religious conclusions than others, he pushed reason as far as it would go. Mr Gottlieb has, surprisingly, chosen to end his book with Voltaire and Rousseau, leaving Kant for a later volume, a decision that some might question.

That aside, "The Dream of Enlightenment" is an entertaining introduction to a range of daring thinkers of the long Enlightenment from Descartes to Rousseau. The author has a light touch, and his book is a joy to read. He manages to convey the excitement of ideas, and the humanity of thinkers, without swamping readers with complexity. His readings are at times controversial, as when he declares Locke's political philosophy more Hobbesian than is generally thought, and in the prominent place he gives to Pierre Bayle, a 17th-century French Protestant, but it is for scholars to quibble over these interpretations.

A great strength of the book is the inclusion of details such as the mention of Voltaire's marginal comments on Rousseau's passages on primitive man: "How do you know?" and "How you exaggerate everything!"; the revelation that Spinoza did not live from his earnings as a lens grinder, but rather from grants from admirers and pupils; Hume's reply to a publisher's request for further volumes of his "History", that he was "too old, too fat, too lazy, and too rich" to comply; and, perhaps most pertinent, the succinct summary of Locke's philosophy by Charles Sanders Peirce, who was known as the "father of pragmatism": "Men must think for themselves." ■

New American television

As real as a dream

With "Atlanta", Donald Glover brings an original voice to prestige television

ONE of the shortcomings of this platinum age of television is that it is still predominantly white. There are more good shows with minority characters in important roles, but most stories are still told from the white point of view.

"Atlanta", which starts on September 6th on FX in America, introduces an important new voice to "prestige TV". Donald Glover, the creator and star, is familiar to audiences as a comic actor (appearing in "Community", a television show, and in "The Martian", a film), and as a hip-hop performer with the stage name Childish Gambino. The show he has made is funny, eccentric and thought-provoking. It is also groundbreaking television: not just because it explores the struggles of a black man in a black world, but because of how it does so.

Mr Glover plays Earn, a charming young underachiever trying to make something of himself—and to pay his share of the rent at his child's mother's house. In the first episode, having returned home to Atlanta after dropping out of Princeton, he discovers his drug-dealing cousin Alfred is beginning to make a name for himself as a rapper, Paper Boi, and decides to talk his way into becoming his manager.

What follows is a series of misadventures, the attempted rise of a rapper and his would-be entourage. Earn is a guy on the make. His father refuses to let him into his house, giving as his reason, "I can't afford it." Paper Boi, played by Brian Tyree Henry, accuses Earn of trying to get rich from him. By the end of the first episode, Paper Boi and Earn end up being arrested after a confrontation where a gun goes off. By the end of the second, the publicity of the arrest makes Paper Boi a local celebrity, with echoes of the late Tupac Shakur (another American rapper and record producer, who was himself arrested in a shooting in Atlanta). It is a development that the rapper regards as both appealing and disturbing. Meanwhile, in parallel, Earn spends a long day in jail, a sequence that manages to serve as both social commentary and absurd entertainment.

The first two episodes (and seven of the season's ten) are directed by Hiro Murai, who has collaborated frequently with Mr Glover on music videos. Mr Murai's surrealist touch pairs well with Mr Glover's writing sensibility. In a mind-bending scene in the first episode, a man in a suit and bow tie on a bus dispenses wisdom to Earn and urges him to eat a Nutella sandwich, then disappears, only to reappear outside the bus walking a dog into the trees—a existential play.

At the same time "Atlanta" feels real and naturalistic, a credit to its writing and acting. Keith Stanfield steals multiple scenes as Paper Boi's trippy sidekick, Darius, usually high on weed and deep in his own head. When Earn says to Paper Boi that he is not so homeless that he, say, uses a rat as a telephone, Darius muses aloud how much better the world would be if people could actually use rats as phones. It would be "messy", he concedes, but "everyone would have an affordable phone."

Alexa Fogel, a casting director who worked on "The Wire", David Simon's acclaimed crime drama series, has assembled a cast of talented character actors who anchor the show in its eponymous city. In the second episode, one of the men being held with Earn in jail launches into a monologue, in amusingly indecipherable Atlanta patois, about how he went out for beers and ended up getting arrested. This is how "Atlanta" unfolds—characters speak to each other without the limiting crutch of helping the audience with context or exposition. We are left to absorb the story, piecing things together in this world as we follow along with Earn, bemused.

"Atlanta" defies easy categorisation. It is a comedy interested in more than laughs. It is a hyperrealist study painted with surrealist strokes. It comes from an original point of view, and it is heading somewhere intriguing. ■

Fiction

You're my baby

Nutshell. By Ian McEwan. *Nan A. Talese; 208 pages; $24.95. Jonathan Cape; £16.99*

YOU know from the prologue to "Nutshell" that the book is a new take on "Hamlet", even before you learn that the two main adult characters are called Trudy (for Gertrude) and Claude (for Claudius, Hamlet's uncle).

> "Oh God, I could be bounded in a nutshell and count myself a king of infinite space—were it not that I have bad dreams."

Reworkings of Shakespeare—by Margaret Atwood and Howard Jacobson, Anne Tyler and Jeanette Winterson—have been pouring into bookshops this year. But none is as creepy or as brilliant as Ian McEwan's latest. The Hamlet-narrator is the child whom Trudy is carrying and will give birth to within a fortnight, a baby now so wedged up against the walls of the uterus that, "I wear my mother like a tight-fitting cap."

Trudy fell in love with the child's father when she was 18, and they embarked on a romantic tryst in a room without a view in the historic seaside town of Dubrovnik. An impoverished poetry publisher ("he's saddened rather than embittered by his own failure in verse"), he brought her back to live in the marital home he had inherited, a Georgian town house in north London that is worth as much as £8m ($10.5m). By now, ten years on, the two are separated. Trudy is still in the house and is having an affair with the poet's brother Claude ("the dull-brained yokel"), whose only talent is property development, a base occupation that helped make him rich once, even though he is down to his last £250,000. The baby, tied to his mother, ear pressed up against her body, is privy to all their plans: to kill the father, sell the house, give the child up for adoption and run off, rich and unencumbered.

Mr McEwan is 68 and has written 16 novels, so this counts as a late work, but what a glorious late work it is. What is wrong in Hamlet's "state of Denmark" extends here to all of Europe, but there is much to celebrate as well. The book's finest exploration is of poetry. The author offers up everything he knows about its intensity, and why he loves it so. It is clear Mr McEwan has had enormous fun writing "Nutshell"; now it is the reader's turn to be entertained too. Dark as it is, this novel is a thing of joy.

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FINANCING AFRICA'S INFRASTRUCTURE
POUR LES INFRASTRUCTURES EN AFRIQUE

Africa50 is a specialized international financial institution created at the initiative of the African Development Bank (AfDB) and capitalized so far by the AfDB, 23 African countries and two African Central Banks. Subsequent funding is expected to come from African countries that are not yet investors in Africa50, but also from non-sovereign investors both in Africa and outside Africa. Africa50 aims to help accelerate infrastructure development in Africa leveraging the strong support of its government shareholders and the AfDB and has a mandate to operate commercially. Africa50's committed capitalization is expected to reach $1 billion in the next few months. The target is to raise $3 billion over the medium term to invest in commercially viable infrastructure projects across Africa. Africa50 has its headquarters in Casablanca. It enjoys all immunities and privileges recognized to International Financial Institutions.

Director HR and Administration

The Director Human Resources and Administration will lead the establishment of the HR and Administration department and ensure the competitiveness of Africa50 as an employer of choice. S/he will head the HR and Admin department, develop and promote human resources, administrative and IT policies and practices that enhance organizational effectiveness, drive to achieve results and talent management as well as ensure effective procurement of assets, services, and works.

The Director HR and Administration must have a strong experience in Human Resources Development as well as Administration, and in driving institutional development ideally in a fund or financial institution environment.

Director Project Finance

The Director Project Finance will head the Project Finance department and will be responsible for originating and leading the execution of Africa50's later stage investments. S/he will also manage the portfolio of later stage investments and will play a critical role in the recruitment and the coaching of the Investment Officers.

The Director Project Finance will bring a strong experience in investment in infrastructure projects and an ability to generate a strong pipeline of appropriate infrastructure projects in Africa, as well as experience leading a team to originate and invest primarily through equity and quasi-equity including mezzanine instruments with senior debt as a plus.

Director Investor Relations

The Director Investor Relations will head the Investor Relations department and drive fundraising and develop investor relationships globally, with public and private shareholders.

The Director Investor Relations will bring a strong experience in discussing with governments as well an excellent fundraising track record in the private sector. S/he will be a good communicator and negotiator.

All roles report to the CEO and require a minimum of 15 years of proven leadership and relevant experience; an advanced degree in a related field of study is also required. Fluency in English and/or French, with a working knowledge of the other language is required.

Russell Reynolds Associates are assisting Africa50 with this appointment. For further information about any of these roles and details of how to apply, please visit Russell Reynolds Associates website at **www.rraresponses.com**. **The closing date for applications is 17 September 2016.**

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MANAGING DIRECTOR

The Ministry of Petroleum Resources of the Federal Republic of Nigeria

Invites interested individuals and legal entities to submit Expression of Interest (EOI) for the selection of a Consultant for the organization of the Nigeria International Oil and Gas Summit (NIOGS) to be held in Abuja, 2017.

The full text of the invitation for Expression of Interest (EOI) can be accessed on the following official websites of the Ministry and its Agencies:

http://petroleumresources.gov.ng
http://nnpcgroup.com
http://ncdmb.gov.ng
http://dpr.gov.ng

Publications

The Last Bastion Of Civilization, 2041

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FACULTY POSITIONS

To be considered, education and research/professional experience/expertise are required in at least one of the following units:

Accounting and Management: financial reporting and analysis, management accounting, performance measurement, and management control systems. Closing date: 14 November 2016.

Business, Government and the International Economy: economic, political, and legal environment in which business operates. Closing date for applicants completing or having completed a Ph.D. in political science with research interests in international political economy or comparative political economy: 1 October 2016 (indicate "Tenure-Track Position: Political Science" on application). Closing date for applicants completing or having completed a Ph.D. in history with research interests in history of capitalism, public policy, democratic governance, economic development, and/or political economy: 7 November 2016 (indicate "Tenure-Track Position: History" on application). Closing date for applicants completing or having completed a Ph.D. in economics, especially with research interests in macroeconomics, international trade and finance, public economics, political economy, environmental economics and/or development: 15 November 2016 (indicate "Tenure-Track Position: Economics" on application).

Entrepreneurial Management: entrepreneurial leadership and organization; emerging industries and technologies; innovation; or financing ventures and growth. Closing date for applicants with background in management, organization theory, sociology, psychology, or strategy: 30 October 2016 (indicate "Entrepreneurship (MOS)"). Closing date for applicants with background in economics or finance: 27 November 2016 (indicate "Entrepreneurship (ECF)").

Finance: corporate finance, capital markets, investments, behavioral finance, corporate governance, and financial institutions. Closing date: 28 November 2016.

Negotiation, Organizations and Markets: negotiation, decision making, behavioral economics, incentives, the motivation and behavior of individuals in organizations, and the design and functioning of markets. Closing date for applicants with a background in judgment and decision making, negotiation, social psychology, and/or organizational behavior: 7 October 2016 (indicate "NOM - Behavioral Sciences"). Closing date for applicants with a background in economics: 20 November 2016 (indicate "NOM - Economics").

Organizational Behavior: micro- and macro- organizational behavior, leadership or human resources management. The unit welcomes diverse theoretical and disciplinary perspectives, including organizational behavior, organization studies, human resource studies, industrial relations, sociology, psychology, economics, and networks, among others. Closing date: 30 September 2016.

Strategy: competitive strategy, corporate strategy, global strategy, firm organization and boundaries, strategy and technology, strategy implementation and process, non-market strategy, and the economics of competitive interactions. Closing date: 4 November 2016.

Technology and Operations Management: operations management in manufacturing and service contexts, digital operations and analytics, new product development, economics and management of technological innovation, supply chain management/logistics, or economics of information technology. Candidates should submit a current curriculum vitae and a job market paper abstract by 7 October 2016. A complete job packet is due by 11 November 2016.

Harvard Business School recruits new faculty for positions entailing case method teaching at the graduate and executive program levels. Applicants for tenure and tenure-track positions should have a doctorate or terminal degree in a field specified above, or related discipline, by the time the appointment begins and strong demonstrated potential and interest to conduct research at the forefront of their fields.

Candidates should submit a current CV, copies of publications and current working papers, description of courses taught, and three letters of recommendation. Materials should be submitted online to: http://www.hbs.edu/research/faculty-recruiting. Materials that can only be submitted in hard copy may be sent to the address below.

Harvard Business School, Faculty Administration, Attn: UNIT NAME Application, Morgan Hall T25, Soldiers Field Road, Boston, MA 02163.

Recommenders may submit letters directly at: www.hbs.edu/research/faculty-recruiting.

We are an equal opportunity employer and all qualified applicants will receive consideration for employment without regard to race, color, religion, sex, sexual orientation, gender identity, national origin, disability status, protected veteran status, or any other characteristic protected by law.

Economic data

% change on year ago

	Gross domestic product			Industrial production	Consumer prices		Unemployment	Current-account balance		Budget balance	Interest rates, %	Currency units, per $	
	latest	qtr*	2016†	latest	latest	2016†	rate, %	latest 12 months, $bn	% of GDP 2016†	% of GDP 2016†	10-year gov't bonds, latest	Aug 31st	year ago
United States	+1.2 Q2	+1.1	+1.7	-0.5 Jul	+0.8 Jul	+1.4	4.9 Jul	-473.1 Q1	-2.5	-2.7	1.57	-	-
China	+6.7 Q2	+7.4	+6.5	+6.0 Jul	+1.8 Jul	+2.0	4.1 Q2§	+256.1 Q2	+2.7	-3.8	2.59§§	6.68	6.38
Japan	+0.6 Q2	+0.2	+0.5	-3.8 Jul	-0.5 Jul	-0.1	3.0 Jul	+163.5 Jun	+3.4	-5.0	-0.05	103	121
Britain	+2.2 Q2	+2.4	+1.6	+1.6 Jun	+0.6 Jul	+0.7	4.9 May††	-161.9 Q1	-5.1	-4.0	0.70	0.76	0.65
Canada	+0.9 Q2	-1.6	+1.4	-1.3 Jun	+1.3 Jul	+1.7	6.9 Jul	-51.1 Q2	-2.4	-2.5	1.02	1.31	1.33
Euro area	+1.6 Q2	+1.1	+1.5	+0.4 Jun	+0.2 Aug	+0.3	10.1 Jul	+393.5 Jun	+3.0	-1.8	-0.06	0.90	0.89
Austria	+1.2 Q2	-0.7	+1.3	+0.9 Jun	+0.6 Jul	+1.2	6.0 Jul	+10.5 Q1	+2.3	-1.4	0.12	0.90	0.89
Belgium	+1.4 Q2	+2.2	+1.3	+6.3 Jun	+2.2 Aug	+1.7	8.3 Jul	+6.5 Mar	+1.1	-2.8	0.17	0.90	0.89
France	+1.4 Q2	-0.2	+1.4	-1.3 Jun	+0.2 Aug	+0.3	10.3 Jul	-21.4 Jun‡	-0.5	-3.3	0.15	0.90	0.89
Germany	+1.7 Q2	+1.7	+1.5	+0.5 Jun	+0.4 Aug	+0.4	6.1 Aug	+307.7 Jun	+8.1	+0.4	-0.06	0.90	0.89
Greece	-0.4 Q2	+0.7	-0.6	+7.4 Jun	-1.0 Jul	-0.2	23.5 May	+1.5 Jun	-0.1	-4.6	8.15	0.90	0.89
Italy	+0.7 Q2	nil	+0.9	-1.0 Jun	-0.1 Aug	nil	11.4 Jul	+53.9 Jun	+2.1	-2.6	1.15	0.90	0.89
Netherlands	+2.3 Q2	+2.5	+1.5	+1.6 Jun	-0.3 Jul	+0.3	7.4 Jul	+62.0 Q1	+9.9	-1.4	0.02	0.90	0.89
Spain	+3.2 Q2	+3.4	+2.8	+1.0 Jun	-0.2 Aug	-0.4	19.6 Jul	+22.7 Jun	+1.3	-4.3	1.02	0.90	0.89
Czech Republic	+2.7 Q1	+3.6	+2.3	+3.8 Jun	+0.5 Jul	+0.5	5.4 Jul§	+2.7 Q1	+1.1	-0.5	0.28	24.3	24.1
Denmark	+1.0 Q2	+1.8	+1.2	-0.8 Jun	+0.3 Jul	+0.7	4.2 Jul	+18.3 Jun	+6.0	-2.5	0.04	6.68	6.66
Norway	+2.5 Q2	+0.1	+1.0	-9.0 Jun	+4.4 Jul	+3.5	4.8 Jun‡‡	+29.3 Q1	+6.6	+3.0	1.12	8.34	8.39
Poland	+3.0 Q2	+3.6	+3.1	-3.4 Jul	-0.8 Aug	-0.8	8.6 Jul§	-1.7 Jun	-0.8	-2.9	2.77	3.91	3.77
Russia	-0.6 Q2	na	-0.8	-0.3 Jul	+7.2 Jul	+7.2	5.3 Jul§	+38.4 Q2	+2.9	-4.1	8.21	65.3	66.7
Sweden	+3.1 Q2	+1.2	+3.5	-1.4 Jun	+1.1 Jul	+1.0	6.3 Jul§	+28.2 Q1	+5.7	-0.4	0.10	8.58	8.49
Switzerland	+0.7 Q1	+0.4	+1.0	-1.2 Q2	-0.2 Jul	-0.5	3.3 Jul	+71.9 Q1	+9.2	+0.4	-0.46	0.98	0.97
Turkey	+4.8 Q1	na	+3.4	+1.1 Jun	+8.8 Jul	+7.5	9.4 May§	-29.4 Jun	-4.7	-2.0	9.83	2.96	2.91
Australia	+3.1 Q1	+4.3	+2.7	+4.8 Q1	+1.0 Q2	+1.3	5.7 Jul	-62.3 Q1	-4.5	-2.1	1.83	1.33	1.41
Hong Kong	+1.7 Q2	+6.5	+1.5	-0.3 Q1	+2.4 Jul	+2.6	3.4 Jul‡‡	+11.7 Q1	+3.0	nil	0.97	7.76	7.75
India	+7.1 Q2	+5.5	+7.4	+2.1 Jun	+6.1 Jul	+5.1	4.9 2013	-22.1 Q1	-1.2	-3.8	7.11	67.0	66.5
Indonesia	+5.2 Q2	na	+5.0	+9.1 Jun	+3.2 Jul	+4.0	5.5 Q1§	-18.7 Q2	-2.4	-2.3	7.03	13,265	14,050
Malaysia	+4.0 Q2	na	+4.3	+5.2 Jun	+1.1 Jul	+2.0	3.4 Jun§	+5.3 Q2	+2.8	-3.4	3.60	4.06	4.20
Pakistan	+5.7 2016**	na	+5.7	nil Jun	+4.0 Jul	+3.7	5.9 2015	-2.5 Q2	-0.8	-4.6	8.03†††	105	104
Philippines	+7.0 Q2	+7.4	+5.8	+8.5 Jun	+1.9 Jul	+1.7	6.1 Q2§	+6.7 Mar	+3.0	-1.0	3.41	46.6	46.7
Singapore	+2.1 Q2	+0.3	+1.4	-3.6 Jul	-0.7 Jul	-0.8	2.1 Q2	+58.4 Q2	+19.5	+0.7	1.80	1.36	1.41
South Korea	+3.1 Q2	+2.9	+2.5	+1.6 Jul	+0.4 Aug	+1.2	3.5 Jul§	+104.4 Jul	+7.5	-1.2	1.48	1,115	1,183
Taiwan	+0.7 Q2	+0.2	+0.5	-0.3 Jul	+1.2 Jul	+1.3	4.0 Jul	+75.7 Q2	+13.5	-0.6	0.68	31.7	32.5
Thailand	+3.5 Q2	+3.2	+2.7	-5.1 Jul	+0.1 Jul	+0.2	1.0 Jul§	+42.4 Q2	+6.2	-2.6	2.17	34.6	35.9
Argentina	+0.5 Q1	-2.7	-0.8	-2.5 Oct	— ***	—	9.3 Q2§	-15.0 Q1	-1.6	-5.1	na	14.9	9.29
Brazil	-3.8 Q2	-2.3	-3.5	-5.9 Jun	+8.7 Jul	+8.0	11.6 Jul§	-27.9 Jul	-1.1	-6.6	12.02	3.23	3.64
Chile	+1.5 Q2	-1.4	+1.6	-1.8 Jul	+4.0 Jul	+4.1	7.1 Jul§‡‡	-5.1 Q2	-2.1	-2.5	4.23	679	693
Colombia	+2.0 Q2	+0.8	+2.0	+6.6 Jun	+9.0 Jul	+8.0	9.8 Jul§	-16.9 Q1	-5.5	-3.7	7.50	2,954	3,094
Mexico	+2.5 Q2	-0.7	+2.2	+0.6 Jun	+2.7 Jul	+3.0	3.8 Jul	-30.9 Q2	-3.0	-3.0	5.84	18.9	16.8
Venezuela	-8.8 Q4~	-6.2	-15.1	na	na	+546	7.3 Apr§	-17.8 Q3~	-3.0	-24.2	11.52	9.99	6.31
Egypt	+6.7 Q1	na	+3.0	-16.5 Jun	+14.0 Jul	+12.1	12.5 Q2§	-18.3 Q1	-6.6	-11.5	na	8.88	7.83
Israel	+2.6 Q2	+3.7	+2.7	+1.2 Jun	-0.6 Jul	-0.3	4.7 Jul	+14.7 Q1	+3.6	-2.2	1.73	3.78	3.93
Saudi Arabia	+3.5 2015	na	+1.0	na	+3.8 Jul	+4.4	5.6 2015	-59.5 Q1	-7.3	-12.6	na	3.75	3.75
South Africa	-0.2 Q1	-1.2	+0.4	+4.3 Jun	+6.0 Jul	+5.7	26.6 Q2§	-13.4 Q1	-3.0	-3.4	9.07	14.7	13.3

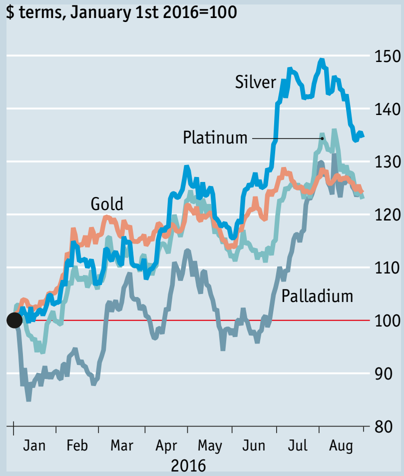
Source: Haver Analytics. *% change on previous quarter, annual rate. †*The Economist* poll or Economist Intelligence Unit estimate/forecast. §Not seasonally adjusted. ‡New series. ~2014 **Year ending June. ††Latest 3 months. ‡‡3-month moving average. §§5-year yield. ***Official number not yet proved to be reliable; The State Street PriceStats Inflation Index, June 36.96%; year ago 26.70% †††Dollar-denominated bonds.

Markets

	Index Aug 31st	% change on one week	Dec 31st 2015 in local currency	Dec 31st 2015 in $ terms
United States (DJIA)	18,400.9	-0.4	+5.6	+5.6
China (SSEA)	3,230.1	nil	-12.8	-15.2
Japan (Nikkei 225)	16,887.4	+1.7	-11.3	+3.8
Britain (FTSE 100)	6,781.5	-0.8	+8.6	-3.5
Canada (S&P TSX)	14,597.2	-0.2	+12.2	+19.1
Euro area (FTSE Euro 100)	1,030.9	+0.3	-5.8	-3.3
Euro area (EURO STOXX 50)	3,023.1	+0.5	-7.5	-5.0
Austria (ATX)	2,314.4	+0.3	-3.4	-0.9
Belgium (Bel 20)	3,553.4	nil	-4.0	-1.4
France (CAC 40)	4,438.2	+0.1	-4.3	-1.7
Germany (DAX)*	10,592.7	-0.3	-1.4	+1.2
Greece (Athex Comp)	577.4	+1.7	-8.5	-6.1
Italy (FTSE/MIB)	16,943.4	+0.3	-20.9	-18.8
Netherlands (AEX)	454.4	+0.5	+2.8	+5.6
Spain (Madrid SE)	879.5	+0.9	-8.9	-6.5
Czech Republic (PX)	859.1	+0.1	-10.2	-7.8
Denmark (OMXCB)	848.4	-0.3	-6.4	-3.7
Hungary (BUX)	27,969.2	+0.1	+16.9	+22.5
Norway (OSEAX)	677.6	-0.1	+4.4	+10.7
Poland (WIG)	47,935.1	+1.0	+3.2	+4.2
Russia (RTS, $ terms)	950.3	-0.8	+12.1	+25.5
Sweden (OMXS30)	1,418.1	+0.4	-2.0	-3.3
Switzerland (SMI)	8,202.1	nil	-7.0	-5.2
Turkey (BIST)	75,967.6	-0.2	+5.9	+4.3
Australia (All Ord.)	5,529.4	-2.2	+3.5	+6.8
Hong Kong (Hang Seng)	22,976.9	+0.7	+4.8	+4.7
India (BSE)	28,452.2	+1.4	+8.9	+7.5
Indonesia (JSX)	5,386.1	-0.3	+17.3	+21.7
Malaysia (KLSE)	1,678.1	-0.2	-0.9	+5.0
Pakistan (KSE)	39,809.6	+0.8	+21.3	+21.2
Singapore (STI)	2,820.6	-1.7	-2.2	+1.7
South Korea (KOSPI)	2,034.7	-0.4	+3.7	+8.6
Taiwan (TWI)	9,068.9	+0.6	+8.8	+12.6
Thailand (SET)	1,548.4	+0.1	+20.2	+25.2
Argentina (MERV)	15,649.5	-1.0	+34.0	+14.7
Brazil (BVSP)	57,901.1	+0.3	+33.6	+62.1
Chile (IGPA)	20,429.3	-0.7	+12.5	+18.2
Colombia (IGBC)	10,176.4	+1.1	+19.1	+28.8
Mexico (IPC)	47,541.3	-0.4	+10.6	+1.6
Venezuela (IBC)	11,962.3	+0.4	-18.0	na
Egypt (Case 30)	8,158.0	-0.8	+16.4	+2.7
Israel (TA-100)	1,271.5	-1.7	-3.3	-0.8
Saudi Arabia (Tadawul)	6,079.5	+0.9	-12.0	-12.0
South Africa (JSE AS)	52,733.1	-1.5	+4.0	+11.3

Precious-metal prices

Precious metals have shone this year: in part because Brexit-related uncertainty has increased demand for safe assets, and in part because rock-bottom interest rates reduce the opportunity cost of holding an investment that produces no income. The price of gold has risen by 24% over the past eight months. Silver has done better still: its price has jumped by 35% this year, and not simply because of its appeal as an investment. Silver also has industrial uses and has benefited from rising smartphone use, especially in India and China, and from solar-panel installations. Both platinum and palladium are used by carmakers in catalytic converters; they have been boosted by rising car sales in China and America.



Source: Thomson Reuters

Other markets

	Index Aug 31st	% change on one week	Dec 31st 2015 in local currency	Dec 31st 2015 in $ terms
United States (S&P 500)	2,171.0	-0.2	+6.2	+6.2
United States (NAScomp)	5,213.2	-0.1	+4.1	+4.1
China (SSEB, $ terms)	354.8	+0.4	-14.4	-16.8
Japan (Topix)	1,329.5	+1.7	-14.1	+0.6
Europe (FTSEurofirst 300)	1,352.3	-0.3	-5.9	-3.4
World, dev'd (MSCI)	1,723.6	-0.4	+3.7	+3.7
Emerging markets (MSCI)	898.9	+0.2	+13.2	+13.2
World, all (MSCI)	417.8	-0.4	+4.6	+4.6
World bonds (Citigroup)	963.1	-1.0	+10.7	+10.7
EMBI+ (JPMorgan)	813.5	+0.2	+15.5	+15.5
Hedge funds (HFRX)	1,183.9§	-0.1	+0.8	+0.8
Volatility, US (VIX)	13.9	+13.5	+18.2	(levels)
CDSs, Eur (iTRAXX)†	68.2	+1.1	-11.5	-9.2
CDSs, N Am (CDX)†	72.7	+1.4	-17.7	-17.7
Carbon trading (EU ETS) €	4.5	-3.0	-46.2	-44.8

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

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

The Economist commodity-price index

2005=100

	Aug 23rd	Aug 30th*	% change on one month	% change on one year
Dollar Index				
All Items	138.3	133.6	-1.7	+2.6
Food	159.5	152.2	-1.2	+1.5
Industrials				
All	116.2	114.3	-2.4	+4.1
Nfa†	124.8	122.7	-2.1	+11.5
Metals	112.5	110.7	-2.5	+0.9
Sterling Index				
All items	190.7	185.6	-0.1	+20.0
Euro Index				
All items	151.9	149.0	-1.1	+3.5
Gold				
$ per oz	1,339.7	1,318.1	-3.6	+15.6
West Texas Intermediate				
$ per barrel	47.7	46.4	+17.3	+2.9

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.

Let us play

The Reverend Roly Bain, clown-priest, died on August 11th, aged 62

STANDING in the vestry among the brooms and flower jugs—any vestry in the quietly attenuating Church of England—Roly Bain would put on his priestly vestments. First, the dog collar, several sizes too big, which hung round his neck like a juggling ring. Then baggy red trousers, a coat of many colours, and a biretta. Black shoes, of course: size 18 or so, with bulbous toes on which small boys liked to stamp. Lastly a modest red nose, mascara on his eyes and black crosses on his cheeks. A quick prayer, and he was ready to process down the aisle—on a unicycle, or waving a feather duster, or both at once. His opening invocation was, "Let us play!"

This was his routine for 25 years. He performed in parishes, conference halls, prisons, schools and hospitals all over Britain, Europe, America and Australia, clocking up thousands of miles and becoming, in the process, Britain's only full-time clown-priest. Since 1990, when life as a vicar in south London got a bit dull and he went off for circus training, he had stopped celebrating formal Eucharists to celebrate play and craziness instead. At his services sermons were limericks, prayers went up in clouds of bubbles (when they burst, God had heard them), and at the Peace the congregation were encouraged to shout "Cooeee!" and flap their hands like seals. It was all very un-Anglican.

At the heart of every show was his "slackrope of faith", suspended between two crosses on a frame of tubular steel. In his hands, or rather under his giant clumsy feet, it became a theological aid. The trick to balancing, he would say, precariously trying to, was to think "up"; then you would stay up. The key to walking any distance was to keep your eyes on the cross. At one point, having clambered laboriously onto the rope, he would find himself facing the wrong way. "I wish I could turn round!" he would howl, and then: "They call it repentance in the trade." His continual fallings off, entanglements and failures were gloriously redeemed by one last successful stroll, juggling three rings at the same time—almost: "Two out of three ain't bad—like most people's doctrine of the Holy Trinity."

Children loved it. Adults could be harder work, especially those who saw religion as a po-faced Sunday duty, not to be taken lightly. The self-important were the hardest to win over, but putting down the mighty from their seats and exalting the humble, in the words of the *Magnificat*, were what his show was all about. "Holy Roly" turned the established order upside down, just as lesser clergy did when they mocked their superiors at the medieval Feast of Fools.

He'd had enough of top-heavy pomposity at theological college, when some of his fellow students seemed fixated on high preferment and glittering robes, and he, instead, had preached on Jesus as a clown. A clown was a truth-teller, living by different rules—as he did when, on ten occasions, he greeted a presiding bishop with a merry splat of custard pie.

He also dared, like all clowns, to expose his vulnerability publicly and completely. This put him in a long tradition of holy fools, in Islam and Hinduism as well as Christianity, uncomfortable characters who were often thought mad: St Simeon Salos of Emress, who towed a dead dog behind him and threw nuts at priests during services, or Basil the Blessed who walked naked through Moscow. Didn't St Paul say, in his first letter to the Corinthians, "We are fools for Christ's sake"? Hadn't St Francis danced through the woods playing a pretend viol, and jumped into a potter's claypit to hide? Like all these, he opened himself up to ridicule, giving only innocence, love and joy in return.

In Coco's footsteps

The clowning emerged before the priestliness. He was inspired by his father's biography of Joseph Grimaldi, the greatest of clowns. There were gypsies and storytellers—and a lion-killer—further back in the family. By the age of eight he knew he wanted to be just like Coco, the sad-faced auguste, or simpleton, in Bertram Mills's circus. God's call interrupted all this, but then it struck him that the two vocations went rather well together. In 1982 he set up Holy Fools, to encourage others. When he clowned around, hiding his skill at pratfalls and slapstick behind wide-eyed alarm, his audience seemed to open up to God, releasing pent-up emotions and becoming like children in faith, hope and love. Faith and hope were especially needed when tricks went awry, as his did.

It was not a glamorous life: a succession of small, cardiganed congregations, muddy sports fields, school gyms, tea and biscuits and struggling to get the steel frame out of the car. It didn't pay, with a family to keep: he was part-funded by a group called Faith and Foolishness, which supports clown-priests, and was lucky to rent the vicarage of St Mary's Olveston, near Bristol, where he in turn helped the vicar. He sometimes seemed engaged in a ridiculous enterprise. But then what could be more ridiculous than the cross, that appallingly public symbol of scorn and hopelessness and utter failure?

In weary moments, he would remind himself of a cardinal rule of clowning: never die onstage. Always get back up, despite the plank in the face or the exploding chair; shake it all off. God, too, required him to stand up! And proclaim the resurrection. ■